Abstract

GLOBAL Reproductive HEALTH

OPEN

International Federation of Fertility Societies' (IFFS) Triennial Report 2025: Global Trends in Reproductive Policy and Practice, 10th edition

Editor-in-Chief: Steven J. Ory
Managing Editor: Kathleen Miller
Editorial Board: Sonia Allan, Susannah Baruch, Antonio Capalbo, Georgina Chambers, Mark Evans, Tetsuya Ishii, Kristen Ivani, Molly Johnston, Erkan Kalafat, Rafal Lukasiewicz, Kathleen Miller, Uchechukwu Ngwaba, Steven Ory, and Mariana Rodriguez Iturburu

Frontispiece

The International Federation of Fertility Societies (IFFS) is a federation of national membership societies that have an interest in the clinical and research aspects of reproduction and fertility. IFFS is a non-governmental organization (NGO) in official relations with the World Health Organization (WHO)."

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PREFACE

The world was emerging from the worst effects of the Coronavirus-disease-2019 (COVID-19) pandemic in December 2021 as we completed our previous edition. The high mortality rates seen in 2020 and 2021 had begun to recede and most countries were in varying stages of recovery, but they were only beginning to reckon with the implications of the massive loss of life and disruption of essential services incurred over the preceding two years. The survey responses for the *International Federation of Fertility Societies' (IFFS) Triennial Report 2025: Global Trends in Reproductive Policy and Practice, 10thedition* reveal that most countries have experienced recovery of fertility services to their pre-2020 levels, even though other aspects of their health care systems and economies are following less consistent trends towards improvement.

There has been a significant deceleration in global population growth since 2017, a result of declining birth rates, further exacerbated by the pandemic inflicted mortality with 15.9 million deaths attributed to COVID-19 in 2020 and 2021[1]. It was previously noted that the sharp declines in birth rates typically seen after pandemics and world wars are often followed by *baby booms*[2]. This time, a brief recovery in birth rates was noted in many countries which was followed by a continuation of the inexorable decline in birth rates which has been underway in most countries since 1950[3].

Global population was estimated to be 7.9 billion people in 2021 and has begun to decline in 56 of 204 countries and territories with many more nations predicted to be impacted within the next decade[1]. Concomitant with the birth rate decline, most countries have ageing populations reflected in shifts in population age pyramids. This combination is creating profound challenges for national economies, healthcare systems and cultures and many countries are only now beginning to grapple with it. To a modest extent, some national population losses might be offset by increasing birth rates, but these attempts have, thus far, not proven to be effective in the countries that have undertaken them. Nevertheless, countries are employing a variety of strategies in an attempt to increase birth rates. Providing support and making resources available to couples and individuals seeking to build families is an important step. The IFFS' own *More Joy* campaign has embraced and supported these efforts globally. https://www.iffsreproduction.org/morejoycampaign/

Along with the significant global changes noted over the past triennium that were detected by our survey, we have made several changes internally, starting with a name change. Our new name, the *International Federation of Fertility Societies' (IFFS)* ***Triennial Report*** *2025: Global Trends in Reproductive Policy and Practice, 10thedition,* proposed by the Editorial Board, more accurately depicts our mission to *Report* than our previous name, *Surveillance* which offered different connotations.

We instituted a new system for recruiting national respondents, dividing the globe into 13 regions and appointing one or two Regional Directors for each region. This highly dynamic group was very successful in engaging a record number of countries, 113, to contribute data to our 10th edition (Table 1, 4).

The Editorial Board was reconstituted, placing more emphasis on recruiting individuals with published expertise in subjects covered by the Triennial Report (Table 2). The Jurists Special Interest Group was established recruiting an international group of renowned legal academicians with special interests in reproductive law to review and discuss topical issues of mutual interest (Table 3). Previously, there had been no organization convening these uniquely talented individuals and the IFFS is delighted to be able to provide a forum for them. They have had several virtual meetings and have made substantial contributions to the *2025 Triennial Report*, including writing, editing and validating some of the chapters.

For the most part, the format used in past editions has been maintained but a few changes have been made. The chapter

Preface. Table 1

Triennial Report 2025 Regional Directors

Region	Directors
1 Europe	Luca Gianaroli
	Edgar Mocanu
2 Africa	Oladapo Oshiru
3 Central and South America	Marcos Horton
	Fernando Zegers-Hochschild
4 Middle East	Francisco Javier Ruiz
5 Far East and Asia	Vyacheslav Lokshin
6 Asia, Australia and New Zealand	Michael Chapman
	Eileen Manalo
7 Turkey and Cyprus	Baris Ata
8 China	Zi-Jiang Chen
9 India	Manish Banker
	Rishma Pai
10 Israel	Dov Feldberg
11 Japan	Hiroshi Kishi
	Seung Chik Jwa
12 Russian Federation	Vladislav Korsak
13 North America	Steven Ory

Preface. Table 2

Editorial Board

Steven Ory	USA
Sonia Allan	Australia
Susannah Baruch	USA
Antonio Capalbo	Italy
Georgina Chambers	Australia
Mark Evans	USA
Tetsuya Ishii	Japan
Kristen Ivani	USA
Molly Johnston	Australia
Erkan Kalafat	Turkiye
Mariana Rodriguez Iturburu	Argentina
Rafal Lukasiewicz	Poland
Kathleen Miller	USA
Uchechukwu Ngwaba	Canada

uniquely assessing the response to the COVID-19 pandemic in 2022 has been discontinued. Although ongoing effects of the pandemic persist, relevant concerns are now addressed in their respective chapters. New questions about the use of artificial intelligence (AI) in the ART laboratory have been introduced and they are included in Chapter 9, Laboratory Techniques and AI. Additional questions about private equity ownership of ART centres have been incorporated into Chapter 1, Number of Centres, so that this trend may now be followed more closely. It was estimated that one third of all ART cycles in the United States in 2023 were performed in private equity associated clinics and three such networks provided two thirds of all ART cycles in Australia[4].

As in the past, the online survey was developed by members of the Editorial Board with assistance from MedTech for Solutions who also executed the questionnaire and conducted the initial data analysis. The survey served as the primary source of data for the *2025 Triennial Report*, but it was supplemented with online research and contributions from the Jurists Special Interest Group. The Regional Directors generally sought a single national respondent for most countries, but separate clinical and laboratory contributors were recruited for larger countries with 90 or more ART centres. Of the 113 countries engaged in the 2024 online questionnaire, 30 countries were new to the project and 20 more countries than

Preface. Table 3

Jurists Special Interest Group

Itziar Alkorta	Spain
Sonia Allan	Australia
Susannah Baruch	USA
Susan Crockin	USA
Rachel Cutting	UK
Judith Daar	USA
Katie Gottschalk	USA
Martin Hevia	Argentina
Tetsuya Ishii	Japan
Mariana Iturburu	Argentina
Bartha Maria Knoppers	Canada
Rafal Lukasiewicz	Poland
Uchechukwu Ngwaba	Canada

Preface. Table 4

National Participants

Orion Gliozheni	Albania
Nigri Kamal	Algeria
Idelma Serpa	Argentina
Cristian Alvarez Sedo	Argentina
Eduard Hambartsoumian	Armenia
Georgina Chambers	Australia
Deirdre Zander-Fox	Australia
Michael Chan	Australia
Thomas Ebner	Austria
Abdulghaffar Hussin	Bahrain
Rezwana Kabir	Bangladesh
Farheen Khan	Bangladesh
Merona Akhter	Bangladesh
Al Mamun	Bangladesh
Mizanur Rahman	Bangladesh
Umme Rumman	Bangladesh
Rezwana Kabir	Bangladesh
Tasnuva Mim	Bangladesh
Keerti Singh	Barbados
Oleg Tishkevich	Belarus
Björn Heindryckx	Belgium
Athanase Sodjiedo	Benin
Patricia Frias	Bolivia
Devleta Balic	Bosnia and Herzegovina
Vincent Maloleka	Botswana
Eric Konyaole	Burkina Faso
Roberto Antunes	Brazil
Claudia Petersen	Brazil
Iavor Vladimirov	Bulgaria
Sokteang Sean	Cambodia
Ernestine Gwet Bell	Cameroon
Dan Nayot	Canada
Alejandro Manzur	Chile
Junhao Yan	China
Keilang Wu	China
Maria Posada	Colombia
Fiorella Bagnarello	Costa Rica
Founzégué Amadou Coulibaly	Côte d'Ivoire
Dinka Pavicic Baldani	Croatia
Velimir Simunic	Croatia
Constantinos Pavlides	Cyprus
Georgios Liperis	Cyprus
Tonko Mardesic	Czech Republic
Justin Mboloko Esimo	Democratic Republic of the Congo
Victor Manuel Montes de Oca	Dominican Republic
Pablo Valencia	Ecuador
Gamal Serour	Egypt
Griselda Maria Ramirez de Matamoros	El Salvador
Yenara Patricia Guevara Gómez	El Salvador
Fernando Jesús Prados Mondejar	Equatorial Guinea
Aivar Ehrenberg	Estonia
Meseret Ansa Giweta	Ethiopia
Antti Perheentupa	Finland
Liisa Kuusipalo	Finland
Nathalie Massin	France
Yves Menezo	France
Matthew Anyanwu	Gambia

Preface. Table 4

(Continued)

Nino Museridze	Georgia
Barbara Sonntag	Germany
Claudia Staib	Germany
Karen Rosenberg	Germany
Edem Hiadzi	Ghana
Basil Tarlatzis	Greece
Konstantinos Pantos	Greece
Vivian Lopez	Guatemala
Raymond Li	Hong Kong
Peter Kovacs	Hungary
Attila Torok	Hungary
Hilmar Björgvinsson	Iceland
Manish Banker	India
Deven Patel	India
Budi Wiweko	Indonesia
Putty Alifa Melyani	Indonesia
Eliza Mansyur	Indonesia
Mojgan Aboulghasemi	Iran
Shirzad Hosseini	Iran
Sham Horamee	Iraq
Chro Muhammad	Iraq
Delman Al Attar	Iraq
Heshw Abdulsamad	Iraq
Sham Tahir	Iraq
Fryad Rahman	Iraq
Edgar Mocanu	Ireland
Dov Feldberg	Israel
Luca Gianaroli	Italy
Valerio Pisaturo	Italy
Danilo Cimadomo	Italy
Loxley Christie	Jamaica
Seung Chik Jwa	Japan
Tatsuji Ihana	Japan
Aref Al Khaledi	Jordan
Khaldoun Sharif	Jordan
Vyacheslav Lokshin	Kazakhstan
Wanjiru Ndegwa	Kenya
Alfred Murage	Kenya
AlaaEldin Elshafey	Kuwait
Alia Hourani	Kuwait
Andris Grunskis	Latvia
Valerija Agloniete	Latvia
Nasreen Osman	Libya
Yousef Gadmour	Libya
Iman Butalag	Libya
Egle Drejeriene	Lithuania
K.K.Iswaran	Malaysia
Djedi Kaba Diakité	Mali
Jean Calleja-Agius	Malta
Martha Luna	Mexico
Roman Pastrama	Moldova
Jargalsaikhan Badarch	Mongolia
Tatjana Motrenko Simic	Montenegro
Omar Sefrioui	Morocco
Chu Myet Chel	Myanmar
Khin May Thin	Myanmar
Adriaan P van der Colf	Namibia
Dijan Vaidya	Nepal
Tarun Pradhan	Nepal
Rangina Laikangbam	Nepal
Santosh Kimar	Nepal
Silvio Rivera	Nicaragua
Faye Iketubosin	Nigeria
Alexander Freis	Norway
Åsmund Mjøen-Vigeland	Norway
Francisco Ruiz	Oman
Muhammad Tahir Khan	Pakistan
Roberto Epifanio Malpassi	Panamá
Roger Molinas	Paraguay
Luis Alberto Guzman Masias	Perú
Eileen M. Manalo	Philippines
Carlos Calhaz-Jorge	Portugal
Johnny Awwad	Qatar
Hasan Burjaq	Qatar
Julien Ignace Matete Mounoi	Republic of the Congo
Arben Zguri	Romania
Anna Smirnova	Russia
Oksana Shurygina	Russia
David Mwesigye	Rwanda
Swee Lian Liow	Singapore
Uliana Dorofeyeva	Slovakia
Birol Aydin	Slovakia
Veljko Vlaisavljevic	Slovenia
Paul Le Roux	South Africa
Jeong-ho Cha	South Korea
Gemma Castillon Cortes	Spain
Yosu Franco	Spain
Yagoub Magid	Sudan
Shamsiddin Kurbanov	Tajikistan
Nicholaus Stephen Mazuguni	Tanzania
Catherine Minto-Bain	Trinidad & Tobago
Mohamed Khrouf	Tunisia
Metin Kayacaglayan	Turkey
James Olobo-Lalobo	Uganda
Svitlana Shyianova	Ukraine
Francisco Ruiz	United Arab Emirates
Bryan Woodward	United Kingdom
Alison Campbell	United Kingdom
Cristina Hickman	United Kingdom
David Adamson	United States of America
Kristen Ivani	United States of America
Rita Vernocchi	Uruguay
Shakhnoza Bakhadirova	Uzbekistan
Jose Carlos Rosales Escuredo	Venezuela
Lan Vuong	Vietnam
Bright Makenzih	Zambia
Tinovimba Mhlanga	Zimbabwe
Rumbidzai Majangara Karaga	Zimbabwe

were represented in the 2022 report. Nine countries which submitted data in 2021 did not participate in 2024, but their 2021 data was included in some of the chapters to offer a more complete depiction of the global status of ART in 2024. Based on the national respondents' submissions, reports from the Regional Directors and Editorial Board members and an online search, 141 countries were determined to be ART providing nations. Thus, data from 122 of the 141 ART countries is included in this year's report.

The data was collected online between January 31 to April 15, 2024. The data received reflected the national respondent's understanding of the status of ART pertinent to the questions asked at this time. The 114-question online survey was completed in 115 minutes on average. Not all respondents submitted responses to all questions and the percent of responses provided in each section reflects the number of answers received for each section. Respondents had the option of responding "yes", "no", "unknown", if they did not know the correct response or, in some cases, "not addressed", if there was no existing policy or legislation to address the question. As in previous editions, a distinction is drawn between the *questionnaire* or *survey* which was conducted in *2024* and the *Triennial Report* published in *2025*.

The validation measures were broadened and primarily accomplished by the Editorial Board, the Regional Directors and the Jurists Special Interest Group for this edition. In addition to the aforementioned measures, responses were compared to previous editions to detect changes and inconsistencies. However, the *Triennial Report* continues to experience several limitations, most notably pertaining to the validation process. National responses for most of the countries were submitted by single well-informed individuals charged with gathering data regarding a wide spectrum of ART related topics at a single point in time. Inevitably, inconsistencies were received, circumstances changed over time and many of the over 10,000 relevant data queries sought could not be ascertained or verified.

The Regional Directors, Editorial Board and Jurists Special Interest Group all played vital roles in seeing this project come to fruition. I am immensely grateful for their enthusiasm and tenacity in developing, sustaining and completing this enterprise and equally so to the 165 national respondents who registered online and completed the survey. In addition to these individuals, many IFFS officers, board members, staff and supporters aided in many aspects of this project. As always, our Managing Editor, Kathleen Miller served as the driving force to ensure that all objectives and deadlines were met.

With 86% of ART countries participating, representing the vast majority of world-wide ART programs, the 2025 Triennial Report offers the most comprehensive assessment of the global status of ART presented yet. The report reflects considerable recovery from the pandemic, progress on several fronts and cultural differences in some areas.

Steven J Ory
Editor-in-Chief,
Triennial Report 2025: Global Trends in Reproductive Policy and Practice, 10th edition
December 2024

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CHAPTER 1: NUMBER OF CENTRES

Introduction

The status of ART services was sought from 198 countries and sovereign states via the 2024 online Triennial Report questionnaire between January 31 to April 15, 2024.

Chapter 1. Table 1

Responding Countries with ART

Albania	Cameroon	Ethiopia	Italy	Mongolia+	Qatar	Tajikistan+
Algeria	Canada	Finland	Jamaica	Montenegro	Republic of the Congo+	Tanzania
Argentina	Chile	France	Japan	Morocco	Romania	The Netherlands*
Armenia	China	Gambia	Jordan	Myanmar+	Russia	Trinidad & Tobago
Australia	Colombia	Georgia	Kazakhstan	Namibia	Rwanda+	Tunisia
Austria	Costa Rica	Germany	Kenya	Nepal+	Saudi Arabia+	Turkey
Azerbaijan+	Côte d'Ivoire	Ghana	Kosovo	New Zealand*	Serbia*	Uganda
Bangladesh	Croatia	Greece	Kuwait	Nicaragua+	Singapore+	Ukraine+
Barbados+	Cyprus+	Guatemala	Latvia	Nigeria	Slovakia+	United Arab Emirates+.
Belarus	Czech Republic	Hong Kong	Lebanon*	Norway	Slovenia	United Kingdom
Belgium+	Democratic Republic of the Congo	Hungary	Libya	Oman+	South Africa	United States of America
Benin	Denmark*	Iceland	Lithuania	Pakistan+	South Korea	Uruguay
Bolivia	Dominican Republic+	India	Malaysia	Panamá	Spain	Uzbekistan
Bosnia and Herzegovina+	Ecuador	Indonesia	Mali	Paraguay	Sri Lanka+	Venezuela
Brazil	Egypt	Iran	Malta+	Perú	Sudan	Vietnam
Bulgaria	El Salvador+	Iraq	Mauritius*	Philippines	Sweden*	Yemen+
Burkina Faso	Equatorial Guinea+	Ireland	Mexico	Polska*	Switzerland*	Zambia+
Cambodia	Estonia	Israel	Moldova+	Portugal	Syria+	Zimbabwe

Chapter 1. Table 2

Non-responding countries with ART

Afghanistan	Cuba	Honduras	Senegal	Thailand
Bahamas	Guinea	Luxembourg	State of Palestine	Togo
Burundi	Haiti	Macedonia	Taiwan	Turkmenistan

Responses were received from 113 national participants ("participating countries"), including 30 countries new to the project. Their responses served as the principal source of data for the report. Nine countries, all of which previously provided ART services, participated in the 2021 survey but did not submit updated responses in 2024 and their previous submissions were utilized for this analysis. For this chapter, a diligent search was also undertaken online and with contacts in the region to determine whether other non-responding countries provided ART services. Previously, 39 such countries were identified in 2018 and 42 in 2021, during the COVID-19 pandemic. For the current survey, 19 non-participants were identified that were confirmed to provide ART services but did not participate in either of the recent surveys. Data from the 2021 responders and the online search were used to supplement the 2024 participating countries' answers for a final tally. The Editorial Board also relied on the online search and additional regional contacts to provide additional validation of the data reported. At the time of the sampling in the first half of 2024, 141 countries (71.2%) were confirmed to offer ART services and 57 (28.7%) did not. By comparison, in 2019, 136 countries were reported to have ART facilities and in 2022, 132 were reported. Of the ART active countries in 2024, 122 were represented by 2024 or 2021 data and an additional 19 countries were added with independently collected data, as described.

Accurate determinations of the type and total number of ART centres is always a challenging, dynamic exercise. The numbers depicted here represent the best estimates of reliable national representatives and internet sources in April 2024. In some respects,

Chapter 1. Table 3

Countries without ART

Andorra	Democratic People's Republic of Korea (North Korea)	Kyrgyzstan	Mozambique	Seychelles
Angola	Djibouti	Lao (People's Democratic Republic)	Nauru	Solomon Islands
Antigua and Barbuda	Dominica	Lesotho	Niger	Somalia
Bahrain+	Eritrea	Liberia	Palau	South Sudan
Belize	Eswatini	Liechtenstein	Papua New Guinea	Suriname
Bhutan	Fiji	Madagascar	Saint Kitts and Nevis	Timor-Leste
Botswana+	Gabon	Malawi	Saint Lucia	Tonga
Brunei Darussalam	Grenada	Maldives	Saint Vincent and the Grenadines	Tuvalu
Cabo Verde	Guinea Bissau	Marshall Islands	Samoa	Vanuatu
Central African Republic	Guyana	Mauritania	San Marino	
Chad	Holy See	Micronesia (Federated States of)	Sao Tome and Principe	
Comoros	Kiribati	Monaco	Sierra Leone	

+ Denotes countries new to survey for 2024 (30); * 2021 survey data used (9)

Chapter 1. Table 4

Is ART performed in your country?

Country	Response	Verification Source
Afghanistan	Yes	Industry
Albania	Yes	Completed Survey 2024
Algeria	Yes	Completed Survey 2024
Andorra	No	No ART
Angola	No	No ART
Antigua and Barbuda	No	No ART
Argentina	Yes	Completed Survey 2024
Armenia	Yes	Completed Survey 2024
Australia	Yes	Completed Survey 2024
Austria	Yes	Completed Survey 2024
Azerbaijan	Yes	Completed Survey 2024
Bahamas	Yes	Industry
Bahrain	No	Completed Survey 2024
Bangladesh	Yes	Completed Survey 2024
Barbados	Yes	Completed Survey 2024
Belarus	Yes	Completed Survey 2024
Belgium	Yes	Completed Survey 2024
Belize	No	No ART
Benin	Yes	Completed Survey 2024
Bhutan	No	No ART
Bolivia	Yes	Completed Survey 2024
Bosnia and Herzegovina	Yes	Completed Survey 2024
Botswana	No	Completed Survey 2024
Brazil	Yes	Completed Survey 2024
Brunei Dar Salaam	No	No ART
Bulgaria	Yes	Completed Survey 2024
Burkina Faso	Yes	Completed Survey 2024
Burundi	No	Industry
Cabo Verde	No	No ART
Cambodia	Yes	Completed Survey 2024
Cameroon	Yes	Completed Survey 2024
Canada	Yes	Completed Survey 2024
Central African Republic	No	No ART
Chad	No	No ART
Chile	Yes	Completed Survey 2024
China	Yes	Completed Survey 2024
Colombia	Yes	Completed Survey 2024
Comoros	No	No ART
Costa Rica	Yes	Completed Survey 2024
Côte d'Ivoire	Yes	Completed Survey 2024
Croatia	Yes	Completed Survey 2024
Cuba	Yes	Industry
Cyprus	Yes	Completed Survey 2024
Czech Republic	Yes	Completed Survey 2024
Democratic People's Republic of Korea (North Korea)	No	No ART
Democratic Republic of the Congo	Yes	Completed Survey 2024
Denmark	Yes	Completed Survey 2021
Djibouti	No	No ART
Dominica	No	No ART
Dominican Republic	Yes	Completed Survey 2024
Ecuador	Yes	Completed Survey 2024
Egypt	Yes	Completed Survey 2024
El Salvador	Yes	Completed Survey 2024
Equatorial Guinea	Yes	Completed Survey 2024
Eritrea	No	No ART
Estonia	Yes	Completed Survey 2024
Eswatini	No	No ART
Ethiopia	Yes	Completed Survey 2024
Fiji	No	No ART
Finland	Yes	Completed Survey 2024
France	Yes	Completed Survey 2024
Gabon	No	No ART
Gambia	Yes	Completed Survey 2024
Georgia	Yes	Completed Survey 2024
Germany	Yes	Completed Survey 2024
Ghana	Yes	Completed Survey 2024

Chapter 1. Table 4

(*Continued*)

Country	Response	Verification Source
Greece	Yes	Completed Survey 2024
Grenada	No	No ART
Guatemala	Yes	Completed Survey 2024
Guinea	Yes	Industry
Guinea Bissau	No	No ART
Guyana	No	No ART
Haiti	Yes	Industry
Holy See	No	No ART
Honduras	Yes	Industry
Hong Kong	Yes	Completed Survey 2024
Hungary	Yes	Completed Survey 2024
Iceland	Yes	Completed Survey 2024
India	Yes	Completed Survey 2024
Indonesia	Yes	Completed Survey 2024
Iran	Yes	Completed Survey 2024
Iraq	Yes	Completed Survey 2024
Ireland	Yes	Completed Survey 2024
Israel	Yes	Completed Survey 2024
Italy	Yes	Completed Survey 2024
Jamaica	Yes	Completed Survey 2024
Japan	Yes	Completed Survey 2024
Jordan	Yes	Completed Survey 2024
Kazakhstan	Yes	Completed Survey 2024
Kenya	Yes	Completed Survey 2024
Kiribati	No	No ART
Kosovo	Yes	Completed Survey 2024
Kuwait	Yes	Completed Survey 2024
Kyrgyzstan	No	No ART
Lao People's Democratic Republic	No	No ART
Latvia	Yes	Completed Survey 2024
Lebanon	Yes	Completed Survey 2021
Lesotho	No	No ART
Liberia	No	No ART
Libya	Yes	Completed Survey 2024
Liechtenstein	No	Industry
Lithuania	Yes	Completed Survey 2024
Luxembourg	Yes	Industry
Macedonia	Yes	Industry
Madagascar	No	No ART
Malawi	No	No ART
Malaysia	Yes	Completed Survey 2024
Maldives	No	No ART
Mali	Yes	Completed Survey 2024
Malta	Yes	Completed Survey 2024
Marshall Islands	No	No ART
Mauritania	No	No ART
Mauritius	Yes	Completed Survey 2021
Mexico	Yes	Completed Survey 2024
Micronesia (Federated States of)	No	No ART
Moldova	Yes	Completed Survey 2024
Monaco	No	No ART
Mongolia	Yes	Completed Survey 2024
Montenegro	Yes	Completed Survey 2024
Morocco	Yes	Completed Survey 2024
Mozambique	No	No ART
Myanmar	Yes	Completed Survey 2024
Namibia	Yes	Completed Survey 2024
Nauru	No	No ART
Nepal	Yes	Completed Survey 2024
New Zealand	Yes	Completed Survey 2021
Niger	No	No ART
Nicaragua	Yes	Completed Survey 2024
Nigeria	Yes	Completed Survey 2024
Norway	Yes	Completed Survey 2024
Oman	Yes	Completed Survey 2024
Pakistan	Yes	Completed Survey 2024
Palau	No	No ART

Chapter 1. Table 4

(*Continued*)

Country	Response	Verification Source
Panamá	Yes	Completed Survey 2024
Papua New Guinea	No	No ART
Paraguay	Yes	Completed Survey 2024
Perú	Yes	Completed Survey 2024
Philippines	Yes	Completed Survey 2024
Poland	Yes	Completed Survey 2021
Saudi Arabia	Yes	Completed Survey 2024
Portugal	Yes	Completed Survey 2024
Qatar	Yes	Completed Survey 2024
Republic of the Congo	Yes	Completed Survey 2024
Romania	Yes	Completed Survey 2024
Russia	Yes	Completed Survey 2024
Rwanda	Yes	Completed Survey 2024
Saint Kitts and Nevis	No	No ART
Saint Lucia	No	No ART
Saint Vincent and the Grenadines	No	No ART
Samoa	No	No ART
San Marino	No	No ART
Sao Tome and Principe	No	No ART
Senegal	Yes	Industry
Serbia	Yes	Completed Survey 2021
Sierra Leone	No	No ART
Seychelles	No	No ART
Sri Lanka	Yes	Completed Survey 2024
Singapore	Yes	Completed Survey 2024
Slovakia	Yes	Completed Survey 2024
Slovenia	Yes	Completed Survey 2024
Solomon Islands	No	No ART
Somalia	No	No ART
South Africa	Yes	Completed Survey 2024
South Korea	Yes	Completed Survey 2024
South Sudan	No	No ART
Spain	Yes	Completed Survey 2024
State of Palestine	Yes	Industry
Sudan	Yes	Completed Survey 2024
Suriname	No	No ART
Sweden	Yes	Completed Survey 2021
Switzerland	Yes	Completed Survey 2021
Syria	Yes	Completed Survey 2024
Taiwan	Yes	Industry
Thailand	Yes	Industry
Tajikistan	Yes	Completed Survey 2024
Tanzania	Yes	Completed Survey 2024
The Netherlands	Yes	Completed Survey 2021
Timor-Leste	No	No ART
Togo	Yes	Industry
Tonga	No	No ART
Trinidad & Tobago	Yes	Completed Survey 2024
Tunisia	Yes	Completed Survey 2024
Turkey	Yes	Completed Survey 2024
Turkmenistan	Yes	Industry
Tuvalu	No	No ART
Uganda	Yes	Completed Survey 2024
Ukraine	Yes	Completed Survey 2024
United Arab Emirates	Yes	Completed Survey 2024
United Kingdom	Yes	Completed Survey 2024
United States of America	Yes	Completed Survey 2024
Uruguay	Yes	Completed Survey 2024
Uzbekistan	Yes	Completed Survey 2024
Vanuatu	No	No ART
Venezuela	Yes	Completed Survey 2024
Vietnam	Yes	Completed Survey 2024
Yemen	Yes	Completed Survey 2024
Zambia	Yes	Completed Survey 2024
Zimbabwe	Yes	Completed Survey 2024

Chapter 1. Table 5

Number and types of ART centres

Total number of ART/IVF Centres reported 2013 -2024					Total number of ART/IVF centres reported 2025 and Type of Centres (more than 1 response possible)						
Country	**2013**	**2016**	**2019**	**2022**	**2025**	**Private Physicians' Group**	**Private Equity Owned**	**Private Hospital-based**	**Private or Public University-based**	**Public Hospital-based**	**Sole Practitioner**
Afghanistan	NR	NR	NR	NR	2*						
Albania	NR	NR	NR	3	9	1	4	3		1	
Algeria	NR	NR	2	3	20	19	18	19	1	1	0
Argentina	30-44	60	65	52	83	50	2	1	25	5	
Armenia	NR	NR	6	6	6		6	4	2		
Australia	NR	76	100	80	90	82			2	6	
Austria	25	27	28	31	38	6	18	1	3	5	5
Azerbaijan	NR	NR	NR	NR	15*						
Bahamas	NR	NR	NR	NR	1*						
Bahrain	NR	NR	NR	NR	0						
Bangladesh	NR	12	11	11	23			8	2	1	12
Barbados	NR	1	1	NR	1	1					
Belarus	4	8	8	8	8			5		3	
Belgium	31	34	10	NR	17					17	
Benin	NR	NR	NR	1	1			1			
Bolivia	NR	NR	10	4	4	4	0	0	0	0	0
Botswana	NR	NR	NR	1	0						
Bosnia and Herzegovina	NR	NR	NR	NR	8	7				1	
Brazil	200	189	200	150	170	100	60	3	7		
Bulgaria	23	31	37	35	40	0	39	5	4	1	30
Burkina Faso	NR	NR	1	2	2	2	2	2	0	0	2
Cambodia	NR	NR	NR	7	7	2	0	2	0	1	2
Cameroon	2	2	3	3	5	0	0	4	1	0	0
Canada	NR	32	34	36	40	15	20	4	8	4	5
Chile	7	9	12	12	12	3	2	5	0	2	
China	200+	358	400	523	560	10	30	250	250	20	
Colombia	27	25	23	32	36	30	3	1	1	0	1
Costa Rica	NR	NR	2	4	4	0	0	0	0	1	3
Côte d'Ivoire	2	NR	4	2	7	1	6	4	1	0	2
Croatia	13	12	NR	15	17	7	1			9	
Cuba	NR	NR	NR	NR	5*						
Cyprus	NR	NR	NR	NR	9	9	0	0	0	0	0
Czech Republic	38	42	42	42	46	9	30		7		
Democratic Republic of the Congo	1	NR	3	2	3	3			1		
Denmark	18-21	21	NR	27	27			13	3	13	
Dominican Republic	5	NR	7	NR	13	13	13	0	0	0	4
Ecuador	11	10	12	10	16	16					
Egypt	58	NR	70	110	111	80	5	95	5	1	5
El Salvador	NR	0	2	NR	3		1				2
Equatorial Guinea	NR	NR	NR	NR	1	1	0	0	0	0	0
Estonia	NR	4	6	6	6		3		1	2	
Ethiopia	NR	NR	NR	3	6	2	0	1	1		2
Finland	18	24	21	22	18	0	11	0	5	3	0
France	100	104	101	103	102	42	10	25	25	0	
Gambia	NR	NR	NR	NR	1						
Georgia	NR	NR	9	16	25			20		5	
Germany	NR	134	125	130	140	118		22			
Ghana	NR	NR	18	18	30			29	1		
Greece	60	66	50	45	47		33	7	5	2	
Guatemala	NR	3	4	5	5	5					
Guinea	NR	NR	NR	NR	1*						
Haiti	NR	NR	NR	NR	1*						
Honduras	NR	2	NR	NR	4*						
Hong Kong	9-12	11	42	40	32	7	8	3	3	5	6
Hungary	14	13	11`	14	12	0	0	0	4	8	0

Chapter 1. Table 5

(*Continued*)

Total number of ART/IVF Centres reported 2013 -2024					Total number of ART/IVF centres reported 2025 and Type of Centres (more than 1 response possible)						
Country	**2013**	**2016**	**2019**	**2022**	**2025**	**Private Physicians' Group**	**Private Equity Owned**	**Private Hospital-based**	**Private or Public University-based**	**Public Hospital-based**	**Sole Practitioner**
Iceland	1	NR	1	1	1		1				
India	500-600	1000	1500	2000	2500						
Indonesia	NR	26	32	42	65	7	10	40		8	
Iran	NR	62	60	41	80*	40	20	10	10	70	0
Iraq	NR	13	5	15	30*	80	20				
Ireland	7-8	28	8	9	10	4	4	1	0	1	0
Israel	29	34	23	25	28	0	4	4	24	0	0
Italy	350	350	350	329	314	179	37	22	76	0	
Jamaica	NR	NR	NR	NR	1			1			
Japan	591	587	574	600	625	380	50	50	45	100	
Jordan	NR	20	22	35	31	0	0	24	2	5	0
Kazakhstan	12	19	23	27	28		24	1		3	
Kenya	NR	5	9	11	14	1	1	1	0	0	11
Kosovo	NR	NR	NR	NR	10*						
Kuwait	NR	NR	NR	15	15	4	4	9	0	2	3
Latvia	4	NR	7	6	6	6	0	0	0	0	0
Lebanon	NR	NR	NR	20	20	16		4	0	0	10
Libya	NR	NR	NR	40	14			8	2	6	
Lithuania	NR	NR	6	8	7	0	3	0	2	0	2
Luxembourg	NR	NR	NR	NR	3*						
Macedonia	NR	NR	NR	NR	5*						
Malaysia	NR	36	12	52	42		16	14	6		5
Mali	NR	1	1	3	5	4				1	
Malta	NR	NR	NR	NR	2	1				1	
Mauritius	NR	NR	NR	4	4	0		1	0	0	3
Mexico	30	48	81	100	120	80	2	10	10	4	14
Moldova	NR	NR	1	NR	4	4	4	4	1	0	0
Mongolia	NR	NR	4	NR	5	5	5	5	0	1	0
Montenegro	NR	NR	5	6	6	1	2	1		1	1
Morocco	NR	NR	NR	17	18	14		2	2		
Myanmar	NR	1	2	NR	5	3			2		
Namibia	NR	NR	2	2	2	2					
Nepal	NR	NR	NR	NR	33	20	26	5	2	4	2
Netherlands	NR	13	15	16	16	2				14	
New Zealand	7	9	8	7	7	6				1	
Nicaragua	NR	NR	1	NR	3	3	3	0	0	0	0
Nigeria	NR	50	36	96	120						
Norway	10	12	10	11	18	1	2	2	4	1	0
Oman	NR	14	NR	NR	6	1	4	1			
Pakistan	NR	NR	NR	NR	27						
Panamá	9	12	10	12	14	13				1	
Paraguay	NR	2	2	2	2	0	2	0	0	0	0
Perú	6	12	18	32	28	25	1	1		1	
Philippines	5	6	7	8	30		8	1			
Polska	NR	50	70	39	60*	35		0	4	0	0
Portugal	28	24	24	26	27		17	1	9		
Qatar	NR	NR	NR	66	10	1	2	3	0	1	3
Republic of the Congo	NR	NR	NR	NR	1		1				
Romania	NR	21	23	40	24	10	2	3		1	7
Russian Federation	110-130	170	200	300	320	235	10	10	65	0	
Rwanda	NR	NR	NR	NR	2	3	2	2	1	1	No
Saudi Arabia	30	50	NR	NR	40*						
Senegal	2	2	100	NR	3*						
Serbia	NR	NR	15	15	15	5				6	4
Singapore	11	11	11	NR	10	7	7	3	1	3	0
Slovakia	NR	9	NR	NR	16	8	5	3	0	0	0

Chapter 1. Table 5

(*Continued*)

Total number of ART/IVF Centres reported 2013 -2024					Total number of ART/IVF centres reported 2025 and Type of Centres (more than 1 response possible)						
Country	**2013**	**2016**	**2019**	**2022**	**2025**	**Private Physicians' Group**	**Private Equity Owned**	**Private Hospital-based**	**Private or Public University-based**	**Public Hospital-based**	**Sole Practitioner**
Slovenia	3	3	3	3	3	1			2		
South Africa	15	20	22	40	40	30	0	0	3	0	7
South Korea	150	148	154	157	160	61		63	32	4	
Spain	100+	371	150	300	334	0	203	0	46	0	
Sri Lanka	NR	6	110	NR	10*						
State of Palestine	NR	NR	NR	NR	5*						
Sudan	NR	NR	NR	8	10	10	10	3	1	1	2
Sweden	16	17	10	16	16	9			7		
Switzerland	26	25	29	30	30	14		4	5	7	
Syria	NR	NR	NR	NR	3*						
Taiwan (China)	76	79	78	NR	60*						
Tajikistan	NR	NR	NR	NR	3	0	3	0	0	0	0
Tanzania	NR	NR	NR	1	6	0	0	5	0	0	1
Thailand	NR	NR	75	NR	40*						
Togo	1	NR	2	NR	NR						
Trinidad & Tobago	NR	1	1	1	1	0	1	0	0	0	0
Tunisia	12	9	13	12	13	0	1	9	3	0	0
Turkey	131	153	154	135	166	102	12	22	30		
Turkmenistan	NR	NR	NR	NR	1*						
Uganda	2	NR	6	5	5			3			2
Ukraine	NR	NR	40	NR	50		38	5	2	5	
United Arab Emirates	NR	NR	10	NR	17						
United Kingdom	71-117	78	82	75	107	22	22	22	41	0	
United States of America	430	410	450	450	450	275	50	50	25	50	
Uruguay	4	3	3	3	3	3	0	0	0	0	0
Uzbekistan	NR	NR	NR	NR	12	10	0	2	0	0	0
Venezuela	10	30	22	9	15	13	0	2	0	0	0
Vietnam	13	NR	26	34	55	0	0	37	3	15	0
Yemen	NR	NR	NR	NR	2*						
Zambia	NR	NR	NR	NR	2	2	2	2	0	0	0
Zimbabwe	NR	NR	2	2	2			1			1
Totals 141	3524-3870	5360	6189	6973	7982	2403	966	1014	836	436	159

more accurate data has become available over the past three years with the further evolution of registries, oversight from national health agencies and progress following recovery from the pandemic. Since most countries lack official registration mechanisms for ART clinics, precise numbers, even at one point in time, are best considered estimates. The 2024 questionnaire and supplemental data sources depict the most intensive effort to compile complete and accurate global data pertaining to ART services yet undertaken.

Analysis of the Survey

The following questions were posed in the survey:

(1) Is ART performed in your country?
(2) The number of ART/IVF centres located in your country is?
(3) The number of various types of ART/IVF clinics in your country is?
(4) Does your country have a fertility society?

Regarding the first question, a total of 198 countries were queried, 141(71.2%) countries were identified that provide ART services and 57 (28.7%) countries do not (Table 1-4, Chart 1). Regarding the second and third questions, the responses were as follows: A total of 141 countries provided data regarding the number of ART centres and a global total of 7982 centres was reported (Table 5).

The fourth query was, "Does your country have a fertility society?" For this question, 99 countries responded, 65 (65.7%) affirmed the presence of a national fertility society, 31 (31.3%) noted the absence of one and 3 respondents replied "unknown" (Table 6).

Discussion

Most countries appear to have made considerable progress in re-establishing ART services post-COVID-19 pandemic. Overall, the 2024 Triennial Report data reflect a 14.4% increase, from 6973 to

Chapter 1. Table 6

Does your country have a fertility society?

Country	Response	Name(s) and contact information of fertility societies
Albania	No	
Algeria	Yes	SAMERE
Armenia	Yes	Armenian society for reproductive medicine (I am the president of the society)
Austria	Yes	1. Austrian Society of Reproductive Medicine (ÖGRM) Contact: Mrs Yasmin HAUNOLD CE Management Scheibenbergstr. 39 A-1180 Vienna mailto:office@ce-management.com 2. Austrian IVF-Society (Österreichische IVF-Gesellschaft) Contact: Mr. Roman HAAS Medical Quality GmBH Koschatgasse 3 A-1190 Vienna mailto:office@ivf-gesellschaft.at
Bahrain	No	
Bangladesh	Yes	Fertility and Sterility Society of Bangladesh - FSSB
Barbados	No	
Belarus	Yes	Belarusian Medical Society of Human Reproduction
Belgium	Yes	Belgian Society for Reproductive Medicine BSRM Central Office C/O Orga-Med Congress Office Opalfeneweg 3, 1740 Ternat, Belgium ria@orga-med.com; Tel. +32 02/582.08.52
Benin	Yes	Societe Beninoise de Fertilite (SOBEF) Tél : +(229) 51.01.22.22; E-mail : sobef2011@gmail.com
Bolivia	No	
Bosnia and Herzegovina	No	
Botswana	No	
Bulgaria	Yes	Bulgarian Association of Sterility and Reproductive Heath www.basrh.org/info@basrh.org
Burkina Faso	No	
Cambodia	No	
Cameroon	Yes	Cameroon Fertility Society https://www.cameroonfertility.com/desktop/fr/cameroonfertilitysociety@gmail.com President: Dr Gwet Bell Ernestine: gwetbell@gmail.com Secretary: Dr Tsingaing Jacques; Treasurer: Dr Akoung Nicole
Canada	Yes	CFAS
Chile	Yes	Sociedad Chilena de Medicina Reproductiva (SOCMER) Dr. Anibal Scarella is the president for the period 2024-2025 anibalscarella@gmail.com Dr. Alejandro Manzur is the past president amanzur64gmail.com
Colombia	Yes	Asociacion de Centros Colombianos de Reproduccion Humana ACCER Presidente: Andres Gutierrez Angutapa@yahoo.com
Costa Rica	No	
Côte d'Ivoire	Yes	Dr Angoi Virginie Contact: 00 225 05 05 78 66 52; Email : avavirginie@yahoo.fr
Croatia	Yes	Croatian Society for Gynecologic Endocrinology and Hyman Reproduction; Croatian Society of Clinical Embriologists
Cyprus	Yes	Association of Clinical Embryologists Cyprus (ACEC)
Czech Republic	Yes	Czech Society for Assisted Reproduction and Infertility Dr. Stepan Machac e-mail: Stepan.Machac@ivfclinic.cz
Democratic Republic of the Congo	Yes	Société Congolaise de Fertilité
Dominican Republic	No	
Ecuador	Yes	Sociedad Ecuatoriana de Medicina Reproductiva
Egypt	Yes	Egyptian Fertility and Sterility Society (EFFS) www.efss-eg.com 002023785331/Email efsociety1@hot-mail.com
El Salvador	No	
Equatorial Guinea	No	
Estonia	Yes	Eesti Viljatusravi ja Embrüoloogia Selts; info@viljatusraviselts.ee
Ethiopia	No	
Finland	Yes	Finnish Fertility Society, hanna.savolainen-peltonen@hus.fi
Gambia	Yes	Fertility Society of The Gambia; 7786700, 3379857
Georgia	Yes	Georgian Reproductology Association
Ghana	Yes	Fertility Society of Ghana President: Dr Rudolph Kantum Adageba; Email; rkadageba3147@gmail.com
Greece	Yes	Hellenic Society of Reproductive Medicine

Chapter 1. Table 6

(*Continued*)

Country	Response	Name(s) and contact information of fertility societies
		Hellenic Association of Physicians of Medical Assisted Reproduction
		Hellenic Fertility and Sterility Society
Guatemala	Yes	
Hong Kong	Yes	Hong Kong Society for Reproductive Medicine
Hungary	Yes	Hungarian Assisted Reproduction Society
		President: Prof.Jozsef Bodis MD, PhD, MSc/ Email: bodis.jozsef@pte.hu
Iceland	No	
Indonesia	Yes	Hifery (Indonesian Fertility society for OB&G)
		Perfitri /Indonesian IVF society (for physicians, embryologist & nurse)
Iran	Yes	ISRM; +982126207215
Iraq	Unknown	
Ireland	No	
Israel	Yes	The Israeli Fertility Association (IFA)
		Professor Raoul Orvieto, Chairman; raoul.orvieto@sheba.health.gov.il
Jamaica	No	IVF Jamaica
Jordan	Yes	Jordanian Society of Fertility and Genetics
		Mrs Amal Alastal; amalalastal@yahoo.com
Kazakhstan	Yes	Kazakh Association of the Reproductive Medecine (KARM)
Kenya	Yes	Fertility And Andrology Society of Kenya
Kuwait	No	
Latvia	Yes	https://www.lcrb.lv/
Libya	Yes	Libyan Fertility Society
		Libyan Society for infertility and Disease Treatment
Lithuania	No	The section of fertility specialists in Lithuanian Society of Obstetricians and Gynecologists
Malaysia	No	Obstetrics & Gynecology society of Malaysia
Mali	Yes	Malian Fertility Society
Malta	No	
Mexico	Yes	Asociación Mexicana de Medicina de la Reproducción (AMMR)
		Ruben Tlapanco, MD, President AMMR +525554140564; rubentlapanco@gmail.com
		Martha Luna, MD, Vice President AMMR +525518507706; martha.luna@rmamexico.com
Moldova	No	
Mongolia	Yes	Mongolian Reproductive Endocrinology and Infertility Society
Montenegro	Yes	Montenegrin Society for Human Reproduction
Morocco	Yes	Société Marocaine de Médecin de Reproduction et de Médecine Dœtale (SMMR)
Myanmar	Yes	Fertility CWH
Namibia	No	
Nepal	Yes	Fertility Society of Nepal (FESON), Dr. Swasti Sharma, Secretary (+977 985-1202266)
Nicaragua	Yes	
Nigeria	Yes	Association For Fertility and Reproductive Health
		Afrhnig@gmail.com; +234-903-765-3157
Norway	Yes	Norsk Forening for Assistert Befruktning
		Leder@nofab.no
Oman	No	
Pakistan	No	
Panamá	Yes	ASPAMER (Asociación Panameña de Medicina Reproductiva). Dr. Carlos Poveda – President; Email: Info@aspamer.com
Paraguay	No	
Perú	Yes	Sociedad Peruana de Fertilidad; https://spf.com.pe/
Philippines	Yes	Philippine Society of Reproductive Medicine
Portugal	Yes	Sociedade Portuguesa de Medicina da Reprodução
		Edifício Cruzeiro n.º 4 · 2º andar, sala 32
		Largo de Celas
		3000-132 Coimbra
		Portugal
		Tm. 917 527 529
		secretariado@spmr.pt
Qatar	No	
Republic of the Congo	Yes	Gieraf Antenna of Congo
Romania	Unknown	Societate
Singapore	Yes	Obstetrical & Gynaecological Society of Singapore
		Secretariat Office
		Unit 3G12, Level 3, Women's Tower
		KK Women's & Children's Hospital
		100 Bukit Timah Road
		Singapore 229899 Tel: (65) 6295-1383; fax: (65) 6299-1969; Email: secretariatogss@gmail.com
Slovakia	No	
Slovenia	Yes	SZRM-SZD

Chapter 1. Table 6

(*Continued*)

Country	Response	Name(s) and contact information of fertility societies
		Slovenian Society for Reproductive Medicine-Slovenian Medical Society Secretary: Nina Jancar@kclj.si
South Korea	No	-The Korean Society for Reproductive Medicine -Korean Society for Reproductive Immunology -Korean Association for Clinical Embryologists -The Korean Society for Fertility Preservation -The Korean Society for Assisted Reproduction -Korean Society for Sexual Medicine and Andrology
Spain	YES	Sociedad Española de Fertilidad (www.sefertilidad.net); ASEBIR
Sudan	Yes	Sudan human Reproduction & Embryology Society (SHRES) Dr Mohamed Awad Ahmed, President; Email address: awad22mohd@gmail.com
Tajikistan	Yes	Association of OB/GYNs; Association for Family Planning and Safe Motherhood
Tanzania	Yes	Dr. Nicholaus Stephen Mazuguni
Trinidad & Tobago	No	
Tunisia	Yes	Société Tunisienne de Gynécologie Obstétrique
Uganda	Yes	Uganda Fertility Society Dr Daniel Zzakke, President Bukoto, Kisaasi Road. Kampala email: wwwfertilitysocietyug.org
Ukraine	Yes	Ukrainian Association of Reproductive Medicine 58005, Chernivtsi, Trepko str., 1-A tel./fax: +38(044) 465-10-46 President - Prof. Oleksandr Yuzko Secretary - Onishchuk Oksana Silina Natalia E-mail: uarm.kiev@gmail.com; tel. +38 (095) 853-81-35
United Arab Emirates	No	
United States of America	Yes	American Society of Reproductive Medicine (www.asrm.org)
Uruguay	Yes	Sociedad Uruguaya de Reproduccion Humana (SURH)
Uzbekistan	Yes	"O'zbekiston reproduktiv meditsina assotsiatsiyasi" https://www.uzarm.uz/+998946188107; +998977515000; shahnozafayz@mail.ru
Venezuela	Yes	Asociación Venezolana de Medicina Reproductiva y Embriología AVEMERE www.avemere.org.ve; @avemere.ve
Vietnam	No	
Zambia	Yes	Zambia Fertility Society; +260977980930
Zimbabwe	Unknown	Has a Reproductive Medicine society that is formulating guidelines for practice of reproductive medicine in Zimbabwe. It is a branch of the society of obstetricians and gynaecologists.

7982 ART centres, over the past three years. It is difficult to compare the total number of centres over three years since the 2024 data included 45 countries not represented in the 2021 survey and one country not represented in the current survey that was included three years ago. However, of the 45 previously omitted countries, only 10 reported having more than 10 centres in the current survey and most had one or two centres. For this analysis, 95 countries submitted data in both of the past two surveys that permitted comparisons between 2021 and 2024. The increase of 1009 centres noted over the triennium can be attributed to 45 countries which reported the creation of additional programs. Most countries experienced slight increases in their total number of centres, but several countries including Algeria, Argentina, Austria, Bangladesh, Ecuador, Georgia, Ghana, India, Indonesia, Mexico, Nigeria, Polska, Turkey, the United Kingdom, and Vietnam, reported 20% or greater increases in the number of centres during the past three years. Only 13 countries reported declines in their numbers, including Botswana, Finland, France, Hong Kong, Hungary, Italy, Jordan, Libya, Lithuania, Malaysia, Peru, Qatar, and Romania. The remainder reported no change. Although these numbers are generally consistent with past surveys, individual reporting may vary with the perspective of the respondent and the sampling methods that they utilized.

Private physicians or group ownership remains the most common business model with 77 countries noting their existence. The 2024 survey included a query about the presence of private equity ownership in ART centres for the first time and 65 countries cited their presence. The private equity model is particularly prevalent in Algeria, Austria, Brazil, Bulgaria, Canada, the Czech Republic, the Dominican Republic, Finland, Greece, Kazakhstan, Nepal, Portugal, Spain, Ukraine and the United States. University based programs were a less common model, present in 57 countries and public hospital ART centres were found in only 55 countries. Clinics operated by sole practitioners, historically the least common model except in 2019, was noted in 31 countries. The sole practitioner model is the predominant one in twelve countries, including Bangladesh, Bulgaria, Burkina Faso, Cambodia, Costa Rica, El Salvador, Ethiopia, Hong Kong, Kenya, Kuwait, Lebanon and Mauritius.

The 2024 survey revealed that 65 countries have discrete national fertility societies.

Summary

The 2024 Triennial Report data more completely depict the status of ART services of the 141 countries currently providing

Chapter 1. Chart 1

these services. The report documents a robust recovery from the pandemic in the provision of ART services in most countries and an increase of over 1000 additional ART centres since the last report, reflecting broader participation in the survey and generally modest increases in the number of ART centres in 45 countries. Only 13 countries reported a decline in their numbers. The private practice or group ownership format remains the most common business model, present in 77 countries followed by university-based programs. In 2024, 65 countries reported the existence of a national fertility society.

Chapter 2: Legislation and Policy Guidelines

Introduction

The 2024 Survey provides the opportunity to compare systems that govern the use of Assisted Reproductive Technology (ART) in various countries worldwide. For this section, data collected from respondents in 115 countries provided meaningful information regarding regulations, governance, and oversight of ART. Some form of regulation currently exists in most countries where ART services are available. Most often the regulation focuses on legislative requirements that establish the specific boundaries of ART practice. Laws may be found at Federal/National; State/Provincial/Regional; and/or Municipal levels. This legal framework is frequently supplemented with guidelines provided by the government or professional societies. Many countries have additional provisions for licensing and agency oversight.

The extent and/or boundaries of these regulations are often influenced by the social, cultural, religious, and political context in which the practice of ART, surrogacy, and related practice/research takes place. Laws and guidelines are often developed following consultation with local stakeholders, including patient advocacy groups, local health care providers, professional organizations, cultural and religious organizations. There may also be subsequent follow up consultations with ART offspring. The specific policies implemented by governmental agencies and legislative bodies reflect the extent that such practices are accepted and/or limited by respective jurisdictions. Professional bodies may also contribute to establishing requirements and parameters within which practice occurs. All such factors are reflected in the responses to this chapter and are considered in greater detail in subsequent chapters.

Analysis of the Survey

Questions posed by the survey include:

(1) Is ART regulated in your country?
(2) How is ART regulated in your country?
(3) If possible, please specify where government/regulatory documents or relevant information can be accessed?
(4) Have there been any updates to the regulation of ART in your country since 2021b What were the main modifications?
(5) Have there been any instances where violations of national ART policies have been reported?
(6) Are their licensing criteria in your country for ART/IVF centres? What are the licensing criteria for an IVF/ART centre?
(7) Is there licensing criteria in your country for physicians with advanced training in reproductive endocrinology and infertility (REI)? What are the licensing criteria in your country for physicians with advanced training in reproductive endocrinology and infertility (REI)?
(8) Is there licensing criteria in your country for OB/GYN physicians who practise ART? What are the licensing criteria for OB/GYN physicians who practise ART?
(9) Is there licensing criteria in your country for the ART laboratory? What are the licensing criteria in your country for the ART laboratory?
(10) Is there licensing criteria in your country for the ART laboratory director? What are the licensing criteria for the ART laboratory director?
(11) Is there licensing criteria in your country for ART laboratory technical staff? What are the licensing criteria for the ART technical staff?
(12) Is there licensing criteria in your country for mental health professionals? What are the licensing criteria for mental health professionals?
(13) Is there licensing criteria in your country for fertility nurses? What are the licensing criteria for fertility nurses?
(14) Are there monitoring mechanisms for governance, licensure or credentialing in your country for ART centres? How is monitoring of governance, licensure or credentialing carried out? Who carries out such monitoring?
(15) Are there monitoring mechanisms for governance, licensure or credentialing in your country for physicians with advanced training in reproductive endocrinology and infertility (REI)? How is monitoring of governance, licensure or credentialing carried out? Who carries out such monitoring?
(16) Are there monitoring mechanisms for governance, licensure or credentialing in your country for the ART laboratory? How is monitoring of governance, licensure or credentialing carried out? Who carries out such monitoring?
(17) Are there monitoring mechanisms for governance, licensure or credentialing in your country for the ART laboratory director? How is monitoring of governance, licensure or credentialing carried out? Who carries out such monitoring?
(18) Are there monitoring mechanisms for governance, licensure or credentialing in your country for ART laboratory technical staff? How is monitoring of governance, licensure or credentialing carried out? Who carries out such monitoring?
(19) Are there monitoring mechanisms for governance, licensure or credentialing in your country for mental health professionals? How is monitoring of governance, licensure or credentialing carried out? Who carries out such monitoring?
(20) Are there monitoring mechanisms for governance, licensure or credentialing in your country for fertility nurses? How is monitoring of governance, licensure or credentialing carried out? Who carries out such monitoring?
(21) Are penalties designated for violation of governance, licensure, or credentialing? Describe penalties.
(22) Is ART regulated in your country? How is ART regulated in your country?

Of the 115 respondents that provided information pertaining to the regulation of ART in their respective country, 80 (69.6 %) reported the existence of some type(s) of regulation that governs the practice of ART (Table 1). Thirty-four (28.6%) reported no regulation; and one respondent (0.9%) (from Iraq) responded 'unknown'.

The number of respondents that reported the type of regulation that exists varied. Seventy-two of 76 respondents

Chapter 2. Table 1

Is ART regulated in your country?

		Is ART regulated in your country?					
Country	**Regulated?**	**Federal/National**	**State/Provincial/Regional**	**Municipal**	**Agency**	**Licensing Body**	**Professional**
Albania	Yes	Yes					
Algeria	No						
Argentina	Yes	Yes					
Armenia	Yes	Yes	No	No	No	No	Yes
Australia	Yes	Yes	Yes		Yes	Yes	Yes
Austria	Yes	Yes	No	No	No	Yes	No
Bangladesh	No						
Barbados	No						
Belarus	Yes	Yes				Yes	Yes
Belgium	Yes	Yes	No	No	Yes	Yes	No
Benin	Yes	Yes					
Bolivia	No						
Bosnia and Herzegovina	Yes	Yes	Yes	No	No	Yes	No
Brazil	Yes	Yes	No	No	Yes	No	Yes
Bulgaria	Yes	No	Yes	No	Yes	Yes	Yes
Burkina Faso	No						
Cambodia	Yes	Yes	No	No	No	Yes	Unknown
Cameroon	Yes	Yes	No	No	No	No	Yes
Chile	Yes	Yes	No	No	Yes	No	Yes
China	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Colombia	Yes	Yes					Yes
Costa Rica	Yes	Yes	No	No	No	No	No
Côte d'Ivoire	No						
Croatia	Yes	Yes					
Cyprus	Yes	Yes	No	No	No	Yes	No
Czech Republic	Yes	Yes	No	No	No	No	No
Democratic Republic of the Congo	No						
Denmark	Yes	Yes	No	No	Unknown	Yes	Yes
Dominican Republic	No						
Ecuador	No						
Egypt	Yes						Yes
El Salvador	No						
Equatorial Guinea	Yes	Yes	No	No	No	No	No
Estonia	Yes	Yes	No	No	Yes	Yes	Yes
Ethiopia	Yes	Yes	Unknown	Unknown	Unknown	Yes	Yes
Finland	Yes	Yes	No	No	Yes	Yes	Yes
France	Yes	Yes	No	No	No	No	No
Gambia	No						
Georgia	Yes	Yes	No	No	No	No	No
Germany	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ghana	Yes	Yes	No	No	No	No	Yes
Greece	Yes	Yes	Unknown			Yes	Yes
Guatemala	No						
Hong Kong	Yes	Yes	Yes	No	No	Yes	Yes
Hungary	Yes	Yes	No	No	No	No	No
Iceland	Yes	Yes	No	No	No	Yes	No
India	Yes	Yes					
Indonesia	Yes	Yes				Yes	Yes
Iran	No						
Iraq	Unknown						
Ireland	No						
Israel	Yes	Yes	No	No	No	Yes	Yes
Italy	Yes	Yes	Yes	No	Yes	Yes	Yes
Jamaica	No						
Japan	Yes	No	No	No	No	No	Yes
Jordan	No						
Kazakhstan	Yes	Yes				Yes	
Kenya	No						
Kuwait	Yes	Yes	No	No	No	Yes	No
Latvia	Yes	Yes	No	No	Yes	Yes	Yes
Lebanon	No						
Libya	No						
Lithuania	Yes	Yes	No	No	No	Yes	Yes
Malaysia	No						
Mali	No						

Chapter 2. Table 1

(*Continued*)

		Is ART regulated in your country?					
Country	**Regulated?**	**Federal/National**	**State/Provincial/Regional**	**Municipal**	**Agency**	**Licensing Body**	**Professional**
Malta	Yes	Yes				Yes	
Mexico	No						
Moldova	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Montenegro	Yes	Yes	Yes	No	Yes	Yes	Yes
Morocco	Yes	Yes					
Myanmar	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Namibia	Yes		Yes			Yes	Yes
Nepal	Yes	Yes	Unknown	No	Unknown	Yes	Yes
New Zealand	Yes	Yes			Yes	Yes	Yes
Nicaragua	Yes	Yes					
Nigeria	Yes						Yes
Norway	Yes	Yes	No	No	Yes	Yes	No
Oman	Yes	Yes	No	No	No	Yes	No
Pakistan	No						
Panamá	No						
Paraguay	No						
Perú	No						
Philippines	Yes	No	no	No	Yes	No	Yes
Polska	Yes	Yes	No	No	Yes	Yes	No
Portugal	Yes	Yes	No	No	Yes	Yes	No
Qatar	Yes	No	Yes	No	No	Yes	No
Republic of the Congo	No						
Romania	Yes						Yes
Russia	Yes	Yes	Yes	No	No	No	Yes
Rwanda					N/A	No	
Serbia	Yes	Yes	No	No	Yes	Yes	Yes
Singapore	Yes	Yes	Unknown	Unknown	Yes	Yes	Yes
Slovenia	Yes	Yes				Yes	
South Africa	Yes	Yes	Yes	No	No	No	Yes
South Korea	Yes	Yes	No	No	No	No	No
Spain	Yes	Yes	No	No	No	No	No
Sudan	No						
Sweden	Yes	Yes	No	No	No	No	Yes
Switzerland	Yes	Yes	Yes	No	Yes	Yes	Yes
Tajikistan	Yes	Yes	No		Yes	Yes	No
Tanzania	No						
The Netherlands	Yes	Yes	No	No	No	Yes	Yes
Trinidad & Tobago	No						
Tunisia	Yes	Yes			Yes	Yes	
Turkey	Yes	Yes					
Uganda	No						
Ukraine	Yes	Yes	No	No	No	Unknown	Yes
United Arab Emirates	Yes	Yes	Yes	No	No	Yes	Yes
United Kingdom	Yes	Yes	No	No	Yes	Yes	Yes
United States of America	Yes	Yes	Yes	No	Yes	Yes	Yes
Uruguay	Yes	Yes	No	No	No	No	No
Uzbekistan	Yes	Yes	No	No	No	No	No
Venezuela	No						
Vietnam	Yes	Yes	No	No	No	No	Yes
Zambia	No						
Zimbabwe	No						

reported that ART was governed by federal (national) laws, statutes, ordinances, or policies, while 17 of 61(27.8%) respondents noted the existence of state, provincial, or regional laws, statutes, or ordinances. Four of 57 (7.0%) respondents reported the existence of municipal laws, statutes, or ordinances that regulated ART, while 26 of 62 (27.8%) respondents said there was agency-based regulations or oversight. Forty-six of 69 (66.7%) respondents reported licensing bodies, and 45 of 68 (66.1%)reported that oversight was provided by professional organizations.

Variations in reported numbers in previous years most likely reflect changes in sampling methods, the number of respondents to various questions, and that respondents have changed over time, and may have differing knowledge. The results did not indicate that any rescinding of regulation pertaining to ART had occurred in the past three years.

Chapter 2. Table 2

Where can government/regulatory documents or relevant information be accessed.

Country	Site /Links/Comments
Albania	Reproductive Health Law Law Nr. 8876 Dated 4 April 2002 on Reproductive Health Art.20 (English)
Algeria	Ministère de santé. Dz Loi n°18-11 du18 Chaoual 1439 correspondant au 2 juillet 2018 relative à la santé (French)
Argentina	There is a law covering fertility treatments, but there is no law regulating the practice. The Law 26, 862 establishes this coverage applies to the public sector, private health insurance, and social security and SAMeR www.samer.org.ar Medically Assisted Reproduction Law 26, 862 Regulations
Armenia	https://www.arlis.am/documentview.aspx?docid=75284
Australia	Links to state and territory legislation and national guidelines regulating ART in NSW, SA, WA, ACT, QLD (pending); in all states and territories: https://www.nhmrc.gov.au/research-policy/ethics/ethical-guidelines-use-assisted-reproductive-technology (See also and laws pertaining to surrogacy and status of children (parentage)) Research involving human embryos and cloning – links to Cth and state legislation: https://www.nhmrc.gov.au/research-policy/embryo-research-licensing/commonwealth-and-state-legislation Professional Organsiations: https://www.fertilitysociety.com.au/rtac-australia-new-zealand/
Austria	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10003046
Belarus	https://kodeksy-by.com/zakon_rb_o_vspomogatel_nyh_reproduktivnyh_tehnologiyah.htm https://pravo.by/document/?guid=12551&p0=W22035340&p1=1
Belgium	https://www.ejustice.just.fgov.be/cgi/article_body.pl?language=nl&caller=summary&pub_date=07-07-17&numac=2007023090
Benin	https://assemblee-nationale.bj/wp-content/uploads/2020/03/code-de-l-enfant.pdf
Brazil	ANVISA and CFM websites Resolution No. 2.168
Bulgaria	https://www.mh.government.bg https://iamn.bg
Cameroon	Ministry of Public Health of Cameroon Loi n°2011/024 du 14/12/2011 relative à la lutte contre le trafic et la traite des personnes
Chile	https://www.gob.cl/ministerios/ministerio-de-salud/
China	https://www.gov.cn/gongbao/content/2002/content_61906.htm
Colombia	https://www.minsalud.gov.co/Normatividad_Nuevo/Ley%201953%20de%202019.pdf Sentencia de la Corte Constitucional SU074/20 2022 https://www.corteconstitucional.gov.co/relatoria/2020/SU074-20.htm
Costa Rica	http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?nValor1=1&nValor2=80115
Croatia	https://zdravlje.gov.hr/programi-i-projekti/nacionalni-programi-projekti-i-strategije/nacionalni-transplantacijski-program/zakoni-i-ostali-propisi-2547/medicinski-pomognuta-oplodnja/2690
Cyprus	https://www.cylaw.org/nomoi/enop/non-ind/2015_1_69/full.html
Czech Republic	https://uzis.cz
Denmark	Danish Health Authorities, Assisted Reproduction - https://stps.dk/da/ansvar-ogretningslinjer/vejledning/assisteret-reproduktion/#
Egypt	GadElHak, goriosDar Eliftaa., 1980Cairo, 1225 andGregorios1989 AkhbR el glum, 82131 Decree no. 238/2003 of the Ministry of Health and Population on Professional Ethics Regulations
Equatorial Guinea	https://www.guineasalud.org/archivos/Ordenes/Ley%20Num_4-2020.pdf

Chapter 2. Table 2

(*Continued*)

Country	Site /Links/Comments
Estonia	https://www.riigiteataja.ee/en/eli/ee/508012024002/consolide/current
Finland	https://www.finlex.fi/en/
France	https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000043884384
Ghana	Ministry of Health, Judicial service
Greece	www.eaiya.gr
Guatemala	http://ww2.oj.gob.gt/
Hong Kong	www.chrt.org.hk
Hungary	https://njt.hu/jogszabaly/1999-43-20-22
Iceland	https://www.althingi.is/lagas/nuna/1996055.html
India	www.artsurrogacy.gov.in
Iran	https://behdasht.gov.ir/
Ireland	No ART Law yet. Laboratories are regulated under the EUTCD.
Italy	https://www.iss.it/rpma-normativa
Japan	https://www.jsog.or.jp/modules/statement/index.php?content_id=3
Kazakhstan	"ON PUBLIC HEALTH AND HEALTHCARE SYSTEM" Code of the Republic of Kazakhstan dated July 7, 2020 No. 360-VI ЗРК.
Kuwait	Kuwait moh
Latvia	https://www.zva.gov.lv
Lithuania	https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/f31c44c27bd711e6a0f68fd135e6f40c
Malta	https://legislation.mt/eli/act/2022/11/eng
Mexico	Red LARA (Red Latinoamericana de Reproducción Asistida)
Montenegro	Ministry of Health, Montenegro, Agency for biomedicine
Morocco	Ministry of health
New Zealand	https://www.legislation.govt.nz/act/public/2004/0092/latest/whole.html
Oman	Ministry of Health https://www.moh.gov.om/en
Philippines	Philippine Department of Health
Portugal	https://www.cnpma.org.pt/
Romania	http://sogr.ro/ghiduri-clinice
Russia	http://publication.pravo.gov.ru/Document/View/0001202010190041
Serbia	www.gov.rs
Singapore	https://www.moh.gov.sg/docs/librariesprovider5/licensing-terms-and-conditions/licensingterms-and-conditions-on-assisted-reproduction-services.pdf
Slovenia	Act on the treatment of infertility and ART http://pisrs.si/Pis.web/pregledPredpisa?id=ZAKO2518 Act on the Quality and Safety of … http://www.jazmp.si/kri-tkiva-in-celice/preskrba-s-tkivi-in-celicami/zakonodaja/
South Africa	www.health.gov.za
South Korea	https://www.mohw.go.kr/
Switzerland	www.admin.ch
Tajikistan	gender.tj/images/booklets/kodeks-zdravohraneniya-rt.pdf
The Netherlands	https://wetten.overheid.nl
Tunisia	http://www.santetunisie.rns.tn/fr/presentations/textes-juridiques-et-reglementaires?start=45
Turkey	https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=20085&MevzuatTur=7&MevzuatTertip=5
Ukraine	https://ips.ligazakon.net/document/JH6NP00A?an=3https://zakon.rada.gov.ua/laws/show/z1697-13#Text
United Kingdom	www.hfea.gov.uk
United States of America	https://www.cdc.gov/art/nass/policy.html
Uruguay	Web Fondo Nacional de Recursos
Uzbekistan	https://lex.uz/ru/docs/5425100
Zambia	Currently using the British guidelines

Chapter 2. Table 3a

Have there been any updates to the regulation of ART in your country since 2021 and what were the main modifications?

Country	Updates	Donation	PGT	Legislation and guidelines	Surrogacy	Cross border reproduction	Number of embryos for transfer
Albania	Yes		Increased	Increased	Restricted/ Limited		Increased
Algeria	No						
Argentina	No						
Armenia	Yes	Increased		Increased	Increased	Increased	
Australia	Yes	Increased		Restricted/Limited			
Austria	No						
Bangladesh	No						
Barbados	No						
Belarus	No						
Belgium	No						
Benin	No						
Bolivia	No						
Bosnia and Herzegovina	Yes	Restricted/ Limited	Restricted/ Limited	Increased	Restricted/ Limited	Restricted/Limited	Restricted/Limited
Brazil	Yes	Increased	Increased	Increased	Increased	Unknown	Restricted/Limited
Bulgaria	Yes	Increased	Increased	Increased	Restricted/ Limited	Increased	Increased
Burkina Faso	No						
Cambodia	No						
Cameroon	No						
Chile	No						
China	No						
Colombia	No						
Costa Rica	No						
Côte d'Ivoire	Unknown						
Croatia	No						
Cyprus	Yes	Increased		Increased	Increased		Increased
Czech Republic	Yes			Increased			
Democratic Republic of the Congo	No						
Denmark	Yes	Increased		Restricted/Limited		Restricted/Limited	
Dominican Republic	No						
Ecuador	No						
Egypt	No						
El Salvador	No						
Equatorial Guinea	No						
Estonia	Yes			Increased			
Ethiopia	No						
Finland	Yes						
France	Yes	Restricted/ Limited	Restricted/ Limited	Restricted/Limited	Restricted/ Limited	Restricted/Limited	Restricted/Limited
Gambia	No						
Georgia	Yes	Restricted/ Limited	Unknown	Unknown	Restricted/ Limited	Restricted/Limited	Unknown
Germany	Yes						
Ghana	Yes	Increased	Restricted/ Limited	Increased	Restricted/ Limited	Increased	
Greece	Yes	Increased	Increased	Increased	Increased	Increased	
Guatemala	No						
Hong Kong	No						
Hungary	No						
Iceland	Yes	Increased		Increased			
India	Yes	Restricted/ Limited	Restricted/ Limited		Restricted/ Limited	Restricted/Limited	Restricted/Limited
Indonesia	Yes	Restricted/ Limited	Restricted/ Limited	Increased	Restricted/ Limited	Restricted/Limited	Restricted/Limited
Iran	No						
Iraq	Unknown						
Ireland	No						
Italy	No						

Chapter 2. Table 3a

(*Continued*)

Country	Updates	Donation	PGT	Legislation and guidelines	Surrogacy	Cross border reproduction	Number of embryos for transfer
Jamaica	No						
Japan	Yes	Restricted/ Limited	Restricted/ Limited	Increased	Restricted/ Limited	Unknown	Restricted/Limited
Jordan	No						
Kazakhstan	No						
Kenya	No						
Kuwait	No						
Latvia	No						
Lebanon	No						
Libya	No						
Lithuania	Yes						
Malaysia	No						
Mali	No						
Malta	Yes		Increased				
Mexico	No						
Moldova	Yes	Increased	Unknown	Increased	Restricted/ Limited	Restricted/Limited	Unknown
Montenegro	Yes	Increased	Restricted/ Limited	Increased	Restricted/ Limited	Restricted/Limited	Restricted/Limited
Morocco	No						
Myanmar	No						
Namibia	No						
Nepal	Yes	Unknown	Unknown	Unknown	Restricted/ Limited	Restricted/Limited	Unknown
New Zealand	No						
Nicaragua	No						
Nigeria	No						
Norway	No						
Oman	No						
Pakistan	No						
Panamá	No						
Paraguay	No						
Perú	No						
Philippines	No						
Polska	No						
Portugal	Yes				Increased		
Qatar	Unknown						
Republic of the Congo	No						
Romania	Yes	Restricted/ Limited	Increased		Restricted/ Limited	Unknown	Unknown
Russia	Yes	Restricted/ Limited			Restricted/ Limited	Restricted/Limited	Restricted/Limited
Serbia	Yes	Increased	Unknown	Increased	Unknown	Unknown	Increased
Singapore	Yes			Increased			
Slovenia	Unknown						
South Africa	No						
South Korea	No						
Spain	No						
Sudan	No						
Sweden	Yes	Increased	Restricted/ Limited	Increased	Restricted/ Limited	Restricted/Limited	Restricted/Limited
Switzerland	Yes		Increased	Increased			
Tajikistan	No						
Tanzania	No						
The Netherlands	No						
Trinidad & Tobago	No						
Tunisia	No						
Turkey	Yes		Increased	Increased			
Uganda	No						
Ukraine	Yes						Restricted/Limited
United Arab Emirates	Yes			Increased		Increased	
United Kingdom	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

Chapter 2. Table 3a

(*Continued*)

Country	Updates	Donation	PGT	Legislation and guidelines	Surrogacy	Cross border reproduction	Number of embryos for transfer
United States of America	Yes	Increased	Unknown	Unknown	Increased	Increased	Restricted/Limited
Uruguay	Yes	Increased					
Uzbekistan	No						
Venezuela	No						
Vietnam	Yes	Increased	Unknown	Increased	Increased	Unknown	Unknown
Zambia	No						
Zimbabwe	No						

Where can government/regulatory documents or relevant information be accessed

Respondents were asked to provide relevant information regarding accessing governmental and regulatory documents and relevant information (Table 2).

Updates to the regulation of ART since 2021

Seventy-one of 114 (62.2%) respondents reported that there had been no changes to regulations governing the practice of ART since the 2021 Surveillance study. Thirty-nine of 114 (34.2%) respondents reported specific changes in legislation that were made during this interval. There was a variable number of respondents that commented on each item surveyed.

Reports that the main modification was *increased access* were made in relation to donation (16 of 26, 61.5%, of respondents); PGT (8 of 23, 34.8% of respondents); legislation and guidelines (22 of 29, 75.9% of respondents); surrogacy (7 of 24, 29.2% of respondents); and cross border reproduction (6 of 23, 26.1% of respondents). Changes that led to increased access were also reported in relation to numbers of embryos for transfer (6 of 23, 26.1% of respondents); same sex/single parenting policy (11 of 25, 44.0% of respondents); marital status (11 of 25, 44.0% of respondents); posthumous reproduction (6 of 19, 31.2%, of respondents); cryopreservation (19 of 24, 79.2% of respondents); and micromanipulation 8 of 16, 50% of respondents).

Chapter 2. Table 3b

Have there been any updates to the regulation of ART in your country since 2021 and what were the main modifications?

Country	Marital status	Posthumous reproduction	Cloning	Cryopreservation	Micro manipulation
Albania	Increased			Increased	
Bosnia and Herzegovina	Increased	Restricted/Limited	Restricted/Limited	Increased	Increased
Brazil	Increased	Increased	Restricted/Limited	Increased	Restricted/Limited
Bulgaria	Increased	Increased	Restricted/Limited	Increased	Increased
Denmark				Increased	
Finland	Increased				
France	Restricted/Limited	Restricted/Limited	Restricted/Limited	Increased	Restricted/Limited
Georgia	Restricted/Limited	Unknown	Restricted/Limited	Increased	Restricted/Limited
Germany				Increased	
Greece	Increased			Increased	
Iceland	Increased	Increased		Increased	
India	Restricted/Limited		Unknown		
Indonesia	Increased	Restricted/Limited	Restricted/Limited	Increased	Increased
Japan	Increased	Restricted/Limited	Restricted/Limited	Restricted/Limited	Restricted/Limited
Lithuania				Increased	
Moldova	Unknown	Restricted/Limited	Restricted/Limited	Increased	Unknown
Montenegro	Increased	Restricted/Limited	Restricted/Limited	Increased	Increased
Nepal	Restricted/Limited	Unknown	Restricted/Limited	Increased	Increased
Portugal		Increased			
Romania	Unknown	Restricted/Limited	Restricted/Limited	Increased	Increased
Rwanda			No	No	
Serbia	Increased	Increased	Unknown	Increased	Increased
Singapore				Increased	
Sweden	Restricted/Limited	Restricted/Limited	Restricted/Limited	Restricted/Limited	Restricted/Limited
Switzerland				Increased	
Ukraine		Increased			
United Arab Emirates	Increased				
United Kingdom	Unknown	Unknown	Unknown	Unknown	Increased
United States of America	Increased	Unknown	Unknown	Restricted/Limited	Unknown
Uruguay			Restricted/Limited		
Vietnam	Unknown	Unknown	Unknown	Unknown	Unknown

Chapter 2. Table 4

Have there been instances where violations of national ART policies have been reported?

Country	Violations
Albania	No
Algeria	No
Argentina	No
Armenia	No
Australia	No
Austria	No
Bangladesh	No
Barbados	Unknown
Belarus	No
Belgium	Unknown
Benin	No
Bolivia	No
Bosnia and Herzegovina	Yes
Brazil	Yes
Bulgaria	No
Burkina Faso	No
Cambodia	Unknown
Cameroon	Yes
Chile	No
China	No
Colombia	Yes
Costa Rica	Unknown
Côte d'Ivoire	No
Croatia	No
Cyprus	No
Czech Republic	No
Democratic Republic of the Congo	No
Denmark	Yes
Dominican Republic	No
Ecuador	Yes
Egypt	Yes
El Salvador	No
Equatorial Guinea	No
Estonia	No
Ethiopia	No
Finland	No
France	No
Gambia	Unknown
Georgia	Unknown
Germany	Unknown
Ghana	No
Greece	Yes
Guatemala	Unknown
Hong Kong	Unknown
Hungary	No
Iceland	No
India	No
Indonesia	Yes
Iran	No
Iraq	Unknown
Ireland	No
Italy	No
Jamaica	No
Japan	Yes
Jordan	Unknown
Kazakhstan	Yes

Chapter 2. Table 4

(*Continued*)

Country	Violations
Kenya	Unknown
Kuwait	No
Latvia	No
Lebanon	Unknown
Libya	Unknown
Lithuania	No
Malaysia	No
Mali	Unknown
Malta	Yes
Moldova	Unknown
Montenegro	No
Morocco	Unknown
Myanmar	Unknown
Namibia	No
Nepal	Yes
New Zealand	No
Nicaragua	No
Nigeria	No
Norway	Unknown
Oman	No
Panamá	No
Paraguay	No
Perú	No
Philippines	Yes
Polska	No
Portugal	No
Qatar	Unknown
Republic of the Congo	No
Romania	Unknown
Russia	Yes
Rwanda	No
Serbia	No
Singapore	Unknown
Slovenia	Yes
South Africa	No
South Korea	No
Spain	Unknown
Sudan	Yes
Sweden	No
Switzerland	No
Tajikistan	No
Tanzania	No
The Netherlands	No
Trinidad & Tobago	No
Tunisia	Yes
Turkey	Yes
Uganda	Unknown
Ukraine	Unknown
United Arab Emirates	No
United Kingdom	Yes
United States of America	Unknown
Uruguay	No
Uzbekistan	No
Venezuela	No
Vietnam	Yes
Zambia	Unknown
Zimbabwe	No

Chapter 2. Table 5a

Are there licensing criteria in your country?

	Licensing Criteria/Type			
Country	**ART/IVF Centres**	**Physicians with advanced training in reproductive endocrinology and infertility**	**OB/GYN physicians who practise ART**	**ART laboratory**
Albania	Yes Certification and/or examination Onsite Inspection	No	No	Yes Certification and/or examination
Algeria	No	No	No	No
Argentina	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Armenia	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination
Australia	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	No	Yes Onsite Inspection
Austria		No	Yes Certification and/or examination Continuing education	No
Bangladesh	Yes Certification and/or examination Onsite Inspection	No	Yes Certification and/or examination	Yes Certification and/or examination Onsite Inspection
Barbados	Unknown	Unknown	Unknown	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Belarus	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Belgium	Yes Certification and/or examination Onsite Inspection	No	No	No
Benin	Yes Onsite Inspection	No	No	No
Bolivia	No	No	No	No
Bosnia and Herzegovina	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Brazil	Yes Certification and/or examination Periodic report Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination
Bulgaria	Yes Certification and/or examination	No	No	Yes Certification and/or examination
Burkina Faso	No	No	No	No
Cambodia	Yes Certification and/or examination Periodic report Onsite Inspection	No	No	No
Cameroun	Yes Certification and/or examination Onsite Inspection	Yes Certification and/or examination Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination Onsite Inspection

Chapter 2. Table 5a

(*Continued*)

	Licensing Criteria/Type			
Country	**ART/IVF Centres**	**Physicians with advanced training in reproductive endocrinology and infertility**	**OB/GYN physicians who practise ART**	**ART laboratory**
			Onsite Inspection	
Chile	Yes Certification and/or examination Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination Onsite Inspection
China	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Unknown
Colombia	Yes Periodic report Onsite Inspection	Yes Certification and/or examination	No	Yes Periodic report Onsite Inspection
Costa Rica	Yes Certification and/or examination Periodic report Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown
Croatia	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Cyprus	Yes Onsite Inspection	No	No	Yes Onsite Inspection
Czech Republic	Yes Certification and/or examination Periodic report Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination Periodic report Onsite Inspection
Democratic Republic of the Congo	No	No	No	No
Denmark	Yes Certification and/or examination Periodic report Onsite Inspection	No	No	Yes Periodic report Onsite Inspection
Dominican Republic	No	No	No	No
Ecuador	Yes Periodic report Onsite Inspection	No	No	No
Egypt	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
El Salvador	Yes Certification and/or examination Onsite Inspection	No	No	No
Equatorial Guinea	Yes Periodic report Onsite Inspection	Unknown	Unknown	Yes Periodic report Onsite Inspection
Estonia	Yes Periodic report Onsite Inspection	No	No	Yes Periodic report
Ethiopia	Yes Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Onsite Inspection
Finland	Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination	No	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection

Chapter 2. Table 5a

(*Continued*)

	Licensing Criteria/Type			
Country	**ART/IVF Centres**	**Physicians with advanced training in reproductive endocrinology and infertility**	**OB/GYN physicians who practise ART**	**ART laboratory**
France	Yes Certification and/or examination Periodic report Onsite Inspection	No	No	Yes Certification and/or examination
Gambia	No	No	Yes Unknown	No
Georgia	Unknown	Unknown	Yes Certification and/or examination Continuing education Periodic report	No
Germany	Yes Continuing education Onsite Inspection	Yes Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Periodic report Onsite Inspection
Ghana	Yes Certification and/or examination Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Continuing education Onsite Inspection
Greece	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	No	No	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Guatemala	Yes Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination	Yes Onsite Inspection
Hong Kong	Yes Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes
Hungary	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education	Yes
Iceland	Yes Certification and/or examination Onsite Inspection	No	No	Yes
India	Yes Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination	Yes
Indonesia	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes
Iran	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Iraq	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination		Yes Certification and/or examination Onsite Inspection

Chapter 2. Table 5a

(*Continued*)

	Licensing Criteria/Type			
Country	**ART/IVF Centres**	**Physicians with advanced training in reproductive endocrinology and infertility**	**OB/GYN physicians who practise ART**	**ART laboratory**
Ireland	Yes Onsite Inspection			
Italy	Yes Certification and/or examination Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	
Jamaica	No	No	No	No
Japan	Yes Certification and/or examination Periodic report	Yes Certification and/or examination Continuing education	No	Yes Certification and/or examination Periodic report
Jordan	Yes Onsite Inspection	Yes Certification and/or examination Continuing education	No	No
Kazakhstan	Yes Certification and/or examination	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	
Kenya	Yes Certification and/or examination	Yes Certification and/or examination	No	No
Kuwait	Yes Certification and/or examination Onsite Inspection	Unknown	Unknown	Yes Certification and/or examination Onsite Inspection
Latvia	Yes Periodic report Onsite Inspection	No	No	Yes Periodic report Onsite Inspection
Lebanon	No	No	No	No
Libya	Unknown	No	No	No
Lithuania	Yes Certification and/or examination Periodic report Onsite Inspection	No	Yes Certification and/or examination	Yes Certification and/or examination Periodic report Onsite Inspection
Malaysia	Yes Unknown	Yes Certification and/or examination	Yes Certification and/or examination	Yes Onsite Inspection
Mali	No	No	No	No
Malta	Yes Onsite Inspection	No	No	Yes Onsite Inspection
Mexico	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination Periodic report Onsite Inspection
Moldova	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	No	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Unknown
Montenegro	Yes Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Onsite Inspection
Morocco	No	No	No	No
Myanmar	Yes Continuing education	Yes Continuing education	Yes Continuing education	Yes Continuing education
Namibia	No	No	No	No
Nepal	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education Onsite Inspection

Chapter 2. Table 5a

(Continued)

	Licensing Criteria/Type			
Country	**ART/IVF Centres**	**Physicians with advanced training in reproductive endocrinology and infertility**	**OB/GYN physicians who practise ART**	**ART laboratory**
New Zealand	Yes Certification and/or examination Onsite Inspection	No	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Onsite Inspection
Nicaragua	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination Continuing education
Nigeria	No	No	No	No
Norway	Yes Periodic report Onsite Inspection	No	Yes Continuing education	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Oman	Yes Certification and/or examination Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Onsite Inspection
Pakistan	Yes Continuing education	No	Yes Certification and/or examination	Yes Continuing education
Panamá	Yes Onsite Inspection	Yes Certification and/or examination	Yes Certification and/or examination	No
Paraguay	No	No	No	No
Perú	No	No	Yes Certification and/or examination Continuing education Periodic report	No
Philippines	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	No
Polska	Yes Continuing education Periodic report	No	No	Yes Continuing education Periodic report
Portugal	Yes Certification and/or examination Periodic report Onsite Inspection	Yes Certification and/or examination	No	Yes Certification and/or examination Onsite Inspection
Qatar	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education
Republic of the Congo	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination
Romania	Yes Certification and/or examination Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Russia	Yes Onsite Inspection	No	Yes Certification and/or examination Continuing education	No
Rwanda	No	No	No	No
Serbia	Yes Certification and/or examination Continuing education	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination Onsite Inspection

Chapter 2. Table 5a

(*Continued*)

	Licensing Criteria/Type			
Country	**ART/IVF Centres**	**Physicians with advanced training in reproductive endocrinology and infertility**	**OB/GYN physicians who practise ART**	**ART laboratory**
	Onsite Inspection		Continuing education	
Singapore	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Slovenia	Yes Periodic report Onsite Inspection	No	No	No
South Africa	Yes Onsite Inspection	Yes Certification and/or examination Continuing education	No	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
South Korea	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education	Yes Continuing education Onsite Inspection
Spain	Yes Certification and/or examination Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Sudan	Yes Certification and/or examination	Unknown	Unknown	Yes Certification and/or examination Onsite Inspection
Sweden	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	No	No	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Switzerland	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Tajikistan	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Tanzania	Yes Certification and/or examination Onsite Inspection	No	Yes Certification and/or examination	Yes Onsite Inspection
The Netherlands	Yes Certification and/or examination Periodic report Onsite Inspection	No	Yes Certification and/or examination	Yes Certification and/or examination Periodic report Onsite Inspection
Trinidad & Tobago	No	No	No	No
Tunisia	Yes Periodic report Onsite Inspection	No	No	Yes Certification and/or examination Continuing education
Turkey	Yes Certification and/or examination Onsite Inspection	Yes Certification and/or examination Onsite Inspection	Yes Certification and/or examination Onsite Inspection	Yes Certification and/or examination Periodic report Onsite Inspection
Uganda	Yes	No	Yes	No

Chapter 2. Table 5a

(Continued)

Country	Licensing Criteria/Type			
	ART/IVF Centres	Physicians with advanced training in reproductive endocrinology and infertility	OB/GYN physicians who practise ART	ART laboratory
	Onsite Inspection		Certification and/or examination Continuing education Onsite Inspection	
Ukraine	No	No	No	No
United Arab Emirates	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
United Kingdom	Yes Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	
United States of America	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Periodic report Onsite Inspection
Uruguay	Yes Certification and/or examination Periodic report Onsite Inspection	No	No	Yes Certification and/or examination Periodic report Onsite Inspection
Uzbekistan	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education
Venezuela	Yes Onsite Inspection	No	No	No
Vietnam	Yes Certification and/or examination Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Periodic report Onsite Inspection
Zambia	No	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Onsite Inspection
Zimbabwe	Yes Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Onsite Inspection

In contrast, reports that the main modification was to *restrict/limit* access were made regarding donation by 2 of 26 (7.7%) respondents; PGT by 8 of 23 (34.8%) respondents; Legislation and guidelines by 3 of 29 (10.3%) respondents; surrogacy by 15 of 24 (62.5%) respondents; and cross border reproduction by 11 of 23 (47.8%) respondents. Changes that led to *restricted/limited* access were also reported in relation to numbers of embryos for transfer (11 of 23, 47.8% of respondents); same sex/single parenting policy (9 of 25, 36% of respondents); marital status (9 of 25, 36% of respondents); posthumous reproduction (8 of 19, 42.1% of respondents); cloning (13 of 18, 72.2% of respondents); cryopreservation (3 of 24, 12.5% of respondents); and micromanipulation 5 of 16, 31.2% of respondents).

The above reflects the trend, continuing from 2021 and 2018, that more countries are acting to expand access to ART services including donation, while restricting more problematic practices with legislation and regulations, such as surrogacy and cross-border reproductive care (Table 3a-b, Chart 1).

Have there been any instances where violations of national ART policies have been reported?

Twenty one of 113 (18.6%) respondents to this question reported that there had been violations of national ART policies reported. Although there were more respondents this survey, this is close to the number of violations reported in 2021 (18 (20%) of 89 respondents). Sixty-five of 113 (57.5%) respondents reported that there had not been violations of national ART polices, and 27 of 113 (23.9%)

Chapter 2. Table 5b

Are there licensing criteria in your country?

	Licensing Criteria/Type			
Country	**ART laboratory director**	**ART laboratory technical staff**	**Mental health professionals**	**Fertility nurses**
Albania	No	No	No	No
Algeria	No	No	No	No
Argentina	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination	No
Armenia	No	No	Unknown	No
Australia	Yes Continuing education Onsite Inspection	No	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection
Austria	No	No	No	
Bangladesh	No	No	Yes Certification and/or examination	No
Barbados	Yes Unknown	Yes Unknown	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education
Belarus	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	No	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Belgium	No	No	No	No
Benin	Yes Certification and/or examination	No	No	No
Bolivia	No	No	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	No
Bosnia and Herzegovina	Yes Certification and/or examination Onsite Inspection	No	Yes Certification and/or examination Onsite Inspection	No
Brazil	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination
Bulgaria	Yes Certification and/or examination	No	Yes Certification and/or examination	No
Burkina Faso	No	No	Yes Certification and/or examination	No
Cambodia	No	No	Yes Unknown	No
Cameroun	No	No	No	No
Chile	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	No
China	No	Yes Continuing education	Unknown	No
Colombia	No	No	Yes Certification and/or examination	No
Costa Rica	Yes Certification and/or examination	No	No	No
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown
Croatia	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Cyprus	No	No	Yes Unknown	No
Czech Republic	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	No

Chapter 2. Table 5b

(Continued)

	Licensing Criteria/Type			
Country	**ART laboratory director**	**ART laboratory technical staff**	**Mental health professionals**	**Fertility nurses**
		Continuing education		
Democratic Republic of the Congo	No	No	No	No
Denmark	No	No	Yes Certification and/or examination	No
Dominican Republic	No	No	Yes Certification and/or examination	No
Ecuador	No	No	No	No
Egypt	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination	No	Yes Certification and/or examination
El Salvador	No	No	Yes Certification and/or examination	No
Equatorial Guinea	No	No	Unknown	No
Estonia	No	Yes Onsite Inspection	Yes Certification and/or examination	No
Ethiopia	Yes Certification and/or examination	No	Yes Certification and/or examination Continuing education	No
Finland	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Onsite Inspection	Yes Certification and/or examination	No
France	Yes Certification and/or examination	No	No	No
Gambia	No	No	Yes Periodic report	No
Georgia	No	No	Yes Certification and/or examination Continuing education Periodic report	No
Germany	Yes Certification and/or examination Continuing education	Yes Certification and/or examination	Unknown	No
Ghana	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education
Greece	No	No	Yes Certification and/or examination	No
Guatemala	No	No	Yes Certification and/or examination	No
Hong Kong	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination
Hungary	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Continuing education Periodic report	Unknown	No
Iceland	No	No	No	No
India	No	Yes Certification and/or examination Onsite Inspection	Yes National registry Periodic report Onsite Inspection Recertification	No
Indonesia	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection
Iran	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	No

Chapter 2. Table 5b

(*Continued*)

	Licensing Criteria/Type			
Country	**ART laboratory director**	**ART laboratory technical staff**	**Mental health professionals**	**Fertility nurses**
	Continuing education Periodic report	Continuing education Periodic report Onsite Inspection	Continuing education Periodic report	
Iraq	No	Unknown	Unknown	Unknown
Italy			Yes Certification and/or examination Continuing education	No
Jamaica	No	No	Yes Certification and/or examination Continuing education	No
Japan	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education
Jordan	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination	No
Kazakhstan	No	No	Yes Certification and/or examination Continuing education	No
Kenya	No	No	Yes Certification and/or examination	No
Kuwait	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Onsite Inspection	Unknown	No
Latvia	No	No	Yes Certification and/or examination Continuing education	No
Lebanon	No	No	No	No
Libya	No	No	No	No
Lithuania	No	Yes Continuing education	Unknown	No
Malaysia	Yes Certification and/or examination	No	Yes Certification and/or examination	No
Mali	No	No	No	No
Malta	Yes Onsite Inspection	Yes Onsite Inspection	Yes Certification and/or examination	No
Mexico	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	No
Moldova	Unknown	Unknown	No	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection
Montenegro	No	No	Yes Certification and/or examination Continuing education	No
Morocco	No	No	No	No
Myanmar	No	Yes Certification and/or examination	No	No
Namibia	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Unknown
Nepal	Unknown	Unknown	Yes Certification and/or examination	Yes Certification and/or examination
New Zealand	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination
Nicaragua	No	No	No	No
Nigeria	No	No	No	No

Chapter 2. Table 5b

(*Continued*)

	Licensing Criteria/Type			
Country	**ART laboratory director**	**ART laboratory technical staff**	**Mental health professionals**	**Fertility nurses**
Norway	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	No	No
Oman	No	No	Unknown	No
Pakistan	Yes Certification and/or examination	Yes Certification and/or examination	Yes Continuing education	No
Panamá	No	No	Yes Certification and/or examination	No
Paraguay	No	No	Unknown	No
Perú	No	No	Yes Certification and/or examination Continuing education	No
Philippines	Yes Certification and/or examination	No	No	No
Polska	Yes Certification and/or examination	No	No	No
Portugal	Yes Certification and/or examination	No	Yes Certification and/or examination	No
Qatar	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education
Republic of the Congo	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	No
Romania	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education Periodic report	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education
Russia	No	No	No	No
Rwanda	No	No	No	
Serbia	No	No	Yes Certification and/or examination Continuing education	No
Singapore	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education Onsite Inspection
Slovenia	No	No	No	No
South Africa	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection
South Korea	No	No	No	Yes Certification and/or examination Continuing education
Spain	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	No	Yes National registry Onsite Inspection Recertification	Yes
Sudan	Yes Certification and/or examination	Yes Certification and/or examination	Yes Certification and/or examination	No
Sweden	No	No	Yes Certification and/or examination	No
Switzerland	Yes Certification and/or examination	No	Yes Certification and/or examination	No
Tajikistan	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	No	Yes Certification and/or examination Continuing education

Chapter 2. Table 5b

(Continued)

Country	Licensing Criteria/Type			
	ART laboratory director	**ART laboratory technical staff**	**Mental health professionals**	**Fertility nurses**
	Periodic report Onsite Inspection	Periodic report Onsite Inspection		Periodic report Onsite Inspection
Tanzania	No	No	No	No
The Netherlands	No	No		No
Trinidad & Tobago	No	No	No	No
Tunisia	Yes Certification and/or examination	Yes Certification and/or examination	No	No
Turkey	Yes Certification and/or examination	No	Yes Certification and/or examination Onsite Inspection	Yes Continuing education
Uganda	No	No	No	No
Ukraine	No	No	Unknown	No
United Arab Emirates	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	No
United Kingdom			Unknown	Yes Certification and/or examination Continuing education
United States of America	Yes Certification and/or examination Continuing education Periodic report Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	No
Uruguay	Yes Certification and/or examination Onsite Inspection	Yes Certification and/or examination Onsite Inspection	No	No
Uzbekistan	No	No	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education
Venezuela	No	No	Yes Certification and/or examination	No
Vietnam	No	No	Yes Certification and/or examination Continuing education	No
Zambia	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education Onsite Inspection	Unknown
Zimbabwe	Yes Certification and/or examination Continuing education Onsite Inspection	Yes Certification and/or examination Continuing education	Yes Certification and/or examination Continuing education	No

respondents reported they did not know. Again, this corresponded to 55% in 2021 who reported no violations; and 25% of respondents who didn't know (Table 4).

Licensing criteria for ART/IVF centres

One hundred and thirteen respondents submitted information pertaining to specific licensing criteria in their countries (Table 5a). Ninety-two of 113 respondents (87%) reported that ART centres in their countries were subject to licensing requirements. This compared to 69 (77%) of the 90 respondents from 2021. In the 2024 survey, respondents reported various country-specific licensing requirements for ART centres, with the following distribution:

- Certification and/or examination, continuing education, periodic report, and on-site inspection were required in 22.6% of cases.
- On-site inspection alone was reported in 17.2% of cases.
- Certification and/or examination, periodic report, and on-site inspection were required in 16.1% of cases.
- Certification and/or examination and on-site inspection were necessary in 12.9% of cases.
- Periodic report and on-site inspection were used in 9.7% of cases.
- Certification and/or examination alone was reported in 8.6% of cases.
- Certification and/or examination, continuing education, and on-site inspection were reported in 4.3% of cases.
- Certification and/or examination and periodic report were required in 1.1% of cases.

Chapter 2. Table 6a

Are there monitoring mechanisms for governance licensure or credentialing in your country

Country	ART centres?	Monitored how?	Monitored by?	REI physicians	Monitored how?	Monitored by?	OB/GYN	Monitored how?	Monitored by?
Albania	No			No			No		
Algeria	No			No			No		
Argentina	Yes	International Registry Periodic report On-site Inspection Re-certification	Independent Agencies	Yes	International Registry Periodic report On-site Inspection Re-certification	Medical Officials	Yes	International Registry Periodic report On-site Inspection Re-certification	Medical Officials
Armenia	Yes	International Registry	Government Employees	No			No		
Australia	Yes	National registry Periodic report On-site Inspection Re-certification	Independent Agencies	Yes	On-site Inspection Re-certification	Medical Officials Independent Agencies	No		
Austria				No			No		
Bangladesh	Yes	On-site Inspection Re-certification	Government Employees Medical Officials	No			Yes	Re-certification	Government Employees Independent Agencies
Barbados	Yes	International Registry Unknown	Government Employees Medical Officials	Unknown			Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
Belarus	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
Belgium	Yes	National registry On-site Inspection	Government Employees	No			No		
Benin	No			No			No		
Bolivia	No			No			No		
Bosnia and Herzegovina	Yes	National registry International Registry	Government Employees	Yes	National registry	Government Employees	Yes	National registry Periodic report On-site Inspection	Government Employees
Brazil	Yes	National registry International Registry Periodic report On-site Inspection	Government Employees	No			No		
Bulgaria	Yes	Periodic report	Government Employees	Yes	International Registry On-site Inspection	Government Employees	Yes	International Registry On-site Inspection	Government Employees
Burkina Faso	No			No			Yes	National registry	Medical Officials
Cambodia	Unknown			Unknown			Unknown		
Cameroun	No			No			No		
Chile	Yes	International Registry On-site Inspection	Government Employees Medical Officials	Yes	International Registry Re-certification	Medical Officials	Yes	International Registry Re-certification	Medical Officials
China	Yes	National registry	Government Employees	Yes	National registry	Government Employees	Yes	National registry	Government Employees
Colombia	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees	No			No		
Costa Rica	Yes	National registry Periodic report On-site Inspection	Government Employees	Yes	National registry	Government Employees	Yes	National registry	Government Employees
Côte d'Ivoire	Unknown			Unknown			Unknown		
Croatia	Yes	National registry International	Government Employees	Yes	National registry Periodic report	Government Employees	Yes	National registry Periodic report	Government Employees

Chapter 2. Table 6a

(*Continued*)

Country	ART centres?	Monitored how?	Monitored by?	REI physicians	Monitored how?	Monitored by?	OB/GYN	Monitored how?	Monitored by?
		Registry Periodic report On-site Inspection Re-certification	Medical Officials		On-site Inspection Re-certification	Medical Officials		On-site Inspection Re-certification	Medical Officials
Cyprus	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	No			No		
Czech Republic	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees	No		
Democratic Republic of the Congo	No			No			No		
Denmark	Yes	Periodic report On-site Inspection	Government Employees	No			No		
Dominican Republic	Yes	National registry Periodic report On-site Inspection	Government Employees	No			No		
Ecuador	No			No			No		
Egypt	Yes	National registry International Registry	Government Employees Medical Officials	No			No		
El Salvador	Yes	International Registry	Medical Officials Independent Agencies	Yes	International Registry	Medical Officials Independent Agencies	Yes	International Registry	Medical Officials Independent Agencies
Equatorial Guinea	Yes	International Registry Periodic report	Government Employees	Unknown			Unknown		
Estonia	Yes	Periodic report	Government Employees	No			No		
Ethiopia	Yes	On-site Inspection Re-certification	Government Employees	Yes	National registry Re-certification	Medical Officials			
Finland	Yes	National registry Periodic report On-site Inspection	Government Employees	No			No		
France	Yes	National registry On-site Inspection Re-certification	Government Employees	No			No		
Gambia	No			No			No		
Georgia	Unknown			Unknown			Unknown		
Germany				Yes	National registry On-site Inspection	Government Employees Independent Agencies	Unknown		
Ghana	Yes	National registry On-site Inspection	Government Employees Medical Officials	Yes	National registry On-site Inspection	Government Employees Medical Officials	Yes	National registry Re-certification	Government Employees Medical Officials
Greece	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Independent Agencies	No			No		
Guatemala	No			No			No		
Hong Kong	Yes	Periodic report On-site Inspection Re-certification	Independent Agencies	Yes	Re-certification	Independent Agencies	Yes	National registry	Independent Agencies

Chapter 2. Table 6a

(*Continued*)

Country	ART centres?	Monitored how?	Monitored by?	REI physicians	Monitored how?	Monitored by?	OB/GYN	Monitored how?	Monitored by?
Hungary	Yes	National registry	Government Employees Medical Officials	Yes	National registry Re-certification	Government Employees Medical Officials	Yes	Re-certification	Government Employees Medical Officials
Iceland	Yes	Periodic report	Government Employees	No			No		
India				Yes	National registry Periodic report On-site Inspection	Government Employees Medical Officials	No		
Indonesia	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	National registry International Registry Periodic report Re-certification	Government Employees Medical Officials Independent Agencies	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies
Iran	Yes	On-site Inspection	Government Employees Medical Officials	Yes	Periodic report On-site Inspection	Government Employees Medical Officials	Yes	Periodic reportOn-site Inspection	Government Employees Medical Officials
Iraq	Unknown			Unknown			Unknown		
Italy	Yes	Periodic report On-site Inspection Re-certification	Government Employees	Yes	On-site Inspection	Government Employees	Yes	On-site Inspection	Government Employees
Jamaica	No			No			No		
Japan	Yes	National registry	Medical Officials	No			No		
Jordan	No			No			No		
Kazakhstan	No			Yes	Periodic report Re-certification	Government Employees	No		
Kenya	No			No			No		
Kuwait	Yes	National registry On-site Inspection Re-certification	Government Employees	Unknown			Unknown		
Latvia	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees	No			No		
Lebanon	No			No			No		
Libya	No			No			No		
Lithuania	Yes	National registry Periodic report	Government Employees	No			No		
Malaysia	No			Yes	National registry	Government Employees	No		
Mali	No			No			No		
Malta	Yes	On-site Inspection	Government Employees	No			No		
Mexico	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	Re-certification	Government Employees Medical Officials	Yes	Re-certification	Government Employees Medical Officials
Moldova	Unknown			Unknown			Unknown		
Montenegro	Yes	International Registry On-site Inspection	Government Employees Medical Officials Independent Agencies	Yes	International Registry On-site Inspection	Government Employees Independent Agencies	Yes	On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies
Morocco	No			No			No		
Myanmar (Burma)	Yes	National registry	Medical Officials	No			Yes	National registry	Medical Officials
Namibia	No			Unknown			No		

Chapter 2. Table 6a

(*Continued*)

Country	ART centres?	Monitored how?	Monitored by?	REI physicians	Monitored how?	Monitored by?	OB/GYN	Monitored how?	Monitored by?
Nepal	Unknown			Yes	Unknown	Government Employees Medical Officials	Yes	National registry	Government Employees Medical Officials
New Zealand	Yes	On-site Inspection	Government Employees Independent Agencies	No			No		
Nicaragua	No			Yes	National registry	Government Employees	Yes	National registry	Government Employees
Nigeria	No			No			No		
Norway	No			No			No		
Oman	Yes	Periodic report On-site Inspection	Medical Officials	Yes	Re-certification	Medical Officials	Yes	Re-certification	Medical Officials
Pakistan	Yes	Periodic report	Unofficial Agencies	No			Yes	National registry	Medical Officials
Panamá	No			No			No		
Paraguay	No			No			No		
Perú	No			No			Yes	National registry International Registry Re-certification	Medical Officials
Philippines	Yes	Periodic report	Independent Agencies	No					Independent Agencies
Polska	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	No			No		
Portugal	Yes	National registry Periodic report On-site Inspection Re-certification	Independent Agencies	No			No		
Qatar	Yes	On-site Inspection Re-certification	Government Employees	Yes	On-site Inspection Re-certification	Government Employees	Yes	On-site Inspection Re-certification	Government Employees
Republic of the Congo	No			No			No		
Romania	Yes	Periodic report On-site Inspection Re-certification	Government Employees Unofficial Agencies	Yes	Periodic report	Government Employees Medical Officials Unofficial Agencies	Yes	Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Unofficial Agencies
Russia	No			No			Yes	Re-certification	Medical Officials
Rwanda	No			No			No		
Serbia	Yes	National registry Periodic report On-site Inspection Re-certification	Medical Officials	Yes	National registry	Medical Officials	Yes	National registry Periodic report	Government Employees
Singapore	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Medical Officials Independent Agencies	Yes	National registry International Registry Periodic report Re-certification	Medical Officials Independent Agencies	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Medical Officials Independent Agencies
Slovenia	No			No			No		
South Africa	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	No		
South Korea	Yes	National registry Periodic report On-site Inspection	Government Employees	Yes	National registry Periodic report	Government Employees	Yes	National registry Periodic report	Government Employees

Chapter 2. Table 6a

(*Continued*)

Country	ART centres?	Monitored how?	Monitored by?	REI physicians	Monitored how?	Monitored by?	OB/GYN	Monitored how?	Monitored by?
Spain	No						Yes	National registry	Government Employees
Sudan	Yes	On-site Inspection Re-certification	Government Employees	No			No		
Sweden	Yes	National registry Periodic report On-site Inspection Re-certification	Independent Agencies	No			No		
Switzerland	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report	Medical Officials	Yes	National registry	Medical Officials
Tajikistan	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection	Government Employees Medical Officials
Tanzania	No			No			No		
The Netherlands	No			No			Yes	Periodic report	Medical Officials
Trinidad & Tobago	No			No			No		
Tunisia	Yes	National registry Periodic report	Government Employees	No			No		
Turkey	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees	Yes	National registry On-site Inspection Re-certification	Government Employees
Uganda	No			No			No		
Ukraine	No			No			No		
United Arab Emirates	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
United Kingdom	Yes	National registry On-site Inspection	Government Employees	Yes	Re-certification	Independent Agencies	Yes	Re-certification	Independent Agencies
United States of America	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	Re-certification	Government Employees Medical Officials	Yes	Re-certification	Government Employees Medical Officials
Uruguay	Yes	National registry Periodic report On-site Inspection	Government Employees	No			No		
Uzbekistan	Yes	Periodic report	Government Employees	Yes	Re-certification	Government Employees	Yes	Re-certification	Government Employees
Venezuela	No			No			No		
Vietnam	Yes	Periodic report On-site Inspection Re-certification	Government Employees Medical Officials						
Zambia	Yes	On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies
Zimbabwe	Yes	On-site Inspection	Independent Agencies	Yes	Re-certification	Independent Agencies	Yes	Re-certification	Independent Agencies

Chapter 2. Table 6b

Are there monitoring mechanisms for governance licensure or credentialing in your country?

Country	ART laboratory	Monitored how?	Monitored by?	ART laboratory director	Monitored how?	Monitored by?	ART laboratory technical staff	Monitored how?	Monitored by?
Albania	No			No			No		
Algeria	No			No			No		
Argentina	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
Armenia	No			No			No		
Australia	Yes	Periodic report On-site Inspection	Independent Agencies	Yes	Periodic report On-site Inspection	Independent Agencies	No		
Austria	Unknown								
Bangladesh	Yes	On-site Inspection Re-certification	Government Employees Medical Officials	Yes	On-site Inspection Re-certification	Government Employees Medical Officials	Yes	Periodic report	Government Employees Medical Officials
Barbados	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	Unknown	Government Employees Medical Officials
Belarus	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
Belgium	No			No			No		
Benin	No			No			No		
Bolivia	No			No			No		
Bosnia and Herzegovina	Yes	National registry On-site Inspection	Government Employees	Yes	National registry On-site Inspection	Government Employees	No		
Brazil	Yes	National registry	Government Employees	Yes	National registry	Government Employees	Yes	National registry	Government Employees
Bulgaria	Yes	On-site Inspection	Government Employees	Yes	On-site Inspection	Government Employees	No		
Burkina Faso	No			No			No		
Cambodia	Unknown			Unknown			Unknown		
Cameroun	No			No			No		
Chile	Unknown			Unknown			Unknown		
China	No			No			Yes	On-site Inspection	Medical Officials
Colombia	Yes	National registry On-site Inspection Re-certification	Government Employees	No			No		
Costa Rica	Yes	National registry Periodic report On-site Inspection	Government Employees	Yes	National registry	Government Employees	No		
Côte d'Ivoire	Unknown			Unknown			Unknown		
Croatia	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
Cyprus	Yes	On-site Inspection	Government	Yes	Periodic report	Government	No		

Chapter 2. Table 6b

(*Continued*)

Country	ART laboratory	Monitored how?	Monitored by?	ART laboratory director	Monitored how?	Monitored by?	ART laboratory technical staff	Monitored how?	Monitored by?
			Employees Medical Officials		Re-certification	Employees Medical Officials			
Czech Republic	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees	Yes	On-site Inspection Re-certification	Government Employees
Democratic Republic of the Congo	No			No			No		
Denmark	No			No			No		
Dominican Republic	No			No			No		
Ecuador	No			No			No		
Egypt	No			No			No		
El Salvador	Yes	International Registry	Medical Officials Independent Agencies	Yes	International Registry	Medical Officials Independent Agencies	Yes	International Registry	Medical Officials Independent Agencies
Equatorial Guinea	Yes	National registry Periodic report On-site Inspection	Government Employees	No			No		
Estonia	Yes	Periodic report On-site Inspection	Government Employees	No			Yes	Periodic report On-site Inspection	Government Employees
Ethiopia	Yes	On-site Inspection Re-certification	Medical Officials	No			Yes	Re-certification	Medical Officials
Finland	Yes	National registry Periodic report On-site Inspection	Government Employees	No			No		
France	Yes	National registry Periodic report	Government Employees	Yes	National registry Periodic report	Government Employees	No		
Gambia	Yes	On-site Inspection	Unofficial Agencies	Yes	On-site Inspection	Unofficial Agencies	Yes	On-site Inspection	Unofficial Agencies
Georgia	Unknown			Unknown			Unknown		
Germany	Yes	National registry On-site Inspection	Government Employees	Yes	National registry Periodic report On-site Inspection	Government Employees	Yes	On-site Inspection	Government Employees
Ghana	Yes	National registry On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Re-certification	Government Employees Medical Officials	Yes	National registry Re-certification	Government Employees Medical Officials
Greece	Yes	National registry International Registry On-site Inspection Re-certification	Government Employees Independent Agencies	No			No		
Guatemala	No			No			No		
Hong Kong	Yes	National registry Periodic report Re-certification	Independent Agencies	Yes	National registry Periodic report Re-certification	Independent Agencies	No		
Hungary	No			No			No		
Iceland	Yes	On-site Inspection	Government Employees	No			No		
India	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	No			Yes	National registry Periodic report On-site Inspection	Government Employees Medical Officials
Indonesia	Yes	National registry Periodic report	Government Employees	Yes	National registry Periodic report	Government Employees	Yes	National registry Periodic report	Government Employees

Chapter 2. Table 6b

(*Continued*)

Country	ART laboratory	Monitored how?	Monitored by?	ART laboratory director	Monitored how?	Monitored by?	ART laboratory technical staff	Monitored how?	Monitored by?
		On-site Inspection Re-certification	Medical Officials Independent Agencies		On-site Inspection Re-certification	Medical Officials Independent Agencies		On-site Inspection Re-certification	Medical Officials Independent Agencies
Iran	Yes	Periodic report On-site Inspection	Government Employees Medical Officials	Yes	Periodic report On-site Inspection	Government Employees Medical Officials	Yes	Periodic report On-site Inspection	Government Employees Medical Officials
Iraq	Unknown			Unknown			Unknown		
Jamaica	No			No			No		
Japan	Yes	Periodic report Re-certification	Independent Agencies	Yes	Periodic report Re-certification	Independent Agencies	Yes	Periodic report Re-certification	Independent Agencies
Jordan	No			No			No		
Kazakhstan	No			No			No		
Kenya	No			No			No		
Kuwait	Yes	National registry On-site Inspection Re-certification	Government Employees	Unknown			Unknown		
Latvia	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees	No			No		
Lebanon	No			No			No		
Libya	No			No			No		
Lithuania	No			No			No		
Malaysia	No			No			No		
Mali	No			No			No		
Malta	Yes	On-site Inspection	Government Employees	Yes	On-site Inspection	Government Employees	Yes	On-site Inspection	Government Employees
Mexico	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Unofficial Agencies	Yes	International Registry	Unofficial Agencies	Yes	International Registry	Unofficial Agencies
Moldova	Unknown			Unknown			Unknown		
Montenegro	Yes	On-site Inspection	Government Employees Independent Agencies	No			No		
Morocco	No			No			No		
Myanmar (Burma)	Yes	National registry	Medical Officials	Yes	National registry	Medical Officials	Yes	National registry	Government Employees Medical Officials
Namibia	No			No			No		
Nepal	Yes	National registry	Government Employees Medical Officials	Yes	Unknown	Government Employees Medical Officials	Unknown		
New Zealand	Yes	On-site Inspection	Government Employees Independent Agencies	No			Yes	National registry	Government Employees
Nicaragua	Yes	National registry	Government Employees	Yes	National registry	Government Employees	Yes	National registry	Government Employees
Nigeria	No			No			No		
Norway	Yes	National registry Periodic report On-site Inspection	Government Employees	Yes	National registry International Registry Periodic report	Government Employees	Yes	National registry Periodic report On-site Inspection	Government Employees

Chapter 2. Table 6b

(*Continued*)

Country	ART laboratory	Monitored how?	Monitored by?	ART laboratory director	Monitored how?	Monitored by?	ART laboratory technical staff	Monitored how?	Monitored by?
					On-site Inspection				
Oman	Yes	Periodic report On-site Inspection	Medical Officials	No			No		
Pakistan	No			Yes	Re-certification	Unofficial Agencies	No		
Panamá	No			No					
Paraguay	No			No			No		
Perú	No			No			No		
Philippines	No			No			No		
Polska	No			No			No		
Portugal	Yes	National registry Periodic report On-site Inspection	Independent Agencies	No			No		
Qatar	Yes	On-site Inspection Re-certification	Government Employees	Yes	On-site Inspection Re-certification	Government Employees	Yes	On-site Inspection Re-certification	Government Employees
Republic of the Congo	No			No			No		
Romania	Yes	Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Unofficial Agencies	Yes	Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Unofficial Agencies	Yes	National registry Periodic report On-site Inspection	Government Employees Medical Officials Unofficial Agencies
Russia	No			No			Yes	National registry	Government Employees
Rwanda	No			No			No		
Serbia	No						No		
Singapore	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Medical Officials Independent Agencies	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Medical Officials Independent Agencies	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Medical Officials Independent Agencies
Slovenia	No			No			No		
South Africa	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies
South Korea	Yes	National registry Periodic report	Government Employees	No			No		
Spain	Yes	National registry	Government Employees	Yes	National registry On-site Inspection	Government Employees	No		
Sudan	Yes	Re-certification	Government Employees	Unknown			Yes	On-site Inspection Re-certification	Government Employees
Sweden	Yes	National registry Periodic report On-site Inspection	Independent Agencies	No			No		
Switzerland	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry International Registry Periodic report On-site Inspection	Government Employees Medical Officials Independent Agencies	No		

Chapter 2. Table 6b

(*Continued*)

Country	ART laboratory	Monitored how?	Monitored by?	ART laboratory director	Monitored how?	Monitored by?	ART laboratory technical staff	Monitored how?	Monitored by?
Tajikistan	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
Tanzania	No			No			No		
The Netherlands	Yes	Periodic report On-site Inspection	Government Employees	No			No		
Trinidad & Tobago	No			No			No		
Tunisia	Yes	National registry Periodic report On-site Inspection	Government Employees	No			No		
Turkey	Yes	Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	No			No		
Uganda	No			No			No		
Ukraine	No			No			Yes	National registry Re-certification	Government Employees Medical Officials
United Arab Emirates	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials	Yes	National registry International Registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
United States of America	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Independent Agencies	Yes	National registry Re-certification	Government Employees Independent Agencies	No		
Uruguay	Yes	National registry Periodic report On-site Inspection	Government Employees	No			No		
Uzbekistan	Yes	Re-certification	Government Employees	Yes		Government Employees	Yes		Government Employees
Venezuela	No			No			No		
Zambia	Yes	On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies
Zimbabwe	Yes	On-site Inspection Re-certification	Independent Agencies	Yes	Re-certification	Independent Agencies	Yes	Re-certification	Independent Agencies

- Certification and/or examination and continuing education were needed in 1.1% of cases.
- Continuing education alone was reported in 2.2% of cases.
- Continuing education and on-site inspection were required in 1.1% of cases.
- Continuing education and periodic report were necessary in 1.1% of cases.
- Unknown licensing requirements accounted for 1.1% of cases.

Note, in total, sixty-eight of 113 (60.2%) respondents reported that the ART centres were governed by multiple licensing requirements. This was more than the 48 respondents from 2021 that reported this. Fourteen respondents reported that centres were subject to on-site inspections only.

Licensing criteria for physicians with advanced training in reproductive endocrinology and infertility (REI); and Obstetrician/Gyneacologists

Fifty-eight of 113 respondents (51.3%) reported that REI physicians with specialised ART training must be licensed or credentialed (Table 5a). The data represents the distribution of various regulatory oversight methods, expressed as both frequency and percentage. The breakdown is as follows:

- Certification and/or examination alone is the most common method, accounting for 22 occurrences (37.3%).

Chapter 2. Table 6c

Are there monitoring mechanisms for governance licensure or credentialing in your country

Country	Mental Health professionals?	Monitored how?	Monitored by?	ART fertility nurses?	Monitored how?	Monitored by?
Albania	No			No		
Algeria	No			No		
Argentina	Unknown			No		
Armenia	Unknown			No		
Australia	Yes	National registry On-site Inspection Re-certification	Independent Agencies	Yes	National registry Periodic report	Independent Agencies
Austria	Unknown			No		
Bangladesh	Yes	Re-certification	Government Employees Medical Officials	Yes	Periodic report	Government Employees Medical Officials
Barbados	Yes	Unknown	Government Employees Medical Officials	Yes	Unknown	Government Employees Medical Officials
Belarus	No			Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
Belgium	No			No		
Benin	No			No		
Bolivia	Yes	Unknown	Government Employees Medical Officials	No		
Bosnia and Herzegovina	No			No		
Brazil	No			No		
Bulgaria	Yes	National registry	Government Employees	No		
Burkina Faso	Yes	National registry	Medical Officials	No		
Cambodia	Unknown			Unknown		
Cameroun	No			No		
Chile	Yes	Re-certification	Medical Officials	No		
China	Unknown			No		
Colombia	Yes	National registry Periodic report On-site Inspection	Government Employees	No		
Costa Rica	No			No		
Côte d'Ivoire	Unknown			Unknown		
Croatia	Yes	Re-certification	Medical Officials	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
Cyprus	Unknown			No		
Czech Republic	Yes	Unknown	Government Employees	No		
Democratic Republic of the Congo	No			No		
Denmark	Yes	National registry	Government Employees	No		
Dominican Republic	No			No		
Ecuador	No			No		
Egypt	No			No		
El Salvador	Yes	International Registry	Medical Officials Independent Agencies	Yes	International Registry	Medical Officials Independent Agencies
Equatorial Guinea	Unknown			No		
Estonia	Unknown			No		
Ethiopia	Yes	Re-certification	Medical Officials	No		
Finland	No			No		
France	No			No		
Gambia	Unknown			Unknown		
Georgia	Unknown			Unknown		
Germany	Unknown			No		
Ghana	Yes	National registry Re-certification	Government Employees Medical Officials	No		
Greece	No			No		
Guatemala	No			No		
Hong Kong	No			No		
Hungary	Unknown			Unknown		

Chapter 2. Table 6c

(*Continued*)

Country	Mental Health professionals?	Monitored how?	Monitored by?	ART fertility nurses?	Monitored how?	Monitored by?
Iceland	No			No		
India	No			No		
Indonesia	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies
Iran	Yes	Periodic report	Government Employees Medical Officials	No		
Iraq	Unknown			Unknown		
Italy	Yes	On-site Inspection	Government Employees	No		
Jamaica	No			No		
Japan	No			No		
Jordan	Unknown			No		
Kazakhstan	No			No		
Kenya	No			Unknown		
Kuwait	Unknown			Unknown		
Latvia	Yes	National registry Re-certification	Government Employees	No		
Lebanon	No			No		
Libya	No			No		
Lithuania	No			No		
Malaysia	No			No		
Mali	No			No		
Malta	No			No		
Mexico	No			No		
Moldova	Unknown			Unknown		
Montenegro	Yes	Re-certification	Medical Officials	No		
Morocco	No			No		
Myanmar	No			Yes	National registry	Medical Officials
Namibia	Unknown			Unknown		
Nepal	Yes	National registry	Government Employees Medical Officials	Yes	National registry	Government Employees Medical Officials
New Zealand	Yes	National registry	Government Employees	No		
Nicaragua	No			No		
Nigeria	No			No		
Norway	No			No		
Oman	Unknown			No		
Pakistan	Yes	Re-certification	Medical Officials	Yes	Re-certification	Medical Officials Independent Agencies
Panamá	No			No		
Paraguay	Unknown			No		
Perú	Yes	National registry Re-certification	Medical Officials	No		
Philippines	No			No		
Polska	No			No		
Portugal	No			No		
Qatar	Yes	On-site Inspection Re-certification	Government Employees	Yes	On-site Inspection Re-certification	Government Employees
Republic of the Congo	No			No		
Romania	Yes	Periodic report On-site Inspection	Government Employees Medical Officials Unofficial Agencies Independent Agencies	Yes	On-site Inspection	Government Employees Medical Officials
Russia	No			Yes	Re-certification	Medical Officials
Rwanda	No			Yes		
Serbia	No			No		
Singapore	Unknown			Yes	National registry On-site Inspection Re-certification	Medical Officials Independent Agencies
Slovenia	No			No		
South Africa	No			Yes	National registry International Registry Periodic report On-site Inspection	Government Employees Medical Officials Independent Agencies

Chapter 2. Table 6c

(Continued)

Country	Mental Health professionals?	Monitored how?	Monitored by?	ART fertility nurses?	Monitored how?	Monitored by?
South Korea	No			No		
Sudan	Unknown			No		
Sweden	No			No		
Switzerland	No			No		
Tajikistan	Unknown			Yes	National registry Periodic report On-site Inspection Re-certification	Government Employees Medical Officials
Tanzania	No			No		
The Netherlands	No			No		
Trinidad & Tobago	No			No		
Tunisia	No			No		
Turkey	Yes	National registry On-site Inspection Re-certification	Government Employees	Yes	On-site Inspection	Government Employees
Uganda	No			No		
Ukraine	Unknown			No		
United Arab Emirates	Unknown			No		
United Kingdom	Yes	Unknown	Government Employees	Yes	Re-certification	Independent Agencies
United States of America	No			No		
Uruguay	No			No		
Uzbekistan	Yes	Re-certification	Government Employees	Yes	Re-certification	Government Employees
Venezuela	No			No		
Zambia	Yes	On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies	Yes	On-site Inspection Re-certification	Government Employees Medical Officials Independent Agencies
Zimbabwe	Yes	Re-certification	Independent Agencies			

- Certification and/or examination combined with continuing education follows closely, representing 18 occurrences (30.5%).
- Certification and/or examination, continuing education, periodic report, and on-site inspection are used together in 7 cases (11.9%).
- Certification and/or examination, continuing education, and periodic report are reported in 4 cases (6.8%).
- Certification and/or examination, continuing education, and on-site inspection occur in 3 cases (5.1%).
- Certification and/or examination combined with on-site inspection is recorded in 2 cases (3.4%).
- Continuing education alone is noted in 1 case (1.7%).
- Continuing education along with on-site inspection is the least common combination, observed in 1 case (1.7%).

This breakdown highlights that certification and/or examination are the most prevalent oversight mechanisms, frequently supplemented by continuing education and, to a lesser extent, periodic reports and on-site inspections.

Respondents from 63 of 112 (56.3%) countries reported that obstetricians and gynaecologists needed to comply with specific licensing criteria (Table 5a). Multiple combinations of mechanisms were employed to accomplish this requirement as follows:

- Certification and/or examination combined with continuing education was the most common requirement, reported in 32.8% of cases (21 countries).
- Certification and/or examination alone was required in 28.1% of cases (18 countries).
- Certification and/or examination, continuing education, periodic report, and on-site inspection were mandated in 14.1% of cases (9 countries).
- Certification and/or examination, continuing education, and on-site inspection were required in 10.9% of cases (7 countries).
- Certification and/or examination, continuing education, and periodic report were reported in 4.7% of cases (3 countries).
- Certification and/or examination and on-site inspection were necessary in 3.1% of cases (2 countries).
- Continuing education alone was reported in 3.1% of cases (2 countries).
- Unknown licensing criteria were reported in 1.6% of cases (1 country).

The survey did not address the availability of high-quality subspecialty fellowship programmes for reproductive medicine specialists. Overlap likely exists with the qualifications necessary for trained obstetricians/gynaecologists. These physicians may have the capacity to provide appropriate care either with or without further fellowship training.

Licensing criteria for the ART Laboratory; Laboratory Director; and Laboratory Staff

Seventy-five of 110 (68.1%) respondents reported that ART laboratories were required to comply with licensing criteria (Table 5a). This included the following:

- Certification and/or examination, continuing education, periodic report, and on-site inspection were the most common requirements, reported in 19 countries (25%).

Chapter 2. Table 7

Are penalties designated for violation of governance, licensure or credentialing?

Country	Penalties?	Penalty Type
Albania	Yes	Amount of money License removal Closure of center
Algeria	Unknown	
Argentina	Unknown	
Armenia	Yes	Deprive the center of its license
Australia	Yes	Loss of Accreditation as an ART Unit, which affects whether patients receive National health Insurance treatment subsidies.
Austria	Yes	Fine, loss of license, prison
Bangladesh	No	
Barbados	Unknown	
Belarus	Yes	Violation of requirements may result in license suspension
Belgium	Yes	Court
Benin	Yes	Is punished by five (05) years to ten (10) years of imprisonment and a fine of five hundred thousand (500,000) to one million (1,000,000) francs, anyone who uses medically assisted procreation other than in the cases provided for in Articles 52 and 54 of this law. The accomplice is punished with the same penalty
Bolivia	No	
Bosnia and Herzegovina	Yes	Money penalties, offence penalties,
Brazil	Yes	Government Regulatory Agencies can charge fines and close irregular centres.
Bulgaria	Yes	Financial sanctions, license withdrawal
Burkina Faso	No	
Cambodia	Yes	Closure of clinic or hospital
Cameroun	Yes	Temporary closure of the center withdrawal of authorization to practice
Chile	No	
China	Yes	Take back the licence
Colombia	Yes	Monetary penalties Confiscation of medical supplies and equipment Closure of the medical facility
Costa Rica	Yes	http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=80115&nValor3=101568&strTipM=TC#:~:text=Actualmente%2C%20debido%20a%20la%20falta,a%20la%20posibilidad%20de%20procrear.
Côte d'Ivoire	Unknown	
Croatia	Yes	Money fee for non-adherence to certain paragraphs of Nation Law of ART
Cyprus	Yes	Not following the IVF law is a criminal offence that is punishable by monetary penalties and imprisonment.
Czech republic	Yes	Possible loss of licence.
Democratic Republic of the Congo	No	
Denmark	Yes	Withdrawal of license and economically fines
Dominican Republic	Unknown	
Ecuador	No	
Egypt	Yes	Can be closure of the center or suspending license for a period, or imprisonment of the doctor in charge
El Salvador	No	
Equatorial Guinea	Yes	They are detailed in articles 74 and 75 of the ART law 2020. There are three levels of penalties. The most severe may result in the removal of the Centre's license.

Chapter 2. Table 7

(Continued)

Country	Penalties?	Penalty Type
Estonia	Yes	Suspension of licence
Ethiopia	Unknown	
Finland	Yes	According to law, fees or penalty.
France	Yes	Accreditation withdrawn
Gambia	Yes	License revoke
Georgia	Yes	
Germany	Yes	
Ghana	Yes	Loss of license to practice/operate
Greece	Yes	FINANCIAL AND ADMINISTRAIVE FINES
Guatemala	No	
Hong Kong	Yes	
Hungary	Unknown	
Iceland	No	
India	Yes	1. Penalties include a fine and / or imprisonment 2. More severe penalties for Surrogacy 3. Second offence carries more severe penalty
Indonesia	Yes	1. Revocation of permits to provide IVF services (for hospitals or ivf clinics) 2. Revocation of a doctor's practice license 3. Termination of work at the ivf clinics
Iran	No	
Iraq	Yes	closing or suspending the center work
Italy	Yes	Loss of license, fines or imprisonment depending on the severity of the violation.
Jamaica	No	
Japan	No	
Jordan	No	
Kazakhstan	No	
Kenya	No	
Kuwait	Unknown	
Latvia	Yes	Severe and continuing violation could result in the cancelation of TE permit and the loss of government funding.
Lebanon	Unknown	
Libya	Unknown	
Lithuania	No	
Malaysia	No	
Mali	Unknown	
Malta	Yes	Monetary fines
Mexico	No	
Moldova	Unknown	
Montenegro	Yes	Penalties could be from 5000 to 20000 Euros for mistakes related to ART law, plus license loosing for severe mistakes related to health of patients or jail penalties related to severe harm to health of patients.
Morocco	Yes	1 to 15 years of jail
Myanmar	No	
Namibia	Unknown	
Nepal	Yes	According to the Violation.
New Zealand	Yes	The HART Act specifies fines and imprisonment
Nicaragua	Yes	
Nigeria	No	
Norway	Yes	According to national regulations specific criteria must be fulfilled according to directives. Annual inspections ensure that all certified clinics are in alignment to national and EU directives
Oman	Unknown	
Pakistan	No	
Panamá	No	
Paraguay	No	
Perú	No	
Philippines	No	

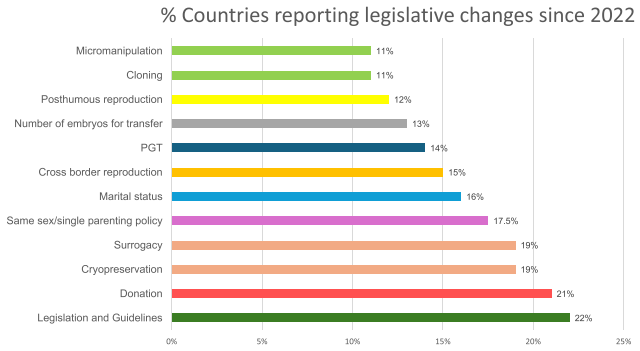
Chapter 2. Table 7

(*Continued*)

Country	Penalties?	Penalty Type
Polska	Unknown	
Portugal	Yes	Dependent on the seriousness of the violation. From a fine to closure of the ART centre
Qatar	Unknown	
Republic of the Congo	No	
Romania	No	
Russia	Yes	Administrative or criminal punishment
Serbia	No	
Singapore	Yes	Fines and/or Suspension of licenses
Slovenia	Yes	There are countless areas in the national law that are subject to the unfair and material liability of both the institution and the ART provider. No intervention is allowed in the collection, storage and use of sperm cells, unfertilised ova and early embryos. No trade in stored sperm cells, unfertilised ova and early embryos shall be permitted.
South Africa	Yes	It is a criminal offence to be noncompliant with the National Health Act. The government uses the National Fertility Society as its proxy to inspect and accredit all renters of excellence.
South Korea	Yes	imprisonment for not more than five years or a fine of not more than 50 million Korean won
Sudan	Yes	Warning Suspension of license
Sweden	Unknown	
Switzerland	Yes	Fines Withdrawal of licence to practice
Tajikistan	Yes	Fine (penalties), barring professional activities, criminal charges, administrative charges
Tanzania	No	
The Netherlands	No	
Trinidad & Tobago	No	
Tunisia	Yes	Fine cessation of activity Prison in case of performing non allowed procedures
Turkey	Yes	Administrative fines, termination of activities and decertification.
Uganda	Yes	Loss of medical license or clinic license one or both
Ukraine	Yes	deprivation of the right to practice medicine
United Arab Emirates	Yes	
United Kingdom	Yes	Decided by Regulatory Bodies. Range from reprimand to loss of licence
United States of America	Yes	Listing of nonreporting clinics Loss of SART membership Loss of certification for professionals failing to maintain CME and/or other professional sanctions regarding licensing For egregious violations, government public letter, sanctions including fines and potentially closure of clinic
Uruguay	No	
Uzbekistan	Yes	All penalties applied according to national laws.
Venezuela	No	
Zambia	Yes	Deregistration from practicing

- Certification and/or examination and on-site inspection were required in 14 countries (18.4%).
- Certification and/or examination, periodic report, and on-site inspection were mandated in nine countries (11.8%).
- On-site inspection alone was reported in seven countries (9.2%).
- Certification and/or examination alone was required in six countries (7.9%).

Chapter 2. Chart 1



- Periodic report and on-site inspection were necessary in six countries (7.9%).
- Certification and/or examination combined with continuing education were reported in four countries (5.3%).
- Continuing education alone was noted in two countries (2.6%).
- Continuing education and on-site inspection were required in two countries (2.6%).
- Continuing education and periodic report were mandated in one country (1.3%).
- Certification and/or examination and periodic report were necessary in one country (1.3%).
- Periodic report alone was reported in one country (1.3%).
- Certification and/or examination, continuing education, and on-site inspection were required in one country (1.3%).

Fifty-one of 112 respondents (45.5%) reported that there were specific licensing requirements for the ART Laboratory Directors in their countries (Table 5b). This includes the following:

- Certification and/or examination alone was the most common requirement, reported by 20 respondents (39%).
- Certification and/or examination combined with continuing education was required in six cases (12%).
- Certification and/or examination, continuing education, and on-site inspection were mandated in six cases (12%).
- Certification and/or examination, continuing education, and periodic report were required in four cases (8%).
- Certification and/or examination, continuing education, periodic report, and on-site inspection were reported in 10 cases (20%).
- Certification and/or examination and on-site inspection were necessary in two cases (4%).
- On-site inspection alone was reported in two cases (4%).
- Unknown licensing requirements accounted for one case (2%).

Forty-three of 112 respondents (38%) reported that there were specific licensing requirements for the ART Laboratory staff in their countries (Table 5b). This includes the following:

- Certification and/or examination alone was the most common requirement, reported in 11 cases (26% of cases).
- Certification and/or examination combined with continuing education was required in 9 cases (21%).
- Certification and/or examination, continuing education, and on-site inspection were mandated in two cases (5%).
- Certification and/or examination, continuing education, and periodic report were required in two cases (5%).
- Certification and/or examination, continuing education, periodic report, and on-site inspection were reported in eight cases (19%).
- Certification and/or examination and on-site inspection were necessary in four cases (9%).
- Continuing education alone was reported in two cases (5%).
- Continuing education and on-site inspection were required in one case (2%).
- Continuing education and periodic report were mandated in one case (2%).
- On-site inspection alone was reported in two cases (5%).
- Unknown licensing requirements accounted for one case (2%).

Licensing criteria for Mental Health Workers and Fertility Nurses

Sixty-five of 113 respondents (58%) reported that there were specific licensing requirements for the ART Mental Health Workers in their countries (Table 5b). This includes the following:

- Certification and/or examination alone was the most common requirement, reported in 29 cases (44%).
- Certification and/or examination combined with continuing education was required in 22 cases (33%).
- Certification and/or examination, continuing education, and on-site inspection were mandated in two cases (3%).
- Certification and/or examination, continuing education, and periodic report were required in in two cases (3%).
- Certification and/or examination, continuing education, periodic report, and on-site inspection were reported in 5% of cases (3 respondents).
- Certification and/or examination and on-site inspection were necessary in in two cases (3%).
- Continuing education alone was reported in one case (2%).
- National registry, on-site inspection, and re-certification were required in in two cases (3%).
- National registry, periodic report, on-site inspection, and re-certification were mandated in one case (2%).
- Periodic report alone was reported in one case (2%).
- Unknown licensing requirements accounted for two cases (3%).

Twenty-three of 112 respondents (21%) reported that there were specific licensing requirements for the ART fertility nurses in their countries (Table 5b). This includes the following:

- Certification and/or examination combined with continuing education was the most common requirement, reported in eight cases (35%).
- Certification and/or examination alone was required in five cases (22%)
- Certification and/or examination, continuing education, and on-site inspection were mandated in four cases (17%).
- Certification and/or examination, continuing education, periodic report, and on-site inspection were reported in in four cases (17%).
- Continuing education alone was required in one case (4%).
- National registry and on-site inspection were necessary in one case (4%).

Monitoring of ART centres and medical professionals

Sixty-eight of 111 respondents (61%) reported that there were specific monitoring mechanisms for governance, licensure, or credentialing for ART centres in their countries (Table 6a). The following responses were given in relation to how such monitoring takes place:

- National registry, periodic report, on-site inspection, re-certification was the most common requirement, reported in 13 cases (19%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, on-site inspection, re-certification was required in eight cases (12%).

- Periodic report alone was reported in six cases (9%).
- National registry alone was required in four cases (6%).
- On-site inspection alone was mandated in four cases (6%).
- Periodic report with on-site inspection and re-certification was necessary in four cases (6%).
- National registry, periodic report, on-site inspection was reported in five cases (7%).
- On-site inspection with re-certification was required in five cases (7%).
- National and International Registry with periodic report, on-site inspection, and re-certification was reported in eight cases (12%).
- International Registry (e.g., ICMART, EIM, REDLARA) was required in two cases (3%).
- International Registry with on-site inspection was reported in two cases (3%).
- National and International Registry (e.g., ICMART, EIM, REDLARA) were required in two cases (3%).
- National registry with on-site inspection was necessary in three cases (4%).
- National registry with periodic reporting was reported in two cases (3%).
- National registry with on-site inspection and re-certification was mandated in two cases (3%).
- Periodic report with on-site inspection was required in two cases (3%).
- International Registry with periodic reporting was reported in one case (1%).
- International Registry with periodic report, on-site inspection, and re-certification was necessary in one case (1%).
- International Registry with unknown criteria accounted for one case (1%).
- National and International Registry with periodic report and on-site inspection was reported in one case (1%).

The following responses were given in relation to who conducts such monitoring:

- Government Employees were the most common entity, reported in 30 cases (44%).
- Government Employees and Medical Officials were responsible in 16 cases (24%).
- Independent Agencies were reported in seven cases (10%).
- Government Employees, Medical Officials, and Independent Agencies were involved in five cases (7%).
- Medical Officials alone were responsible in four cases (6%) .
- Government Employees and Independent Agencies were cited in two cases (3%).
- Medical Officials and Independent Agencies were reported in two cases (3%).
- Government Employees and Unofficial Agencies were noted in one case (1%).
- Unofficial Agencies alone accounted for one case (1%).

Forty-two of 112 (37.5%) respondents reported that physicians with advanced training in reproductive endocrinology and infertility (REI) are monitored in their countries (Table 6a). A wide variety of mechanisms and combinations of mechanisms were utilised by the countries that had strategies in place to monitor REI physicians including:

- Re-certification was the most common mechanism, reported in seven cases (16.7%).
- National registry alone was required in six cases (14.3%).
- National registry, periodic report, on-site inspection, and re-certification were mandated in six cases (14.3%).
- On-site inspection and re-certification were required in three cases (7.1%).
- International registry (e.g., ICMART, EIM, REDLARA) and on-site inspection were reported in two cases (4.8%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, and re-certification were required in two cases (4.8%).
- National registry and on-site inspection were mandated in two cases (4.8%).
- National registry and periodic report were reported in two cases (4.8%).
- National registry and re-certification were necessary in two cases (4.8%).
- International registry (e.g., ICMART, EIM, REDLARA), periodic report, on-site inspection, and re-certification were mandated in one country (2.4%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, on-site inspection, and re-certification were reported in one country (2.4%).
- International registry (e.g., ICMART, EIM, REDLARA) alone was required in one country (2.4%).
- International registry (e.g., ICMART, EIM, REDLARA) and re-certification were necessary in one country (2.4%).
- On-site inspection alone was reported in one country (2.4%).
- Periodic report alone was required in one country (2.4%).
- Periodic report and on-site inspection were mandated in one country (2.4%).
- Periodic report and re-certification were reported in one country (2.4%).
- National registry, periodic report, and on-site inspection were necessary in one country (2.4%).
- Unknown monitoring mechanisms accounted for one country (2.4%).

The following was reported regarding who carries out the above monitoring:

- Government Employees were the most common monitoring entity, reported in 13 cases (31.0%).
- Government Employees and Medical Officials were responsible in 11 cases (26.2%).
- Medical Officials alone monitored REI centres in six cases (14.3%).
- Government Employees, Medical Officials, and Independent Agencies were involved in three countries (7.1%).
- Independent Agencies alone were responsible in three countries (7.1%).
- Medical Officials and Independent Agencies were reported in three countries (7.1%).
- Government Employees and Independent Agencies monitored REI in two cases (4.8%).
- Government Employees, Medical Officials, and Unofficial Agencies were cited in two cases (4.8%).

Forty three of 111 respondents (39%) reported that their countries monitored OB/GYN physicians who practise ART (Table 6a). A variety of mechanisms and combinations of mechanisms were used to achieve this goal as follows:

- National registry alone was the most common mechanism, reported in ten countries (23.3%).
- Re-certification was required in nine countries (20.9%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, on-site inspection, and re-certification were mandated in three countries (7.0%).

- National registry, periodic report, on-site inspection, and re-certification were necessary in three countries (7.0%).
- On-site inspection and re-certification were required in three countries (7.0%).
- National registry and periodic report were reported in two countries (4.7%).
- National registry, periodic report, and on-site inspection were mandated in two countries (4.7%).
- National registry and re-certification were required in one country (2.3%).
- On-site inspection alone was reported in one country (2.3%).
- Periodic report alone was mandated in one country (2.3%).
- Periodic report and on-site inspection were necessary in one country (2.3%).
- Periodic report, on-site inspection, and re-certification were required in one country (2.3%).
- International registry (e.g., ICMART, EIM, REDLARA) alone was reported in one country (2.3%).
- International registry with on-site inspection was mandated in one country (2.3%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), and re-certification were necessary in one country (2.3%).
- National registry, on-site inspection, and re-certification were reported in one country (2.3%).
- International registry, periodic report, on-site inspection, and re-certification were required in one country (2.3%).
- International registry and re-certification were cited in one country (2.3%).

The following was reported regarding who carries out the above monitoring:

- Government Employees were the most common monitoring authority, reported in 12 cases (27.3%).
- Government Employees and Medical Officials were responsible in 11 countries (25.0%).
- Medical Officials alone carried out monitoring in ten countries (22.7%).
- Independent Agencies were responsible in four cases (9.1%).
- Government Employees, Medical Officials, and Independent Agencies were involved in three countries (6.8%).
- Medical Officials and Independent Agencies were cited in two cases (4.5%).
- Government Employees and Independent Agencies were responsible in one country (2.3%).
- Government Employees, Medical Officials, and Unofficial Agencies were noted in one country (2.3%).

Monitoring mechanisms for governance, licensure or credentialing for ART Laboratories and ART professionals

60 of 111 respondents (54%) reported that their countries monitored ART laboratories (Table 6b). A variety of mechanisms and combinations of mechanisms were used to achieve this goal as follows:

- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, on-site inspection, and re-certification was the most common mechanism, reported in nine countries (15.0%).
- National registry, periodic report, and on-site inspection were required in eight countries (13.3%).
- On-site inspection alone was mandated in seven cases (11.7%).
- National registry, periodic report, on-site inspection, and re-certification were reported in six countries (10.0%).
- National registry alone was required in five countries (8.3%).
- On-site inspection and re-certification were mandated in five countries (8.3%).
- Periodic report and on-site inspection were necessary in five countries (8.3%).
- National registry, on-site inspection, and re-certification were required in three cases (5.0%).
- National registry and on-site inspection were mandated in two countries (3.3%).
- Periodic report, on-site inspection, and re-certification were reported in two countries (3.3%).
- National registry and periodic report were necessary in two countries (3.3%).
- Re-certification alone was required in two countries (3.3%).
- Periodic report and re-certification were mandated in one country (1.7%).
- International registry (e.g., ICMART, EIM, REDLARA) alone was reported in one country (1.7%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), on-site inspection, and re-certification were required in one country (1.7%).
- National registry, periodic report, and re-certification were necessary in one country (1.7%).

The following was reported regarding who carries out the above monitoring:

- Government Employees were the most common monitoring authority, reported in 25 countries (41.7%).
- Government Employees and Medical Officials were responsible in 14 countries (23.3%).
- Independent Agencies alone carried out monitoring in six cases (10.0%).
- Government Employees and Independent Agencies were involved in four cases (6.7%).
- Government Employees, Medical Officials, and Independent Agencies were cited in three countries (5.0%).
- Medical Officials alone were responsible in three countries (5.0%).
- Government Employees, Medical Officials, and Unofficial Agencies were noted in two countries (3.3%).
- Medical Officials and Independent Agencies were reported in two countries (3.3%).
- Unofficial Agencies alone accounted for one case (1.7%).

Thirty-nine of 108 respondents (36%) reported that their countries monitored laboratory directors (Table 6b). A variety of mechanisms and combinations of mechanisms were used to achieve this goal as follows:

- National registry, periodic report, on-site inspection, and re-certification was the most common mechanism, reported in five countries (12.8%).
- National registry alone was required in four countries (10.3%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, on-site inspection, and re-certification were mandated in four countries (10.3%).
- On-site inspection alone was required in three countries (7.7%).
- On-site inspection and re-certification were reported in three countries (7.7%).
- Periodic report and re-certification were necessary in two cases (5.1%).

- Re-certification alone was mandated in two cases (5.1%).
- National registry and on-site inspection were required in two cases (5.1%).
- Periodic report and on-site inspection were reported in two cases (5.1%).
- National registry and re-certification were mandated in two cases (5.1%).
- International registry (e.g., ICMART, EIM, REDLARA) alone was required in two cases (5.1%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, and on-site inspection were reported in two cases (5.1%).
- Periodic report, on-site inspection, and re-certification were necessary in one country (2.6%).
- National registry and periodic report were mandated in one country (2.6%).
- National registry, periodic report, and on-site inspection were required in one country (2.6%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, on-site inspection, re-certification, and unknown criteria were reported in one country (2.6%).
- National registry, periodic report, and re-certification were mandated in one country (2.6%).
- Unknown monitoring mechanisms accounted for one country (2.6%).

The following was reported regarding who carries out the above monitoring:

- Government Employees were the most common monitoring authority, reported in 13 countries (32.5%).
- Government Employees and Medical Officials were responsible in 11 cases (27.5%).
- Government Employees, Medical Officials, and Independent Agencies were involved in four countries (10.0%).
- Independent Agencies alone carried out monitoring in four countries (10.0%).
- Unofficial Agencies were responsible in three countries (7.5%).
- Medical Officials and Independent Agencies were cited in two cases (5.0%).
- Government Employees and Independent Agencies were responsible in one country (2.5%).
- Medical Officials alone monitored laboratory directors in one country (2.5%).
- Government Employees, Medical Officials, and Unofficial Agencies were noted in one country (2.5%).

Thirty six of 109 respondents (33%) reported that their countries monitored ART technical laboratory staff (Table 6b). A variety of mechanisms and combinations of mechanisms were used to achieve this goal as follows:

- National registry alone was the most common mechanism, reported in five cases (14.3%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, on-site inspection, and re-certification were required in four cases (11.4%).
- National registry, periodic report, on-site inspection, and re-certification were mandated in four cases (11.4%).
- On-site inspection and re-certification were reported in four cases (11.4%).
- On-site inspection alone was required in four cases (11.4%).
- National registry, periodic report, and on-site inspection were necessary in three countries (8.6%).
- Periodic report and on-site inspection were reported in two countries (5.7%).
- International registry (e.g., ICMART, EIM, REDLARA) alone was mandated in two countries (5.7%).
- National registry and re-certification were required in two countries (5.7%).
- Re-certification alone was reported in two countries (5.7%).
- Periodic report alone was necessary in one country (2.9%).
- Periodic report and re-certification were mandated in one country (2.9%).
- Unknown monitoring mechanisms accounted for one country (2.9%).

The following was reported regarding who carries out the above monitoring:

- Government Employees alone were the most common monitoring authority, reported in 12 countries (33%).
- Government Employees and Medical Officials together were responsible in 12 countries (33%).
- Government Employees, Medical Officials, and Independent Agencies were involved in three cases (8.3%).
- Independent Agencies alone carried out monitoring in two countries (5.6%).
- Medical Officials alone were responsible in two countries (5.6%).
- Medical Officials and Independent Agencies were cited in two countries (5.6%).
- Unofficial Agencies were responsible in two countries (5.6%).
- Government Employees, Medical Officials, and Unofficial Agencies were noted in one case (2.8%).

Monitoring mechanisms for governance, licensure or credentialing for mental health and ART Fertility Nurse professionals

Thirty of 112 respondents (27%) reported that their countries monitored mental health professionals (Table 6c). A variety of mechanisms and combinations of mechanisms were used to achieve this goal as follows:

- Re-certification alone was the most common mechanism, reported in eight cases (27%).
- National registry alone was required in four countries (13.3%).
- Unknown monitoring mechanisms were reported in four countries (13.3%).
- National registry and re-certification were mandated in three cases (10%).
- National registry, on-site inspection, and re-certification were required in two countries (6.7%).
- On-site inspection and re-certification were reported in two countries (6.7%).
- Periodic report alone was mandated in one country (3.3%).
- National registry with unknown criteria was cited in one country (3.3%).
- On-site inspection alone was reported in one country (3.3%).
- Periodic report and on-site inspection were required in one country (3.3%).
- National registry, periodic report, and on-site inspection were necessary in one country (3.3%).
- National registry, periodic report, on-site inspection, and re-certification were mandated in one country (3.3%).
- International registry (e.g., ICMART, EIM, REDLARA) alone was reported in one country (3.3%).

The following was reported regarding who carries out the above monitoring:

- Government Employees alone were the most common monitoring authority, reported in 11 countries (36.7%).
- Medical Officials alone were responsible in seven countries (23.3%).
- Government Employees and Medical Officials together carried out monitoring in six cases (20.0%).
- Independent Agencies alone were responsible in two countries (6.7%).
- Government Employees, Medical Officials, and Independent Agencies were involved in two countries (6.7%).
- Medical Officials and Independent Agencies were cited in one country (3.3%).
- Government Employees, Medical Officials, Unofficial Agencies, and Independent Agencies were noted in one country (3.3%).

Twenty-one of 111 respondents (19%) reported that their countries monitored ART fertility nurses (Table 6c). A variety of mechanisms and combinations of mechanisms were used to achieve this goal as follows:

- National registry, periodic report, on-site inspection, and re-certification was the most common mechanism, reported in four cases (19.0%).
- Re-certification alone was also required in four cases (19.0%).
- National registry alone was mandated in two countries (9.5%).
- On-site inspection alone was reported in two countries (9.5%).
- On-site inspection and re-certification were required in two countries (9.5%).
- National registry, international registry (e.g., ICMART, EIM, REDLARA), periodic report, and on-site inspection were cited in one country (4.8%).
- International registry (e.g., ICMART, EIM, REDLARA) alone was reported in one country (4.8%).
- National registry, on-site inspection, and re-certification were mandated in one country (4.8%).
- National registry and periodic report were required in one country (4.8%).
- Periodic report alone was reported in one country (4.8%).
- Professional incompetence and negligence were identified as monitoring factors in one country (4.8%).
- Unknown monitoring mechanisms accounted for one country (4.8%).

The following was reported regarding who carries out the above monitoring:

- Government Employees and Medical Officials were the most common monitoring authorities, reported in seven countries (35.0%).
- Government Employees, Medical Officials, and Independent Agencies were responsible in three cases (15.0%).
- Medical Officials and Independent Agencies carried out monitoring in three cases (15.0%).
- Government Employees alone were responsible in three cases (15.0%).
- Independent Agencies alone monitored fertility nurses in two countries (10.0%).
- Medical Officials alone were cited in two countries (10.0%).

Penalties for violation of governance, licensure or credentialing

In 2024, 60 or 110 respondents (54%) reported penalties for violation of governance, licensure or credentialing (Table 7). The different types of penalties reported included:

- Administrative fines, termination of activities and decertification.
- Administrative or criminal punishment
- Closure of center
- Confiscation of medical supplies and equipment
- Fine
- Imprisonment
- License revocation
- License suspension
- Loss of Accreditation as an ART Unit
- Loss of government funding.
- Professional Incompetence and negligence
- Revocation of a doctor's practice license
- Warning
- Withdrawal of authorization to practice

In 2021, 18 of 89 respondents (20%) reported that they were aware of ART policy violations taking place in their countries. By contrast, 49 respondents (55%) asserted that no violations had occurred in their country, while 22 (25%) replied "unknown". Penalties for violation of governance, licensure, or credentialing: In 2021, 38 of 88 respondents (43%) reported that disciplinary penalties existed for violations of governance, licensure, or credentialing of ART centres and providers. The various types of penalties reported included:

- Financial penalties
- Closing of activity
- Criminal complaints
- Revocation of a licenses
- Loss of accreditation • Imprisonment
- Suspension of license
- Suspension of privileges
- Facility closure
- Other disciplinary actions

Discussion

Assisted reproductive technologies raise a variety of medical, as well as legal, social, and ethical issues. Many countries have decided to regulate reproductive medicine and associated practices, setting standards intended to protect public health and safety, as well as to address issues subsequently raised. This has been undertaken by a variety of mechanisms among different jurisdictions, including state and/or federal government regulation, guidelines, professional self-regulation, agency oversight, and/or cultural and religious decrees. There may also be a strict licensure system for clinics, physicians, laboratories, laboratory directors, laboratory staff, mental health professionals, and/or fertility nurses.

Summary

The 2024 Triennial Survey confirmed that some form of regulation exists in most countries (almost 70%) where ART is available, although almost 30% of countries were reported not to have any regulation. The number of respondents that reported the type of regulation that exists varied; most reported federal (national) laws, statutes, ordinances, or policies. The next most frequent types of regulation reported were licensing bodies, and oversight by professional organisations; followed by the existence of state, provincial, or regional laws, statutes, or ordinances or agency-based regulations or oversight. Four respondents reported the existence of municipal laws, statutes, or ordinances. Often a mixture of these types of regulation was reported together.

Specific licensing and credentialing criteria for ART centres were reported by the majority of respondents, with most reporting multiple licensing requirements. Additional specific licensing or credentialing requirements were noted for REI physicians, obstetricians and gynaecologists, laboratory staff, mental health professionals, and nursing staff.

ART centres were and continue to be monitored in most respondent countries by a variety of mechanisms. Monitoring is carried out most frequently by government employees and independent agencies and, to a lesser extent, medical officers.

Most of the respondents reported that no violations of regulations had been reported in their countries. However, consistently over the past three surveys 18-20% of respondents have reported that some violations had occurred, and approximately 25% said they did not have sufficient knowledge. In all of 2018, 2021, and 2024 surveys, respondents have described multiple potential penalties that may be invoked for non-compliance. These penalties range from comparatively low-level sanctions to significant criminal concerns. However, the level of enforcement remains unknown.

CHAPTER 3: FINANCIAL SUPPORT FOR ART

Introduction

Although the prevalence of infertility is similar around the globe, there are striking differences in the international utilization of ART[1,2]. These disparities reflect differences in geographic access, regulatory environment, sociocultural norms and the affordability of treatment. From an individual's perspective, ART treatment is an expensive medical procedure and consumer affordability is principally determined by the level of financial support for ART from governments and third-party sources[3].

The 2024 Triennial Report questionnaire investigated financial support for ART from the 122 participating countries that submitted data relevant to the twelve survey questions related to the availability, regulation, coverage and restrictions associated with the provision of financial support for ART. This represents as 35.5% an increase from the 90 countries who responded to the 2021 IFFS Survey.

Analysis of the Survey

The following questions addressing changes in expense allocation for ART since the 2023 questionnaire were posed:

1. Are there regulations that address reimbursement of ART procedures in your country?
2. If there are programs for coverage or reimbursement of ART services, which of the following do they include?
3. Have there been any modifications to insurance coverage or government funding since 2021b
4. Is insurance coverage of government funding based on fertility status?
5. Does insurance coverage or government funding typically cover the following ART services?
6. How are ART services reimbursed?
7. Does your country have insurance coverage or government funding for infertility treatments?
8. Does insurance coverage or government funding limit the number of IVF cycles performed per patient? If yes, number of cycles covered.
9. Is insurance or government funding influenced by personal income levels. If yes, income level.
10. Is insurance coverage or government funding contingent on age limits? If yes, age limit.
11. Is insurance coverage or government funding based on the duration of infertility? If yes, years of infertility.
12. Is insurance coverage or government funding contingent on implementation of single embryo transfer (SET, DET)?

1. Are there regulations that address reimbursement of ART procedures in your country?

In 2024, 110 respondents reported on regulations that addressed reimbursement of ART procedures, a similar proportion to the 2021 survey (Table 1). Of the 110 countries that responded to question on regulation at the Federal/National Laws, Statues or Ordinances level, 58 countries (53%) reported having regulations at this level and 5 countries (4.5%) reported "unknown" status. Of the 97 countries that responded to question on regulation at the State/Provincial/Regional Laws, Statutes or Ordinances level, 17 countries (17.5%) reported having regulations at this level and 6 countries (6%) reported "unknown" status. Of the 97 countries that responded to question on regulation at the Municipal Laws, Statutes or Ordinances level, 11 countries (12%) reported having regulations at this level and 6 countries (6%) reported "unknown" status. Of the 91 countries that responded to question on regulation at the Agency Regulations or Oversight level, 11 countries (12%) reported having regulations at this level and 5 countries (5.5%) reported "unknown" status. Of the 94 countries that responded to question on regulation at the Professional Organization Standards/Guidelines level, 16 countries (17%) reported having regulations at this level and 5 countries (5%) reported "unknown" status. Of the 91 countries that responded to question on regulation at the Cultural Practice level, 7 countries (8%) reported having regulations at this level and 7 countries (8%) reported "unknown" status. Of the 88 countries that responded to question on regulation at the Religious Decree level, 7 countries (8%) reported having regulations at this level and 6 countries (7%) reported "unknown" status.

2. If there are programs for coverage or reimbursement of ART services, which of the following do they include?

Of the 91 responding countries with a combination of government health plans and private insurance, 56 countries (61%) had no coverage or reimbursement for ART services, 18 countries (20%) had partial coverage or reimbursement and only 2 countries (2%) had complete coverage or reimbursement, and 15 countries (16%) responded "unknown" (Table 2). Of the 110 responding countries with only a national health plan, 42 countries (38%) had no coverage or reimbursement for ART services, 32 countries (29%) had partial coverage or reimbursement, and 28 countries (25%) had complete coverage or reimbursement, and 8 countries (7%) responded "unknown".

3. Have there been any modifications to insurance coverage or government funding since 2021?

Sixty-three countries reported changes in the level of financial support available to those in need of ART during the previous three years (Table 3). The following changes were reported:

- Twelve countries (19%) reported expanded access to coverage or reimbursement
- Eight countries (13%) reported
  - decreased access to coverage or reimbursement, or
  - expanded access to coverage or reimbursement and increased amount of financial support
- Four countries (6%) reported

Chapter 3. Table 1

Are there regulations that address reimbursement of ART procedures in your country?

Country	Federal/ National Laws/ Statutes/ Ordinances	State/ Provincial/ Regional Laws/ Statutes/ Ordinances	Municipal Laws/ Statutes/ Ordinances	Agency Regulations/ Oversight	Professional Organization Standards/ Guidelines	Cultural practice	Religious decree
Albania		Yes					
Algeria	Yes	No	No	No	No	No	Unknown
Argentina	Yes	No	No	No	No	No	No
Armenia	Yes	No	No	Yes	Yes	Yes	No
Australia	Yes						
Austria	Yes	No	No	No	No	No	No
Bangladesh	No	No	No	No	No	No	No
Barbados	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	Yes	No	No	No	No	No	No
Belgium	Yes						
Benin	No	No	No	No	No	No	
Bolivia	No	No	No	No	No	No	No
Bosnia and Herzegovina	Yes	Yes	Yes	No	No	No	No
Brazil	No	No	No	No	No	No	No
Bulgaria	Yes	No	Yes	No	No	No	No
Burkina Faso	No	No	No	No	No	No	No
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroun	No	No	No	No	No	No	No
Chile	Yes	No	No	Yes	No	No	No
China	Yes	Yes	No	Yes	Yes	No	No
Colombia	No	No	No	No	No	No	No
Costa Rica	Yes						
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Yes	No	No	No	No	No	No
Cyprus	Yes	No	No	No	No	No	No
Czech Republic	Yes	No	No	No	No	No	No
Democratic Republic of the Congo	No	No	No	No	No	No	No
Denmark	Yes	No	No	No	No	No	No
Dominican Republic	No	No	No	No	No	No	No
Ecuador	No	No	No	No	No	No	No
Egypt	No	No	No	No	No	Yes	Yes
El Salvador	No	No	No	No	No	No	No
Equatorial Guinea	No	No	No	No	No	No	No
Estonia	Yes						
Ethiopia	No	No	No	No	No	No	No
Finland	Yes	No	No	Yes	No	No	No
France	Yes	No	No	No	No	No	No
Gambia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Georgia	Yes						
Germany	Yes	Yes					
Ghana	No	No	No	No	Yes		
Greece	Yes						
Guatemala	No	No	No	No	No	No	No
Hong Kong	No	No	No	Yes	No	No	No
Hungary	Yes	No	No	No	No	No	No
Iceland	Yes	No	No	No	No	No	No
India	No	No	No	No	No	No	No
Indonesia	No	No	No	No	No	No	No
Iran	Yes	No	No	No	No	No	Yes
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	No	No	No	Yes	Yes	No	No
Italy	Yes	Yes	No	No	No	No	No

Chapter 3. Table 1

(*Continued*)

Country	Federal/ National Laws/ Statutes/ Ordinances	State/ Provincial/ Regional Laws/ Statutes/ Ordinances	Municipal Laws/ Statutes/ Ordinances	Agency Regulations/ Oversight	Professional Organization Standards/ Guidelines	Cultural practice	Religious decree
Jamaica	No	No	No	No	No	No	No
Japan	No	Yes	Yes	No	No	No	No
Jordan	No	No	No	No	No	No	No
Kazakhstan	Yes						
Kenya	No	No	No	No	No	No	No
Kuwait	Yes	No	No	No	No	Unknown	Yes
Latvia	Yes	No	No	Yes	No	No	No
Lebanon	No	No	No	No	No	No	No
Libya	Unknown	No	Unknown	No	No	No	Yes
Lithuania	Yes	No	No	No	No	No	No
Malaysia	Yes	No	No	No	Yes	No	No
Mali					Yes	Yes	
Malta	Yes						
Mexico	No	No	No	No	No	No	No
Moldova	Yes	Yes	Yes	No	Unknown	Unknown	No
Montenegro	Yes	Yes	Yes				
Morocco				Yes			
Myanmar	Yes	No	No	No	Yes	Yes	Yes
Namibia		Yes			Yes		
Nepal	No	No	No	No	No	No	No
New Zealand	Yes						
Nicaragua	Yes						
Nigeria	No	No	No	No	No	No	No
Norway	Yes	Yes	No	No	No	No	No
Oman	No	No	No	No	No	No	No
Pakistan	No	No	No	No	No	No	Yes
Panamá	No	No	No	No	No	No	No
Paraguay	No	No	No	No	No	No	No
Perú	No	No	No	No	No	No	No
Philippines	No	No	No	No	No	No	No
Polska	Yes	No	No	No	No	No	No
Portugal	Yes	No	No	No	No	No	No
Qatar	Yes	No	No	No	No	No	No
Republic of the Congo	No	No	No	No	No	No	No
Romania	Yes	Yes	Yes	No	No	No	No
Russia	Yes	Yes	Yes				
Serbia	Yes	No	Yes	No	Yes	No	No
Singapore	Yes	Unknown	Unknown	No	No	No	No
Slovenia	Yes						
South Africa	Yes	No	No	No	No	No	No
South Korea	No	No	No	No	No	No	No
Spain	Yes	Yes	Yes				
Sudan	No	No	No	Unknown	Yes	Unknown	No
Sweden	Yes	Yes	No	No	No	No	No
Switzerland	Yes						
Tajikistan	No	No	No	No	No	No	No
Tanzania	No	No	No	No	No	No	No
The Netherlands	Yes	No	No	No	Yes	No	No
Trinidad & Tobago	No	No	No	No	No	No	No
Tunisia	Yes						
Turkey	Yes						
Uganda	No	No	No	No	No	No	No
Ukraine	Yes				Yes		
United Arab Emirates	Yes	Yes	Yes		Yes	Yes	

Chapter 3. Table 1

(Continued)

Country	Federal/ National Laws/ Statutes/ Ordinances	State/ Provincial/ Regional Laws/ Statutes/ Ordinances	Municipal Laws/ Statutes/ Ordinances	Agency Regulations/ Oversight	Professional Organization Standards/ Guidelines	Cultural practice	Religious decree
United Kingdom	No	No	No	No	Yes	No	No
United States of America	Yes	Yes	No	No	No	No	No
Uruguay	Yes	No	No	Yes	No	No	No
Uzbekistan	No	No	No	No	No	No	No
Venezuela	No	No	No	No	No	No	No
Vietnam	No	No	No	No	No	No	No
Zambia	No	Unknown	Unknown	Yes	Yes	Yes	Unknown
Zimbabwe	No	No	No	No	No	No	No

- increased amount of financial support,
- insurance or funding initiated,
- expanded access to coverage or reimbursement, increased amount of financial support, and insurance or funding initiated, or
- insurance or funding stopped.

- Two countries (3%) reported
  - decreased access to coverage or reimbursement and decreased amount of financial support,
  - increased amount of financial support and insurance or funding initiated, or
  - decreased amount of financial support
- One country (1.5%) reported
  - expanded access to coverage or reimbursement, Increased amount of financial support, and a specific package of assistance to families who lost sons during the war,
  - expanded access to coverage or reimbursement and increased amount of financial support, and state fully funded medical examinations and one IVF program in public clinics,
  - expanded access to coverage or reimbursement and cryopreservation for fertility preservation,
  - expanded access to coverage or reimbursement plus cryopreservation and FET,
  - expanded access to coverage or reimbursement and state funded 3 cycles of IUI and one cycle of IVF/ICSI for all patients that have no living children, female < 41,
  - expanded access to coverage or reimbursement via largest Private Insurance company in South Africa - Discovery Health,
  - Insurance or funding initiated by some private insurance
  - coverage of novelties in the law (same sex and solo, social gamete freezing),
  - Drugs coverage reimbursement,
  - Employer provided fund,
  - government funding for specific cases requiring PGT-M is still available as well for fertility preservation with a medical indication,
  - government funding only available in public-hospital based IVF centres, or
  - government covering only 2 IVF cycles in public centres

4. Is insurance coverage of government funding based on fertility status?

For insurance coverage or government funding based on fertility status, responses varied by category (Table 4, Chart 1). Among 113 countries reporting on primary infertility, 63 countries (56%) had no coverage, 46 countries (41%) provided coverage, and 4 countries (3%) were unknown. For secondary infertility, 107 countries responded, with 66 countries (62%) reporting no coverage, 34 countries (32%) offering coverage, and 7 countries (7%) classified as unknown. Regarding family building, 103 countries provided data, with 76 countries (74%) lacking coverage, 16 countries (15%) offering coverage, and 11 countries (11%) reporting an unknown status.

5. Does insurance coverage or government funding typically cover the following ART services?

Insurance coverage or government funding for ART services varies by service type based on the number of responding countries for each category (Tables 5a-c, Chart 2a). Amongst the 112 countries responding, diagnostic evaluation is covered in 68 countries (61%), not covered in 39 countries (35%), and unknown in 5 countries (5%). Fertility medications, based on responses from 113 countries, are covered in 66 countries (58%), not covered in 44 countries (39%), and unknown in 3 countries (3%). IUI coverage, reported from 111 responding countries, is covered in 47 countries (42%), not covered in 61 countries (55%), and unknown in 3 countries (3%). Amongst 114 countries reporting on IVF, 62 countries (54%) provide coverage, 50 countries (44%) do not, and 2 countries (2%) are unknown. ICSI, with 112 responding countries, is covered in 59 countries (53%), not covered in 51 countries (46%), and unknown in 2 countries (2%).

Assisted hatching, with responses from 106 countries, is covered in 19 countries (18%), not covered in 82 countries (77%), and unknown in 5 countries (5%). Among 110 countries reporting on PGT for monogenic disorders, 27 countries (25%) provide coverage, 80 countries (73%) do not, and 3 countries (3%) are unknown. PGT for aneuploidy, also from 110 countries, is covered in 14 countries (13%), not covered in 92 countries (84%), and unknown in 4 countries (4%).

Cryopreservation coverage varies by indication (Chart 2b). Among 108 responding countries, oocyte cryopreservation for non-medical indications is covered in 8 countries (7%), not covered in 95 countries (88%), and unknown in 5 countries (5%). For medical indications, based on 111 countries' responses, is covered in 46 countries (41%), not covered in 61 countries (55%), and unknown

Chapter 3. Table 2

If there are programs for coverage or reimbursement of ART services which of the following, do they include?

Country	National	State/provincial/ regional	Private insurance	Combination of government and private insurance
Albania	Complete Coverage or Reimbursement			
Algeria	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Unknown	Unknown
Argentina	Complete Coverage or Reimbursement	No Coverage or Reimbursement	Complete Coverage or Reimbursement	Unknown
Armenia	Complete Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement
Australia	Partial Coverage or Reimbursement		Partial Coverage or Reimbursement	Partial Coverage or Reimbursement
Austria	Partial Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement
Bangladesh	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Barbados	Unknown	Unknown	Unknown	Unknown
Belarus	Complete Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement
Belgium	Complete Coverage or Reimbursement			
Benin	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Bolivia	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Bosnia and Herzegovina	Complete Coverage or Reimbursement	Complete Coverage or Reimbursement	Unknown	Partial Coverage or Reimbursement
Brazil	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Bulgaria	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Burkina Faso	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Cambodia	Unknown	Unknown	Unknown	Unknown
Cameroun	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Chile	Partial Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement
China	Partial Coverage or Reimbursement	Complete Coverage or Reimbursement	Complete Coverage or Reimbursement	Partial Coverage or Reimbursement
Colombia	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	
Costa Rica	Complete Coverage or Reimbursement			
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown
Croatia	Complete Coverage or Reimbursement			
Cyprus	Partial Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement
Czech Republic	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Democratic Republic of the Congo	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Denmark	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	Unknown
Dominican Republic	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Ecuador	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Egypt		Partial Coverage or Reimbursement		

Chapter 3. Table 2

(Continued)

Country	National	State/provincial/ regional	Private insurance	Combination of government and private insurance
El Salvador	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Estonia	Complete Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Ethiopia	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Finland	Partial Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement
France	Complete Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	Complete Coverage or Reimbursement
Gambia	Complete Coverage or Reimbursement	Complete Coverage or Reimbursement	No Coverage or Reimbursement	Unknown
Georgia	No Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement
Germany	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Complete Coverage or Reimbursement	Partial Coverage or Reimbursement
Ghana	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement
Greece	Partial Coverage or Reimbursement			
Guatemala	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Hong Kong	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement
Hungary	Complete Coverage or Reimbursement			
Iceland	Partial Coverage or Reimbursement	Unknown	Unknown	Unknown
India	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Unknown
Indonesia	No Coverage or Reimbursement	No Coverage or Reimbursement	Unknown	No Coverage or Reimbursement
Iran	Partial Coverage or Reimbursement	Unknown	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement
Iraq	Unknown	Unknown	Unknown	Unknown
Ireland	Complete Coverage or Reimbursement		Partial Coverage or Reimbursement	
Israel	Complete Coverage or Reimbursement	Partial Coverage or Reimbursement	Complete Coverage or Reimbursement	Complete Coverage or Reimbursement
Italy	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Unknown
Jamaica	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Japan	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Jordan	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Kazakhstan	Complete Coverage or Reimbursement			
Kenya	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement
Kuwait	Unknown	Unknown	No Coverage or Reimbursement	Unknown
Latvia	Partial Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement
Lebanon	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Libya	Partial Coverage or Reimbursement	Unknown	Partial Coverage or Reimbursement	No Coverage or Reimbursement
Lithuania	Complete Coverage or Reimbursement			

Chapter 3. Table 2

(*Continued*)

Country	National	State/provincial/ regional	Private insurance	Combination of government and private insurance
Malaysia	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Mali	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Malta	Complete Coverage or Reimbursement			
Mexico	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Moldova	Complete Coverage or Reimbursement	Complete Coverage or Reimbursement	Unknown	Unknown
Montenegro	Complete Coverage or Reimbursement	Complete Coverage or Reimbursement		
Morocco	No Coverage or Reimbursement			
Myanmar	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement
Namibia	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Nepal	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
New Zealand	Partial Coverage or Reimbursement			
Nicaragua	Unknown			
Nigeria	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement
Norway	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Pakistan	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement
Panamá	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement
Paraguay	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement
Perú	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Philippines	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Polska	No Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Portugal	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Qatar	Complete Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Republic of the Congo	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Romania	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Russia	Complete Coverage or Reimbursement	Complete Coverage or Reimbursement		
Serbia	Complete Coverage or Reimbursement	Partial Coverage or Reimbursement	Complete Coverage or Reimbursement	No Coverage or Reimbursement
Singapore	Partial Coverage or Reimbursement	Unknown	Unknown	Unknown
Slovenia	Complete Coverage or Reimbursement			
South Africa	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement
South Korea	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Spain	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement

Chapter 3. Table 2

(*Continued*)

Country	National	State/provincial/ regional	Private insurance	Combination of government and private insurance
Sudan	Unknown	Unknown	No Coverage or Reimbursement	No Coverage or Reimbursement
Sweden	Complete Coverage or Reimbursement	Complete Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Switzerland			Complete Coverage or Reimbursement	
Tajikistan	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Tanzania	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
The Netherlands	Complete Coverage or Reimbursement	Unknown	Unknown	Unknown
Trinidad & Tobago	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Tunisia	Partial Coverage or Reimbursement			Partial Coverage or Reimbursement
Turkey	Partial Coverage or Reimbursement		Partial Coverage or Reimbursement	
Uganda	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Ukraine	Complete Coverage or Reimbursement			
United Arab Emirates	Complete Coverage or Reimbursement	Complete Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
United Kingdom	Complete Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
United States of America	No Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement
Uruguay	Partial Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Venezuela	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement	No Coverage or Reimbursement
Vietnam	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	Partial Coverage or Reimbursement
Zambia	Unknown	Unknown	No Coverage or Reimbursement	No Coverage or Reimbursement
Zimbabwe	No Coverage or Reimbursement	No Coverage or Reimbursement	Partial Coverage or Reimbursement	No Coverage or Reimbursement

in 4 countries (4%). Sperm cryopreservation for non-medical indications, from 108 countries, is covered in 5 countries (5%), not covered in 98 countries (91%), and unknown in 5 countries (5%). For medical indications, from 110 countries, it is covered in 39 countries (36%), not covered in 65 countries (59%), and unknown in 6 countries (6%).

Among 110 countries reporting on cryopreservation of supernumerary embryos from an IVF cycle, 41 countries (37%) provide coverage, 64 countries (58%) do not, and 5 countries (5%) are unknown. Cryopreservation of supernumerary oocytes from an IVF cycle, from 111 countries, is covered in 30 countries (27%), not covered in 75 countries (68%), and unknown in 6 countries (5%). Cryopreservation of ovarian tissue for medical fertility preservation, based on 109 countries, is covered in 22 countries (20%), not covered in 77 countries (71%), and unknown in 10 countries (9%). For non-medical ovarian tissue preservation, from 108 countries, 4 countries (4%) provide coverage, 96 countries (89%) do not, and 8 countries (7%) are unknown.

Cryopreservation of testicular tissue for medical fertility preservation, among 108 countries, is covered in 27 countries (25%), not covered in 74 countries (69%), and unknown in 7 countries (6%). For non-medical testicular tissue preservation, also from 107 countries, 5 countries (5%) provide coverage, 96 countries (90%) do not, and 6 countries (6%) are unknown. Among 107 countries reporting on embryo cryopreservation for non-medical fertility preservation, 9 countries (8%) provide coverage, 93 countries (87%) do not, and 5 countries (5%) are unknown. For medical indications, based on 110 countries, 37 countries (34%) offer coverage, 67 countries (61%) do not, and 6 countries (5%) are unknown.

Donor-assisted reproduction coverage also varies (Chart 2c). Among 109 countries reporting on donor sperm, 19 countries (17%) provide coverage, 87 countries (80%) do not, and 3 countries (3%) are unknown. Donor egg coverage, based on 109 countries, is available in 19 countries (17%), not covered in 86 countries (79%), and unknown in 4 countries (4%). Donor embryo transfers, from

Chapter 3. Table 3

Have there been any modifications to insurance coverage or government funding since 2021?

Country	Modification
Albania	Government is covering only 2 IVF cycles in public center
Argentina	Decreased access to coverage or reimbursement
	Decreased amount of financial support
Armenia	Expanded access to coverage or reimbursement
	Increased amount of financial support
	A specific package of assistance to families who lost sons during the war
Australia	PGT for some indications
Austria	Decreased amount of financial support
Belarus	Expanded access to coverage or reimbursement
	Increased amount of financial support
	The state fully funds medical examinations and one IVF program in public clinics
Bosnia and Herzegovina	Expanded access to coverage or reimbursement
	Increased amount of financial support
Brazil	Decreased access to coverage or reimbursement
	Decreased amount of financial support
Bulgaria	Increased amount of financial support
Burkina Faso	Insurance or funding initiated
Chile	Expanded access to coverage or reimbursement
	Increased amount of financial support
	Insurance or funding initiated
China	Expanded access to coverage or reimbursement
	Increased amount of financial support
	Insurance or funding initiated
Côte d'Ivoire	Expanded access to coverage or reimbursement
Croatia	Increased amount of financial support
Cyprus	Expanded access to coverage or reimbursement
	Increased amount of financial support
Czech Republic	Expanded access to coverage or reimbursement
	Increased amount of financial support
Ethiopia	Specify other - no insurance coverage
Finland	Decreased access to coverage or reimbursement
France	Coverage of novelties in the law (same sex and solo social gamete freezing)
Germany	Expanded access to coverage or reimbursement
	Cryopreservation for fertility preservation
Ghana	Insurance or funding stopped
Greece	National Health Insurance approval for coverage of medications for 4 attempts and after
Hong Kong	Increased amount of financial support
Hungary	Expanded access to coverage or reimbursement
India	Expanded access to coverage or reimbursement
Iran	Increased amount of financial support
Iraq	Insurance or funding stopped
Ireland	Expanded access to coverage or reimbursement
	The state funds 3 cycles of IUI and one cycle of IVF/ICSI for all patients that have no living children female less than 41y old.
Israel	Expanded access to coverage or reimbursement
	Increased amount of financial support
	Insurance or funding initiated
Italy	Expanded access to coverage or reimbursement
Japan	Insurance or funding initiated
Kazakhstan	Expanded access to coverage or reimbursement
	Increased amount of financial support
Kenya	Decreased access to coverage or reimbursement
Latvia	Expanded access to coverage or reimbursement
	Increased amount of financial support
Lithuania	Expanded access to coverage or reimbursement
Malaysia	Employers provident fund
Malta	Expanded access to coverage or reimbursement
Mexico	Government funding is only available in public hospital-based IVF centers
Montenegro	Expanded access to coverage or reimbursement plus cryopreservation and FET
Morocco	Drugs coverage reimbursement
Myanmar	Expanded access to coverage or reimbursement
Namibia	Insurance or funding stopped
Nigeria	Decreased access to coverage or reimbursement
Oman	Government funding for specific cases requiring PGT-M is still available as well for fertility preservation with a medical indication
Panamá	Insurance or funding initiated
	Some private insurance
Paraguay	Insurance or funding initiated
Polska	Decreased access to coverage or reimbursement
Qatar	Expanded access to coverage or reimbursement
Romania	Expanded access to coverage or reimbursement
	Increased amount of financial support
Russia	Expanded access to coverage or reimbursement
	Increased amount of financial support
Serbia	Expanded access to coverage or reimbursement
Singapore	Decreased access to coverage or reimbursement
Slovenia	Expanded access to coverage or reimbursement
	Increased amount of financial support
South Africa	Expanded access to coverage or reimbursement via largest private insurance company in South Africa - Discovery Health
South Korea	Increased amount of financial support
	Insurance or funding initiated
Spain	Decreased amount of financial support
Switzerland	Increased amount of financial support
	Insurance or funding initiated
The Netherlands	Decreased access to coverage or reimbursement
Tunisia	Decreased access to coverage or reimbursement
Turkey	Expanded access to coverage or reimbursement
Uganda	Insurance or funding stopped
Ukraine	Expanded access to coverage or reimbursement
United Arab Emirates	Insurance or funding initiated
United Kingdom	Decreased access to coverage or reimbursement
United States of America	Expanded access to coverage or reimbursement
	Increased amount of financial support
	Insurance or funding initiated
Uruguay	Expanded access to coverage or reimbursement

107 countries, are covered in 15 countries (14%), not covered in 87 countries (81%), and unknown in 5 countries (5%).

Surrogacy coverage is extremely limited. Among 106 countries reporting on traditional surrogacy, only 1 country (1%) provides coverage, 102 countries (96%) do not, and 3 countries (3%) are unknown. Gestational surrogacy using donated ova and commissioning male sperm, based on 108 countries, is covered in 3 countries (3%), not covered in 102 countries (94%), and unknown in 3 countries (3%). Gestational surrogacy using a commissioning couple's ova and sperm, also from 108 countries, is covered in 3 countries (3%), not covered in 102 countries (94%), and unknown in 3 countries (3%). Gestational surrogacy using both donated ova and sperm, based on 107 countries, is covered in 2 countries (2%), not covered in 102 countries (95%), and unknown in 3 countries (3%).

6. How are ART services reimbursed?

Reimbursement for ART services varies among procedures and countries (Tables 6a-g). Among 112 countries reporting on

Chapter 3. Table 4

Is insurance coverage or government funding based on fertility status?

Country	Primary infertility	Secondary infertility	Family building
Albania	Yes	Yes	
Algeria	Yes	Unknown	Unknown
Argentina	Yes	Yes	No
Armenia	Yes	No	No
Australia	No	No	No
Austria	No	No	Yes
Bangladesh	No	No	
Barbados	No	No	No
Belarus	No	No	No
Belgium	No	No	No
Benin	No	No	No
Bolivia	No	No	No
Bosnia and Herzegovina	Yes	No	No
Brazil	No	No	No
Bulgaria	Yes	Yes	No
Burkina Faso	No	No	No
Cambodia	Unknown	Unknown	Unknown
Cameroun	No	No	No
Chile	Yes	Yes	No
China	Yes	Yes	No
Costa Rica	Yes	Yes	No
Côte d'Ivoire	Unknown	Unknown	Unknown
Croatia	No	No	No
Cyprus	Yes	Yes	Yes
Czech Republic	Yes	Yes	No
Democratic Republic of the Congo	No	No	No
Denmark	Yes	Yes	Yes
Dominican Republic	No	No	No
Ecuador	No	No	No
Egypt	No	No	No
El Salvador	No	No	No
Estonia	No	No	No
Ethiopia	No	No	No
Finland	Yes	Yes	Yes
France	No	No	No
Gambia	Yes	Yes	Yes
Georgia	No	No	No
Germany	No	No	No
Ghana	No	Yes	No
Greece	No	No	Unknown
Guatemala	No	No	No
Hong Kong	No	No	No
Hungary	Yes	Yes	Yes
Iceland	No	No	No
India	No	No	No
Indonesia	Unknown	Unknown	Unknown
Iran	Yes	Yes	Unknown
Iraq	Unknown	Unknown	Yes
Ireland	Yes	No	No
Israel	No	No	No
Italy	No	No	No
Jamaica	No	No	No
Japan	Yes	Yes	No
Jordan	No	No	No
Kazakhstan	Yes	Yes	Yes
Kenya	No	No	No
Kuwait	Yes	No	Yes
Latvia	Yes	Yes	No
Lebanon	No	No	No
Libya	No	Unknown	Unknown
Lithuania	Yes	Yes	No
Malaysia	Yes		

Chapter 3. Table 4

(*Continued*)

Country	Primary infertility	Secondary infertility	Family building
Mali	No	No	No
Malta	Yes		
Mexico	No	No	No
Moldova	Yes	Unknown	Unknown
Montenegro	Yes	Yes	Yes
Morocco	No	No	No
Myanmar	Yes	Yes	Yes
Namibia	No	No	No
Nepal	No	No	No
New Zealand	Yes	Yes	
Nicaragua	No		
Nigeria	No	No	No
Norway	No	No	No
Oman	No	No	No
Pakistan	No	No	No
Panamá	Yes	Yes	No
Paraguay	No	No	No
Perú	No	No	No
Philippines	No	No	No
Polska	Yes	Yes	Unknown
Portugal	Yes	Yes	No
Qatar	Yes	Yes	Yes
Republic of the Congo	No	No	No
Romania	Yes	Yes	
Russia	Yes	Yes	Yes
Serbia	Yes	No	No
Singapore	Yes	Yes	Yes
Slovenia	Yes	Yes	Unknown
South Africa	Yes	Yes	Yes
South Korea	Yes	Yes	Yes
Spain	Yes	Yes	No
Sudan	No	No	No
Sweden	Yes	No	No
Switzerland	No	No	No
Tajikistan	No	No	No
Tanzania	No	No	No
The Netherlands	No	No	No
Trinidad & Tobago	No	No	No
Tunisia	Yes		
Turkey	Yes		
Uganda	No	No	No
Ukraine	No	No	No
United Arab Emirates	Yes	Yes	
United Kingdom	Yes	No	No
United States of America	No		No
Uruguay	No	No	No
Uzbekistan	No	No	No
Venezuela	No	No	No
Vietnam	No	No	No
Zambia	No	No	No
Zimbabwe	Yes	Yes	Unknown

diagnostic evaluation, 38 countries (34%) provide no coverage, while 36 countries (32%) offer reimbursement through a national health plan. Private insurance covers diagnostic evaluation in 10 countries (9%). Of 111 countries reporting on fertility medications, 44 countries (40%) provide no coverage, while 43 countries (39%) have reimbursement through a national health plan.

For IUI, among 111 countries, 59 countries (53%) provide no coverage, while 28 countries (25%) have reimbursement through a national health plan. IVF, based on responses from 111 countries, is not covered in 46 countries (41%), while 38 countries (34%) have reimbursement under a national health plan. ICSI, among 108 reporting countries, is not covered in 47 countries (44%), while 35 countries (32%) have national health plan support.

Assisted hatching, reported by 107 countries, is not covered in 80 countries (75%), while 13 countries (12%) have reimbursement

Chapter 3. Table 5a

Does insurance coverage or government funding typically cover the following ART services?

Country	Diagnostic Evaluation	Fertility Medications	Intrauterine insemination	IVF	ICSI	Assisted hatching	PGT Monogenic disorders	PGT Aneuploidy
Albania	No	Yes	Yes	Yes	Yes	Yes	No	No
Algeria	Yes	Yes	Yes	Yes	Yes	Unknown	Unknown	Unknown
Argentina	Yes	Yes	Yes	Yes	Yes	No	No	No
Armenia	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Australia	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Austria	Yes	Yes	No	Yes	Yes	No	No	No
Bangladesh	No		No	No	No	No	No	No
Barbados	No	No	No	No	No	No	No	No
Belarus	Yes	Yes	Yes	Yes	Yes	No	No	No
Belgium	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Benin	No	No	No	No	No	No	No	No
Bolivia	No	No	No	No	No	No	No	No
Bosnia and Herzegovina	No	Yes	Yes	Yes	Yes		No	No
Brazil	Yes	No	No	No	No	No	No	No
Bulgaria	No	Yes	No	Yes	Yes	No	No	No
Burkina Faso	No	No	No	No	No	No	No	No
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroun	Yes	No	No	No	No	No	No	No
Chile	Yes	Yes	Yes	Yes	Yes	No	No	No
China	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Colombia	Yes	No	No	No	No	No	No	No
Costa Rica	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Côte d'Ivoire	No	No	No	No	No	No	No	No
Croatia	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Cyprus	Unknown	Yes	No	Yes	Yes	No	Yes	Yes
Czech Republic	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Democratic Republic of the Congo	No	No	No	No	No	No	No	No
Denmark	Yes	Yes	Yes	Yes	Yes	Unknown	Yes	Yes
Dominican Republic	No	No	No	No	No	No	No	No
Ecuador	No	No	No	No	No	No	No	No
Egypt	No	No	No	No	No	No	No	No
El Salvador	No	No	No	No	No	No	No	No
Estonia	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Ethiopia	No	No	No	No	No	No	No	No
Finland	Yes	Yes	Yes	Yes	Yes	No	No	No
France	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Gambia	Unknown	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Georgia	No	No	No	No	No	No	No	No
Germany	Yes	Yes	Yes	Yes	Yes	No	No	No
Ghana	No	No	No	No	No	No	No	No
Greece	Yes	Yes	No	No	No	No	No	No
Guatemala	No	No	No	No	No	No	No	No
Hong Kong	Yes	Yes	Yes	No	No	No	No	No
Hungary	Yes	Yes	Yes	Yes	Yes	No	No	No
Iceland	Unknown	Unknown	No	Yes	Yes	No	No	No
India	No	No	No	Yes	Yes	No	No	No
Indonesia	No	No	No	No	No	No	No	No
Iran	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Iraq	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Ireland	Yes	Yes	Yes	Yes	Yes	No	No	No
Israel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Italy	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Jamaica	No	No	No	No	No	No	No	No
Japan	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Jordan	No	No	No	No	No	No	No	No
Kazakhstan		Yes		Yes	Yes	Yes	No	No
Kenya	Yes	Yes	Yes	Yes				
Kuwait	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Latvia	Yes	Yes	No	Yes	Yes	No	No	No
Lebanon	No	No	No	No	No	No	No	No

Chapter 3. Table 5a

(*Continued*)

Country	Diagnostic Evaluation	Fertility Medications	Intrauterine insemination	IVF	ICSI	Assisted hatching	PGT Monogenic disorders	PGT Aneuploidy
Libya	No	No	No	No	No	No	No	No
Lithuania	Yes	Yes	No	Yes	Yes	No	Yes	No
Malaysia	No	Yes		Yes	Yes		No	No
Mali	Yes	Yes	No	No	No	No	No	No
Malta	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Mexico	No	No	No	No	No	No	No	No
Moldova	No	No	No	Yes	Yes	Yes	No	No
Montenegro	Yes	Yes	Yes	Yes	Yes	No	No	No
Morocco	Yes	Yes	No	No	No	No	No	No
Myanmar	Yes	Yes	Yes	Yes	Yes	No	No	No
Namibia	Yes	No	No	No	No	No	No	No
Nepal	No	No	No	No	No	No	No	No
New Zealand	Yes	Yes	Yes	Yes	Yes		Yes	
Nicaragua	No	No	No	No	No	No	No	No
Nigeria	Yes	No	No	No	No	No	No	No
Norway	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Oman	Yes	Yes		Yes	Yes		Yes	Yes
Pakistan	Yes	Yes	No	No	No	No	No	No
Panamá	Yes	No	No	No	No	No	No	No
Paraguay	Yes	No	No	Yes	Yes	No	No	No
Perú	Yes	No	No	No	No	No	No	No
Philippines	No	No	No	No	No	No	No	No
Polska	Yes	Yes	No	No	No	No	No	No
Portugal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Qatar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Republic of the Congo	No	No	No	No	No	No	No	No
Romania	No	Yes	No	Yes	Yes	No	No	No
Russia	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Serbia	Yes	Yes	Yes	Yes	Yes	No	No	No
Singapore	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Slovenia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Unknown
South Africa	Yes	Yes	Yes	Yes	Yes	No	No	No
South Korea		Yes	Yes	Yes	Yes	Yes	No	No
Spain	Yes	Yes	Yes	Yes	Yes			
Sudan	No	No	No	No	No	No	No	No
Sweden	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Switzerland	Yes	Yes	Yes	No	No	No	No	No
Tajikistan	No	No	No	No	No	No	No	No
Tanzania	Yes	No	No	No	No	No	No	No
The Netherlands	Yes	Yes	Yes	Yes	Yes	No	No	No
Trinidad & Tobago	Unknown	No	No	No	No	No	No	No
Tunisia	Yes	Yes	No	No	No	No	No	No
Turkey	Yes	Yes	Unknown	Yes				
Uganda	No	No	No	No	No	No	No	No
Ukraine	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
United Arab Emirates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes	Yes	Yes	No	Yes	No
United States of America	Yes	No	No	No	No	No	No	No
Uruguay	Yes	Yes	Yes	Yes	Yes	No	No	No
Uzbekistan	No	No	No	No	No	No	No	No
Venezuela	No	No	No	No	No	No	No	No
Vietnam	No	No	No	No	No	No	No	No
Zambia	Yes	Yes	No	No	No	No	No	No
Zimbabwe	Yes	Yes	Yes	Yes	Yes	Unknown	No	No

through a national health plan. Among 109 countries reporting on PGT for monogenic disorders, 73 countries (67%) provide no coverage, while 18 countries (17%) have reimbursement under a national health plan. PGT for aneuploidy, based on 107 responses, is not covered in 82 countries (77%), while 9 countries (8%) have reimbursement through a national health plan.

Cryopreservation reimbursement varies. Among 108 reporting countries, oocyte cryopreservation for medical indications is not

Chapter 3. Table 5b

Does insurance coverage or government funding typically cover the following ART services?

					Gestational surrogacy		
Country	**Donor sperm**	**Donor egg**	**Donor embryos**	**Traditional surrogacy** ***Surrogate mother's ova are inseminated with a prospective parent's sperm***	***Using donated ova and commissioning male's sperm***	**Using commissioning couple's ova and sperm**	***Using donated ova and donated sperm***
Albania	No	No	No	No	No	No	No
Algeria	No	Unknown	Unknown	No	No	No	No
Argentina	Yes	Yes	No	No	No	No	No
Armenia	No	No	No	No	No	No	No
Australia	No	Yes	Yes	No	No	No	No
Austria	No	No	No	No	No	No	No
Bangladesh	No	No	No	No	No	No	No
Barbados	No	No	No	No	No	No	No
Belarus	No	No	No	No	No	No	No
Benin	No	No	No	No	No	No	No
Bolivia	No	No	No	No	No	No	No
Bosnia and Herzegovina	No	No	No	No	No	No	No
Brazil	No	No	No	No	No	No	No
Bulgaria	No	No	No	No	No	No	No
Burkina Faso	No	No	No	No	No	No	No
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroun	No	No	No	No	No	No	No
Chile	No	No	No	No	No	No	No
China	Yes	Yes	No	No	No	No	No
Colombia	No	No	No	No	No	No	No
Costa Rica	Yes	Yes	Yes	No	No	No	No
Côte d'Ivoire	No	No	No	No	No	No	No
Croatia	Yes	Yes	Yes	No	No	No	No
Cyprus	No	No	No	No	No	No	No
Czech Republic	No	No	No	No	No	No	No
Democratic Republic of the Congo	No	No	No	No	No	No	No
Denmark	Yes	Yes	No	No	No	No	No
Dominican Republic	No	No	No	No	No	No	No
Ecuador	No	No	No	No	No	No	No
Egypt	No	No	No	No	No	No	No
El Salvador	No	No	No	No	No	No	No
Estonia	No	No	No	No	No	No	No
Ethiopia	No	No	No	No	No	No	No
Finland	Yes	Yes	Yes	No	No	No	No
France	Yes	Yes	Yes	No	No	No	No
Gambia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Georgia	No	No	No	No	No	No	No
Germany	No	No	No	No	No	No	No
Ghana	No	No	No	No	No	No	No
Greece	No	No	No	No	No	No	No
Guatemala	No	No	No	No	No	No	No
Hong Kong	No	No	No	No	No	No	No
Hungary	Yes	No	Yes	No	No	No	No
Iceland	No	No	No	No	No	No	No
India	No	No	No	No	No	No	No
Indonesia	No	No	No	No	No	No	No
Iran	No	No	No	No	No	No	No
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Ireland	No	No	No	No	No	No	No
Israel	No	No		No	No	No	
Italy	Yes	Yes					
Jamaica	No	No	No	No	No	No	No
Japan	No	No	No	No	No	No	No
Jordan	No	No	No	No	No	No	No

Chapter 3. Table 5b

(*Continued*)

					Gestational surrogacy		
Country	**Donor sperm**	**Donor egg**	**Donor embryos**	**Traditional surrogacy** ***Surrogate mother's ova are inseminated with a prospective parent's sperm***	***Using donated ova and commissioning male's sperm***	**Using commissioning couple's ova and sperm**	***Using donated ova and donated sperm***
Kazakhstan	No	No	No	No	No	No	No
Kuwait	No	No	No	No	No	No	No
Latvia	No	No	No	No	No	No	No
Lebanon	No	No	No	No	No	No	No
Libya	No	No	No	No	No	No	No
Lithuania	No	No	Yes	No	No	No	No
Malaysia	No	No	No	No	No	No	No
Mali	No	No	No	No	No	No	No
Malta	Yes	Yes	Yes	No	No	No	No
Mexico	No	No	No	No	No	No	No
Moldova	No	No	No	No	No	No	No
Montenegro	No	No	No	No	No	No	No
Morocco	No	No	No	No	No	No	No
Myanmar	No	No	No	No	No	No	No
Namibia	No	No	No	No	No	No	No
Nepal	No	No	No	No	No	No	No
New Zealand	Yes	Yes	Yes		Yes	Yes	Yes
Nicaragua	No	No	No	No	No	No	No
Nigeria	No	No	No	No	No	No	No
Norway	Yes	Yes	No	No	No	No	No
Pakistan	No	No	No	No	No	No	No
Panamá	No	No	No	No	No	No	No
Paraguay	No	No	No	No	No	No	No
Perú	No	No	No	No	No	No	No
Philippines	No	No	No	No	No	No	No
Polska	No	No	No	No	No	No	No
Portugal	Yes	Yes	Yes	No	Yes	Yes	No
Qatar	No	No	No	No	No	No	No
Republic of the Congo	No	No	No	No	No	No	No
Romania	No	No	No	No	No	No	No
Russia	No	No	No	No	No	No	No
Serbia	No	No	No	No	No	No	No
Singapore	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Slovenia	Yes	Yes	Unknown	No	No	No	No
South Africa	Yes	Yes	Yes	No	No	No	No
South Korea	No	No	No	No	No	No	No
Spain	No	No	No	No	No	No	No
Sudan	No	No	No	No	No	No	No
Sweden	Yes	Yes	Yes	No	No	No	No
Switzerland	No	No	No	No	No	No	No
Tajikistan	No	No	No	No	No	No	No
Tanzania	No	No	No	No	No	No	No
The Netherlands	No	No	No	No	No	No	No
Trinidad & Tobago	No	No	No	No	No	No	No
Tunisia	No	No	No	No	No	No	No
Uganda	No	No	No	No	No	No	No
Ukraine	No	No	No	No	No	No	No
United Kingdom	Yes	Yes	Yes	No	No	No	No
United States of America	No	No	No	No	No	No	No
Uruguay	Yes	Yes	Yes	No	No	No	No
Uzbekistan	No	No	No	No	No	No	No
Venezuela	No	No	No	No	No	No	No
Vietnam	No	No	No	No	No	No	No
Zambia	No	No	No	No	No	No	No
Zimbabwe	No	No	No		No	No	No

Chapter 3. Table 5c

Does insurance coverage or government funding typically cover the following ART services?

	Cryopreservation											
	Supernumerary from an IVF cycle		Fertility preservation for medical indications					Fertility preservation for non-medical indications				
Country	Oocytes	Embryos	Oocytes	Sperm	Embryos	Testicular tissue	Ovarian tissue	Oocytes	Sperm	Embryos	Testicular tissue	Ovarian tissue
Albania	Yes	Yes	No	No	No	No	No	No	No	No	No	No
Algeria	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Argentina	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Armenia	Unknown	Unknown	No	No	No	No	No	No	No	No	No	No
Australia	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Austria	No	Yes	No	No	No	No	No	No	No	No	No	No
Bangladesh	No	No	No	No	No	No	No	No	No	No	No	No
Barbados	No	No	No	No	No	No	No	No	No	No	No	No
Belarus	No	No	No	No	No	No	No	No	No	No	No	No
Belgium	No	No										
Benin	No	No	No	No	No	No	No	No	No	No	No	No
Bolivia	No	No	No	No	No	No	No	No	No	No	No	No
Bosnia and Herzegovina	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Brazil	No	No	Yes	Yes	Yes	No	No	No	No	No	No	No
Bulgaria	No	Yes	Yes	No	No	No	No	No	No	No	No	No
Burkina Faso	No	No	No	No	No	No	No	No	No	No	No	No
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroun	No	No	No	No	No	No	No	No	No	No	No	No
Chile	No	Yes	Yes	Yes	No	No	No	No	No	No	No	No
China	Yes	Yes	No	No	No	No	No	No	No	No	No	No
Colombia	No	No	No	No	No	No	No	No	No	No	No	No
Costa Rica	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Côte d'Ivoire	No	No	No	No	No	No	No	No	No	No	No	No
Croatia	Yes	Yes	Yes	Yes	Yes	Yes	Unknown	No	No	No	No	No
Cyprus	No	No	Yes	Yes	No	Unknown	Unknown	Yes	No	No	Unknown	Unknown
Czech Republic	No	No	Yes	Yes	Yes	No	No	No	No	No	No	No
Democratic Republic of the Congo	No	No	No	No	No	No	No	No	No	No	No	No
Denmark	Unknown	Unknown	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Dominican Republic	No	No	No	No	No	No	No	No	No	No	No	No
Ecuador	No	No	No	No	No	No	No	No	No	No	No	No
Egypt	No	No	No	No	No	No	No	No	No	No	No	No
El Salvador	No	No	No	No	No	No	No	No	No	No	No	No
Estonia	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Ethiopia	No	No	Unknown	No	Unknown	Unknown	Unknown	Unknown	No	Unknown	Unknown	Unknown
Finland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
France	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gambia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Georgia	No	No	No	No	No	No	No	No	No	No	No	No
Germany	No	No	Yes	Yes	No	Yes	Yes		No	No	No	No
Ghana	No	No	No	No	No	No	No	No	No	No	No	No
Greece	No	No	No	No	No	No	No	No	No	No	No	No
Guatemala	No	No	No	No	No	No	No	No	No	No	No	No
Hong Kong	No	No	No	No	No	No	No	No	No	No	No	No
Hungary	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Iceland	No	No	Yes	Yes	Unknown	Unknown	Unknown	No	No	No	No	No
India	No	No	Yes	No	Yes	No	No	Yes	No	Yes	No	No
Indonesia	No	No	No	No	No	No	No	No	No	No	No	No
Iran	Yes	Yes	Yes	Yes	Yes	No	Unknown	No	No	Yes	No	Unknown
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Ireland	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Israel	No	Yes	Yes		Yes	Yes	Yes	No	No		No	No
Italy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Jamaica	No	No	No	No	No	No	No	No	No	No	No	No
Japan	No	Yes	Yes	Yes	Yes	No	Yes	No	No	No	No	No
Jordan	No	No	No	No	No	No	No	No	No	No	No	No
Kazakhstan	No	No	No	No	No	No	No	No	No	No	No	No

Chapter 3. Table 5c

(*Continued*)

	Cryopreservation											
	Supernumerary from an IVF cycle		Fertility preservation for medical indications					Fertility preservation for non-medical indications				
Country	Oocytes	Embryos	Oocytes	Sperm	Embryos	Testicular tissue	Ovarian tissue	Oocytes	Sperm	Embryos	Testicular tissue	Ovarian tissue
Kuwait	Yes	Yes	Yes	Yes	Yes	Yes	Unknown	Yes	Yes	Yes	Yes	Unknown
Latvia	No	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Lebanon	No	No	No	No	No	No	No	No	No	No	No	No
Libya	No	No	No	No	No	No	No	No	No	No	No	No
Lithuania	No	No	No	No	No	No	No	No	No	No	No	No
Malaysia		Yes	No	No	No	No	No	No	No	No	No	No
Mali	No	No	No	No	No	No	No	No	No	No	No	No
Malta	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Mexico	No	No	No	No	No	No	No	No	No	No	No	No
Moldova	No	No	No	No	No	No	No	No	No	No	No	No
Montenegro	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	No
Morocco	No	No	No	No	No	No	No	No	No	No	No	No
Myanmar	No	No	Yes	No	Yes	No	No	Yes	No	No	No	No
Namibia	No	No	No	No	No	No	No	No	No	No	No	No
Nepal	No	No	No	No	No	No	No	No	No	No	No	No
New Zealand	Yes	Yes	Yes	Yes	Yes	Yes	Yes					
Nicaragua	No	No	No	No	No	No	No	No	No	No	No	No
Nigeria	No	No	No	No	No	No	No	No	No	No	No	No
Norway	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Oman	Yes	Yes	Yes	Yes	Yes							
Pakistan	No	No	No	No	No	No	No	No	No	No	No	No
Panamá	No	No	No	No	No	No	No	No	No	No	No	No
Paraguay	No	No	Yes	No	No	No	No	Yes	No	No	No	No
Perú	No	No	No	No	No	No	No	No	No	No	No	No
Philippines	No	No	No	No	No	No	No	No	No	No	No	No
Polska	No	No	No	No	No	No	No	No	No	No	No	No
Portugal	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No	No
Qatar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Republic of the Congo	No	No	No	No	No	No	No	No	No	No	No	No
Romania	No	No	No	No	No	No	No	No	No	No	No	No
Russia	No	Yes	No	No	No	No	No	No	No	No	No	No
Serbia	No	No	No	Unknown	Unknown	Unknown	No	No	Unknown	Unknown	No	No
Singapore	Yes	Yes	Yes	Unknown	Yes	Yes	Unknown	No	No	Yes	Unknown	Unknown
Slovenia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
South Africa	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
South Korea	Yes		No	No	No	No	No	No	No	No	No	No
Spain	Yes		Yes	Yes			No	Yes				No
Sudan	No	No	No	No	No	No	No	No	No	No	No	No
Sweden	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Switzerland	No	No	Yes	Yes	No	Yes	Yes	No	No	No	No	No
Tajikistan	No	No	No	No	No	No	No	No	No	No	No	No
Tanzania	No	No	No	No	No	No	No	No	No	No	No	No
The Netherlands	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Trinidad & Tobago	No	No	No	No	No	No	No	No	No	No	No	No
Tunisia	No	No	No	No	No	No	No	No	No	No	No	No
Uganda	No	No	No	No	No	No	No	No	No	No	No	No
Ukraine	Unknown	Yes	No	No	No	No	No	No	No	No	No	No
United Arab Emirates	Yes	Yes	Yes	Yes	Yes			No	No	No		
United Kingdom	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
United States of America	No	No	No	No	No	No	No	No	No	No	No	No
Uruguay	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Uzbekistan	No	No	No	No	No	No	No	No	No	No	No	No
Venezuela	No	No	No	No	No	No	No	No	No	No	No	No
Vietnam	No	No	No	No	No	No	No	No	No	No	No	No
Zambia	No	No	No	No	No	No	No	No	No	No	No	No
Zimbabwe	Yes	Yes	Yes	Unknown	Yes	No	No	Unknown	Unknown	No	No	No

Chapter 3. Table 6a

How are ART services reimbursed?

Country	Diagnostic Evaluation	Fertility Medications	Intrauterine insemination
Albania	No coverage	No coverage	No coverage
Algeria	State/Provincial/ Regional Unknown	National	National
Argentina	National Private insurance	National Private insurance	National Private insurance
Armenia	National	National	National
Australia	National State/Provincial/ Regional	National Private insurance	National Private insurance
Austria	National	National	No coverage
Bangladesh	No coverage	No coverage	No coverage
Barbados	National Private insurance		
Belarus	National	National	National
Benin	No coverage	No coverage	No coverage
Bolivia	No coverage	No coverage	No coverage
Bosnia and Herzegovina	No coverage	National	National
Brazil	Private insurance	No coverage	No coverage
Bulgaria	No coverage	National	No coverage
Burkina Faso	No coverage	No coverage	No coverage
Cambodia	Unknown	Unknown	Unknown
Cameroun	Private insurance	No coverage	No coverage
Chile	National Private insurance	National Private insurance	National Private insurance
China	No coverage	No coverage	State/Provincial/ Regional
Colombia	Private insurance No coverage	No coverage	No coverage
Costa Rica	National	National	National
Côte d'Ivoire	No coverage	No coverage	No coverage
Croatia	National	National	National
Cyprus	Unknown	National	No coverage
Czech Republic	National	National	National
Democratic Republic of the Congo	No coverage	No coverage	No coverage
Denmark	National	National	National
Dominican Republic	No coverage	No coverage	No coverage
Ecuador	No coverage	No coverage	No coverage
Egypt	No coverage	No coverage	No coverage
El Salvador	No coverage	No coverage	No coverage
Estonia	National	National	National
Ethiopia	No coverage	No coverage	No coverage
Finland	National	National	National
France	National	National	National
Gambia	Unknown	National	National
Georgia	No coverage	No coverage	No coverage
Germany	National Private insurance	National State/Provincial/ Regional Private insurance	National State/Provincial/ Regional Private insurance
Ghana	No coverage	Private insurance	No coverage
Greece	National	National	No coverage
Guatemala	No coverage	No coverage	No coverage
Hong Kong	National State/Provincial/ Regional Private insurance	National State/Provincial/ Regional Private insurance	National State/Provincial/ Regional

Chapter 3. Table 6a

(*Continued*)

Country	Diagnostic Evaluation	Fertility Medications	Intrauterine insemination
Hungary	National	National	National
Iceland	National	National	No coverage
India	No coverage	No coverage	Private insurance
Indonesia	No coverage	No coverage	No coverage
Iran	National	National	National
Iraq	Unknown	Unknown	Unknown
Ireland	National	National	National
Israel	National	National	National
	Private insurance	Private insurance	Private insurance
Italy	National	National	National
	State/Provincial/ Regional	State/Provincial/ Regional	State/Provincial/ Regional
	Private insurance		Private insurance
Jamaica	No coverage	No coverage	No coverage
Japan	National	National	National
Jordan	No coverage	No coverage	No coverage
Kazakhstan	State/Provincial/ Regional	National	No coverage
Kenya	Private insurance	Private insurance	Private insurance
Kuwait	National	National	National
	No coverage	No coverage	No coverage
Latvia	National	National	National
			No coverage
Lebanon	No coverage	No coverage	No coverage
Libya	No coverage	No coverage	No coverage
Lithuania	National	National	No coverage
Malaysia	No coverage	National	No coverage
Mali	National	National	No coverage
	State/Provincial/ Regional	State/Provincial/ Regional	
	Private insurance	Private insurance	
Malta	National	National	National
Mexico	National	No coverage	No coverage
Moldova	National/Provincial/ Regional	No coverage	No coverage
Montenegro	National	National	National
Morocco	National	National	No coverage
	Private insurance		
Myanmar	National	National	National
	Private insurance	Private insurance	Private insurance
Namibia	No coverage	No coverage	No coverage
Nepal	No coverage	No coverage	No coverage
New Zealand	National	National	National
Nicaragua	No coverage	No coverage	No coverage
Nigeria	Private insurance	No coverage	No coverage
Norway	National	National	National
Pakistan	No coverage	No coverage	No coverage
Panamá	Private insurance	No coverage	No coverage
Paraguay	Private insurance	No coverage	No coverage
Perú	National	No coverage	No coverage
	Private insurance		
Philippines	No coverage	No coverage	No coverage
Polska	National	National	No coverage
Portugal	National	National	National
Qatar	National	National	National
Republic of the Congo	No coverage	No coverage	No coverage
Romania	No coverage	State/Provincial/ Regional	No coverage
Russia	National	National	No coverage
	State/Provincial/ Regional	State/Provincial/ Regional	

Chapter 3. Table 6a

(Continued)

Country	Diagnostic Evaluation	Fertility Medications	Intrauterine insemination
Serbia	National	National	National
Singapore	National	National	National
Slovenia	National	National	National
South Africa	Private insurance	Private insurance	Private insurance
South Korea	National	National	National
Spain	Unknown	Unknown	Unknown
Sudan	No coverage	No coverage	No coverage
Sweden	National State/ Provincial/Regional	National State/ Provincial/Regional	National State/ Provincial/Regional
Switzerland	Private insurance	Private insurance	Private insurance
Tajikistan	No coverage	No coverage	No coverage
Tanzania	National	No coverage	No coverage
The Netherlands	National	National	National
Trinidad & Tobago	Unknown	No coverage	No coverage
Tunisia	National	National	No coverage
Turkey	National	National	Unknown
Uganda	No coverage	No coverage	No coverage
Ukraine	National	National	No coverage
United Arab Emirates	National State/ Provincial/Regional	National State/ Provincial/Regional	National State/ Provincial/Regional
United Kingdom	National	National	National
United States of America	State/Provincial/ Regional Private insurance	Private insurance No coverage	Private insurance No coverage
Uruguay	National Private insurance	National Private insurance	National Private insurance
Uzbekistan	No coverage	No coverage	No coverage
Venezuela	No coverage	No coverage	No coverage
Vietnam	Private insurance	No coverage	No coverage
Zambia	No coverage	National	No coverage
Zimbabwe	Private insurance	Private insurance	Private insurance

covered in 59 countries (55%), while 26 countries (24%) have reimbursement through a national health plan. Among 107 countries reporting on non-medical oocyte cryopreservation, 88 countries (82%) provide no coverage, while 4 countries (4%) have national health plan support. Sperm cryopreservation for medical reasons, based on 109 responses, is not covered in 64 countries (59%), while 25 countries (23%) have reimbursement through a national health plan. For non-medical sperm cryopreservation, among 106 countries, 91 countries (86%) provide no coverage, while 3 countries (3%) have reimbursement under a national health plan.

Cryopreservation of embryos from an IVF cycle, based on 109 countries, is not covered in 62 countries (57%), while 26 countries (24%) have reimbursement through a national health plan. Among 108 countries reporting on cryopreservation of supernumerary oocytes from an IVF cycle, 73 countries (68%) provide no coverage, while 19 countries (18%) have reimbursement under a national health plan. Cryopreservation of ovarian tissue for medical fertility preservation, reported by 108 countries, is not covered in 68 countries (63%), while 17 countries (16%) have reimbursement under a national health plan. Non-medical ovarian tissue cryopreservation, from 107 countries, is not covered in 86 countries (80%), while 3 countries (3%) have reimbursement through a national health plan.

Donor reproductive services show limited reimbursement. Donor sperm, based on 107 responses, is not covered in 74 countries (69%), while 12 countries (11%) have reimbursement under a national health plan. Among 107 countries reporting on donor eggs, 73 countries (68%) provide no coverage, while 12 countries (11%) have reimbursement through a national health plan. Donor embryos, based on 104 responses, are not covered in 76 countries (73%), while 9 countries (9%) have reimbursement under a national health plan.

Surrogacy services have the lowest coverage. Traditional surrogacy, based on responses from 103 countries, is not covered in 88 countries (85%), while 1 country (1%) has reimbursement through a national health plan. Gestational surrogacy using donated ova, from 105 countries, is not covered in 88 countries (84%), while 3 countries (3%) have national health plan reimbursement. Gestational surrogacy using commissioning couples' ova and sperm, among 105 countries, is not covered in 88 countries (84%), while 3 countries (3%) have reimbursement through a national health plan.

7. Does your country have insurance coverage or government funding for infertility treatments?

In 2024, 113 countries responded to a question about whether either insurance coverage or government funding was available for infertility treatment, an increase in the response rates from 88 countries in the 2021 survey (Table 7). In 2024, 62 (55%)

Chapter 3. Table 6b

How are ART services reimbursed?

Country	IVF	ICSI	Assisted hatching	PGT Monogenic disorders	PGT Aneuploidy
Albania	No coverage	No coverage	No coverage	No coverage	No coverage
Algeria	National	National	Unknown	Unknown	Unknown
Argentina	National	National	No coverage	No coverage	No coverage
	Private insurance	Private insurance			
Armenia	National	National	National	No coverage	No coverage
Australia	National	National	No coverage	National	No coverage
	Private insurance	Private insurance		No coverage	
Austria	National	National	No coverage	No coverage	No coverage
Bangladesh	No coverage	No coverage	No coverage	No coverage	No coverage
Belarus	National	National	No coverage	No coverage	No coverage
Benin	No coverage	No coverage	No coverage	No coverage	No coverage
Bolivia	No coverage	No coverage	No coverage	No coverage	No coverage
Bosnia and Herzegovina	National	National		No coverage	No coverage
Brazil	No coverage	No coverage	No coverage	No coverage	No coverage
Bulgaria	National	National	No coverage	No coverage	No coverage
Burkina Faso	No coverage	No coverage	No coverage	No coverage	No coverage
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroun	No coverage	No coverage	No coverage	No coverage	No coverage
Chile	National	National	No coverage	No coverage	No coverage
	Private insurance	Private insurance			
China	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional
Colombia	No coverage	No coverage	No coverage	No coverage	No coverage
Costa Rica	National	National	National	No coverage	No coverage
Côte d'Ivoire	No coverage	No coverage	No coverage	No coverage	No coverage
Croatia	National	National	No coverage	National	No coverage
Cyprus	National	National	No coverage	No coverage	No coverage
Czech Republic	National	No coverage	No coverage	National	National
Democratic Republic of the Congo	No coverage	No coverage	No coverage	No coverage	No coverage
Denmark	National	National	Unknown	National	National
Dominican Republic	No coverage	No coverage	No coverage	No coverage	No coverage
Ecuador	No coverage	No coverage	No coverage	No coverage	No coverage
Egypt	No coverage	No coverage	No coverage	No coverage	No coverage
El Salvador	No coverage	No coverage	No coverage	No coverage	No coverage
Estonia	National	National	No coverage	National	No coverage
Ethiopia	No coverage	No coverage	No coverage	Unknown	Unknown
Finland	National	National	No coverage	National	National
France	National	National	No coverage	National	
Gambia	National	National	National	National	National
Georgia	No coverage	No coverage	No coverage	No coverage	No coverage
Germany	National State/Provincial/ Regional	National State/Provincial/ Regional	No coverage	No coverage	No coverage
	Private insurance	Private insurance			
Ghana	No coverage	No coverage	No coverage	No coverage	No coverage
Greece	No coverage	No coverage	No coverage	No coverage	No coverage
Guatemala	No coverage	No coverage	No coverage	No coverage	No coverage
Hong Kong	Unknown	Unknown	Unknown	Unknown	Unknown
Hungary	National	National	No coverage	No coverage	No coverage
Iceland	National	National	No coverage	No coverage	No coverage
India	Private insurance	Private insurance	No coverage	Private insurance	Private insurance
Indonesia	Private insurance	Private insurance	No coverage	No coverage	No coverage
	No coverage	No coverage			
Iran	National	National	National	National	National
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown
Ireland	National	National	No coverage	No coverage	No coverage
Israel	National	National	National	National	National
	Private insurance	Private insurance	Private insurance	Private insurance	Private insurance
Italy	National State/Provincial/ Regional	National State/Provincial/ Regional	No coverage	National State/Provincial/ Regional	No coverage
	Private insurance	Private insurance			
Jamaica	No coverage	No coverage	No coverage	No coverage	No coverage
Japan	National	National	National	No coverage	No coverage
Jordan	No coverage	No coverage	No coverage	No coverage	No coverage
Kazakhstan	National	National	National	No coverage	No coverage
Kenya	Private insurance				
Kuwait	National	National	National	National	National

Chapter 3. Table 6b

(Continued)

Country	IVF	ICSI	Assisted hatching	PGT Monogenic disorders	PGT Aneuploidy
	No coverage	No coverage	No coverage	No coverage	No coverage
Latvia	National	National	No coverage	No coverage	No coverage
Lebanon	No coverage	No coverage	No coverage	No coverage	No coverage
Libya	No coverage	No coverage	No coverage	No coverage	No coverage
Lithuania	National	National	No coverage	National	No coverage
Malaysia	National	National	No coverage	No coverage	No coverage
Mali	No coverage	No coverage	No coverage	No coverage	No coverage
Malta	National	National	No coverage	National	National
Mexico	No coverage	No coverage	No coverage	No coverage	No coverage
Moldova	National State/Provincial/ Regional	National State/Provincial/ Regional	No coverage	No coverage	No coverage
Montenegro	National	National	No coverage	No coverage	No coverage
Morocco	No coverage	No coverage	No coverage	No coverage	No coverage
Myanmar	National	Unknown	National	Unknown	Unknown
	Private insurance		Private insurance		
Namibia	No coverage	No coverage	No coverage	No coverage	No coverage
Nepal	No coverage	No coverage	No coverage	No coverage	No coverage
New Zealand	National	National		National	
Nicaragua	No coverage	No coverage	No coverage	No coverage	No coverage
Nigeria	No coverage	No coverage	No coverage	No coverage	No coverage
Norway	National	National	National	National	No coverage
Pakistan	No coverage	No coverage	No coverage	No coverage	No coverage
Panamá	No coverage	No coverage	No coverage	No coverage	No coverage
Paraguay	Private insurance	Private insurance	No coverage	No coverage	No coverage
Perú	No coverage	No coverage	No coverage	No coverage	No coverage
Philippines	No coverage	No coverage	No coverage	No coverage	No coverage
Polska	State/Provincial/Regional	State/Provincial/Regional	No coverage	State/Provincial/Regional	State/Provincial/Regional
Portugal	National	National	National	National	National
Qatar	National	National	National	National	National
Republic of the Congo	No coverage	No coverage	No coverage	No coverage	No coverage
Romania	State/Provincial/Regional	State/Provincial/Regional	No coverage	No coverage	No coverage
Russia	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional	No coverage
Serbia	National	National	No coverage	No coverage	No coverage
Singapore	National	National	National	National	Unknown
Slovenia	National	National	National	National	Unknown
South Africa	Private insurance	Private insurance	Private insurance	No coverage	No coverage
South Korea	National	National	National	No coverage	No coverage
Spain	Unknown	Unknown	Unknown	Unknown	Unknown
Sudan	No coverage	No coverage	No coverage	No coverage	No coverage
Sweden	National State/Provincial/ Regional	National State/Provincial/ Regional	No coverage	National State/Provincial/ Regional	No coverage
Switzerland	No coverage	No coverage	No coverage	No coverage	No coverage
Tajikistan	No coverage	No coverage	No coverage	No coverage	No coverage
Tanzania	No coverage	No coverage	No coverage	No coverage	No coverage
The Netherlands	National		No coverage	No coverage	No coverage
Trinidad & Tobago	No coverage	No coverage	No coverage	No coverage	No coverage
Tunisia	No coverage	No coverage	No coverage	No coverage	No coverage
Turkey	National				
Uganda	No coverage	No coverage	No coverage	No coverage	No coverage
Ukraine	National	National	National	National	National
United Arab Emirates	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional
United Kingdom	National	National	No coverage	National	No coverage
United States of America	Private insurance	Private insurance	Private insurance	Private insurance	Private insurance
	No coverage	No coverage	No coverage	No coverage	No coverage
Uruguay	National	National	No coverage	No coverage	No coverage
	Private insurance	Private insurance			
Uzbekistan	No coverage	No coverage	No coverage	No coverage	No coverage
Venezuela	No coverage	No coverage	No coverage	No coverage	No coverage
Vietnam	No coverage	No coverage	No coverage	No coverage	No coverage
Zambia	No coverage	No coverage	No coverage	No coverage	No coverage
Zimbabwe	Private insurance	Private insurance	No coverage	No coverage	No coverage

Chapter 3. Table 6c

How are ART services reimbursed?

Country	Donor sperm	Donor egg	Donor embryos
Albania	No coverage	No coverage	No coverage
Algeria	Unknown	Unknown	Unknown
Argentina	National Private insurance	National Private insurance	No coverage
Armenia	No coverage	No coverage	No coverage
Australia	National Private insurance	National Private insurance	National Private insurance
Austria	No coverage	No coverage	No coverage
Bangladesh	No coverage	No coverage	No coverage
Belarus	No coverage	No coverage	No coverage
Benin	No coverage	No coverage	No coverage
Bolivia	No coverage	No coverage	No coverage
Bosnia and Herzegovina	No coverage	No coverage	No coverage
Brazil	No coverage	No coverage	No coverage
Bulgaria	No coverage	No coverage	No coverage
Burkina Faso	No coverage	No coverage	No coverage
Cambodia	Unknown	Unknown	Unknown
Cameroun	No coverage	No coverage	No coverage
Chile	No coverage	No coverage	No coverage
China	State/Provincial/ Regional	State/Provincial/ Regional	No coverage
Colombia	No coverage	No coverage	No coverage
Costa Rica	National	National	National
Côte d'Ivoire	No coverage	No coverage	No coverage
Croatia	National	National	National
Cyprus	No coverage	No coverage	No coverage
Czech Republic	No coverage	No coverage	No coverage
Democratic Republic of the Congo	No coverage	No coverage	No coverage
Denmark	National	National	No coverage
Dominican Republic	No coverage	No coverage	No coverage
Ecuador	No coverage	No coverage	No coverage
Egypt	No coverage	No coverage	No coverage
El Salvador	No coverage	No coverage	No coverage
Estonia	No coverage	No coverage	No coverage
Ethiopia	Unknown	Unknown	Unknown
Finland	National	National	National
France	National	National	National
Gambia	National	National	National
Georgia	No coverage	No coverage	No coverage
Germany	No coverage	No coverage	No coverage
Ghana	No coverage	No coverage	No coverage
Greece	No coverage	No coverage	No coverage
Guatemala	No coverage	No coverage	No coverage
Hong Kong	Unknown	Unknown	Unknown
Hungary	No coverage	No coverage	National No coverage
Iceland	No coverage Unknown	No coverage Unknown	No coverage Unknown
India	Unknown	Private insurance	Private insurance
Indonesia	Unknown	Unknown	Unknown
Iran	Unknown	Unknown	Unknown
Iraq	Unknown	Unknown	Unknown
Ireland	No coverage	No coverage	No coverage
Israel	Private insurance	Private insurance	
Italy	National State/ Provincial/Regional	National State/ Provincial/Regional	
Jamaica	No coverage	No coverage	No coverage
Japan	No coverage	No coverage	No coverage

Chapter 3. Table 6c

(Continued)

Country	Donor sperm	Donor egg	Donor embryos
Jordan	No coverage	No coverage	No coverage
Kazakhstan	No coverage	No coverage	No coverage
Kuwait	Unknown	Unknown	Unknown
Latvia	No coverage	No coverage	No coverage
Lebanon	No coverage	No coverage	No coverage
Libya	No coverage	No coverage	No coverage
Lithuania	No coverage	No coverage	National
Malaysia	No coverage	No coverage	No coverage
Mali	No coverage	No coverage	No coverage
Malta	National	National	National
Mexico	No coverage	No coverage	No coverage
Moldova	No coverage	No coverage	No coverage
Montenegro	No coverage	No coverage	No coverage
Morocco	No coverage	No coverage	No coverage
Myanmar	Unknown	Unknown	Unknown
Namibia	No coverage	No coverage	No coverage
Nepal	No coverage	No coverage	No coverage
New Zealand	National	National	National
Nicaragua	No coverage	No coverage	No coverage
Nigeria	No coverage	No coverage	No coverage
Norway	National	National	No coverage
Pakistan	No coverage	No coverage	No coverage
Panamá	No coverage	No coverage	No coverage
Paraguay	No coverage	No coverage	No coverage
Perú	No coverage	No coverage	No coverage
Philippines	No coverage	No coverage	No coverage
Polska	State/Provincial/ Regional	State/Provincial/ Regional	State/Provincial/ Regional
Portugal	National	National	
Republic of the Congo	No coverage	No coverage	No coverage
Romania	No coverage	No coverage	No coverage
Russia	No coverage	No coverage	No coverage
Serbia	No coverage	No coverage	No coverage
Singapore	Unknown	Unknown	Unknown
Slovenia	National	National	No coverage
South Africa	Private insurance	Private insurance	Private insurance
South Korea	No coverage	No coverage	No coverage
Spain	Unknown	Unknown	Unknown
Sudan	No coverage	No coverage	No coverage
Sweden	National State/ Provincial/Regional	National State/ Provincial/Regional	National State/ Provincial/Regional
Switzerland	No coverage	No coverage	No coverage
Tajikistan	No coverage	No coverage	No coverage
Tanzania	No coverage	No coverage	No coverage
The Netherlands	No coverage	No coverage	No coverage
Trinidad & Tobago	No coverage	No coverage	No coverage
Tunisia	No coverage	No coverage	No coverage
Uganda	No coverage	No coverage	No coverage
Ukraine	No coverage	No coverage	No coverage
United Kingdom	National	National	National
United States of America	Private insurance No coverage	Private insurance No coverage	Private insurance No coverage
Uruguay	No coverage	National Private insurance	National Private insurance
Uzbekistan	No coverage	No coverage	No coverage
Venezuela	No coverage	No coverage	No coverage
Vietnam	No coverage	No coverage	No coverage
Zambia	No coverage	No coverage	No coverage
Zimbabwe	No coverage	No coverage	No coverage

Chapter 3. Table 6d

How are ART services reimbursed?

Country	Traditional surrogacy Surrogate mother's ova are inseminated with a prospective parent's sperm	Gestational surrogacy		
		Using donated ova and commissioning male's sperm	Using commissioning couple's ova and sperm	Using donated ova and donated sperm
Albania	No coverage	No coverage	No coverage	No coverage
Algeria	Unknown	Unknown	Unknown	Unknown
Argentina	No coverage	No coverage	No coverage	No coverage
Armenia	No coverage	No coverage	No coverage	No coverage
Australia	No coverage	No coverage	No coverage	No coverage
Austria	No coverage	No coverage	No coverage	No coverage
Bangladesh	No coverage	No coverage	No coverage	No coverage
Belarus	No coverage	No coverage	No coverage	No coverage
Benin	No coverage	No coverage	No coverage	No coverage
Bolivia	No coverage	No coverage	No coverage	No coverage
Bosnia and Herzegovina	No coverage	No coverage	No coverage	
Brazil	No coverage	No coverage	No coverage	No coverage
Bulgaria	No coverage	No coverage	No coverage	No coverage
Burkina Faso	No coverage	No coverage	No coverage	No coverage
Cambodia	Unknown	Unknown	Unknown	Unknown
Cameroun	No coverage	No coverage	No coverage	No coverage
Chile	No coverage	No coverage	No coverage	No coverage
China	No coverage	No coverage	No coverage	No coverage
Colombia	No coverage	No coverage	No coverage	No coverage
Costa Rica	No coverage	No coverage	No coverage	No coverage
Côte d'Ivoire	No coverage	No coverage	No coverage	No coverage
Croatia	No coverage	No coverage	No coverage	No coverage
Cyprus	No coverage	No coverage	No coverage	No coverage
Czech Republic	No coverage	No coverage	No coverage	No coverage
Democratic Republic of the Congo	No coverage	No coverage	No coverage	No coverage
Denmark	No coverage	No coverage	No coverage	No coverage
Dominican Republic	No coverage	No coverage	No coverage	No coverage
Ecuador	No coverage	No coverage	No coverage	No coverage
Egypt	No coverage	No coverage	No coverage	No coverage
El Salvador	No coverage	No coverage	No coverage	No coverage
Ethiopia	Unknown	Unknown	Unknown	Unknown
Finland	No coverage	No coverage	No coverage	No coverage
Gambia	National	National	National	National
Georgia	No coverage	No coverage	No coverage	No coverage
Germany	No coverage	No coverage	No coverage	No coverage
Ghana	No coverage	No coverage	No coverage	No coverage
Greece	No coverage	No coverage	No coverage	No coverage
Guatemala	No coverage	No coverage	No coverage	No coverage
Hong Kong	Unknown	Unknown	Unknown	Unknown
Hungary	No coverage	No coverage	No coverage	No coverage
Iceland	No coverage	No coverage	No coverage	No coverage
India	Unknown	Unknown	Unknown	Unknown
Indonesia	Unknown	Unknown	Unknown	Unknown
Iran	No coverage	No coverage	No coverage	No coverage
Iraq	Unknown	Unknown	Unknown	Unknown
Ireland	No coverage	No coverage	No coverage	No coverage
Israel	Private insurance	Private insurance	Private insurance	
Jamaica	No coverage	No coverage	No coverage	No coverage
Japan	No coverage	No coverage	No coverage	No coverage
Jordan	No coverage	No coverage	No coverage	No coverage
Kazahkstan	No coverage	No coverage	No coverage	No coverage
Kuwait	Unknown	Unknown	Unknown	Unknown
Latvia	No coverage	No coverage	No coverage	No coverage
Lebanon	No coverage	No coverage	No coverage	No coverage
Libya	No coverage	No coverage	No coverage	No coverage
Lithuania	No coverage	No coverage	No coverage	No coverage
Malaysia	No coverage	No coverage	No coverage	No coverage

Chapter 3. Table 6d

(*Continued*)

Country	Traditional surrogacy Surrogate mother's ova are inseminated with a prospective parent's sperm	Gestational surrogacy		
		Using donated ova and commissioning male's sperm	Using commissioning couple's ova and sperm	Using donated ova and donated sperm
Mali	No coverage	No coverage	No coverage	No coverage
Malta		No coverage	No coverage	No coverage
Mexico	No coverage	No coverage	No coverage	No coverage
Moldova	No coverage	No coverage	No coverage	No coverage
Montenegro	No coverage	No coverage	No coverage	No coverage
Morocco	No coverage	No coverage	No coverage	No coverage
Myanmar	Unknown	Unknown	Unknown	Unknown
Namibia	No coverage	No coverage	No coverage	No coverage
Nepal	No coverage	No coverage	No coverage	No coverage
New Zealand		National	National	National
Nicaragua	No coverage	No coverage	No coverage	No coverage
Nigeria	No coverage	No coverage	No coverage	No coverage
Norway	No coverage	No coverage	No coverage	No coverage
Pakistan	No coverage	No coverage	No coverage	No coverage
Panamá	No coverage	No coverage	No coverage	No coverage
Paraguay	No coverage	No coverage	No coverage	No coverage
Perú	No coverage	No coverage	No coverage	No coverage
Philippines	No coverage	No coverage	No coverage	No coverage
Polska	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional
Portugal	No coverage	National	National	No coverage
Republic of the Congo	No coverage	No coverage	No coverage	No coverage
Romania	No coverage	No coverage	No coverage	No coverage
Russia	No coverage	No coverage	No coverage	No coverage
Serbia	No coverage	No coverage	No coverage	No coverage
Singapore	Unknown	Unknown	Unknown	No coverage
Slovenia	No coverage	No coverage	No coverage	No coverage
South Africa	No coverage	No coverage	No coverage	No coverage
South Korea	No coverage	No coverage	No coverage	No coverage
Spain	Unknown	Unknown	Unknown	Unknown
Sudan	No coverage	No coverage	No coverage	No coverage
Sweden	No coverage	No coverage	No coverage	No coverage
Switzerland	No coverage	No coverage	No coverage	No coverage
Tajikistan	No coverage	No coverage	No coverage	No coverage
Tanzania	No coverage	No coverage	No coverage	No coverage
The Netherlands	No coverage	No coverage	No coverage	No coverage
Trinidad & Tobago	No coverage	No coverage	No coverage	No coverage
Tunisia	No coverage	No coverage	No coverage	No coverage
Uganda	No coverage	No coverage	No coverage	No coverage
Ukraine	No coverage	No coverage	No coverage	No coverage
United Kingdom	No coverage	No coverage	No coverage	No coverage
United States of America	Private insurance No coverage	Private insurance No coverage	Private insurance No coverage	Private insurance No coverage
Uruguay	No coverage	No coverage	No coverage	No coverage
Uzbekistan	No coverage	No coverage	No coverage	No coverage
Venezuela	No coverage	No coverage	No coverage	No coverage
Vietnam	No coverage	No coverage	No coverage	No coverage
Zambia	No coverage	No coverage	No coverage	No coverage
Zimbabwe	No coverage	No coverage	No coverage	No coverage

countries reported provided funding, similar to the 53% of respondents in both 2021 and 2018.

8. Does insurance coverage or government funding limit the number of IVF cycles performed per patient? If yes, number of cycles covered.

Among 61 responding countries, 48 countries (79%) impose limits on the number of IVF cycles covered by insurance or government funding, while 12 countries (20%) have no such restrictions (Table 7). One country (2%) reported an unknown status. Among 48 countries with limits on IVF cycles, 20 countries (42%) cover up to three cycles, 8 countries (17%) cover two cycles, and 6 countries (13%) cover only one cycle. Coverage for four cycles is available in 5 countries (10%), while 7 countries (15%) cover six cycles. One country (2%) covers up to five cycles, and another country (2%) provides coverage for 21 cycles.

Chapter 3. Table 6e

How are ART services reimbursed?

	Cryopreservation of supernumerary from an IVF cycle	
Country	**Oocytes**	**Embryos**
Albania	No coverage	No coverage
Algeria	Unknown	Unknown
Argentina	No coverage	National Private insurance
Armenia	No coverage	No coverage
Australia	No coverage	National Private insurance
Austria	No coverage	National
Bangladesh	No coverage	No coverage
Belarus	No coverage	No coverage
Benin	No coverage	No coverage
Bolivia	No coverage	No coverage
Bosnia and Herzegovina	No coverage	National
Brazil	No coverage	No coverage
Bulgaria	No coverage	No coverage
Burkina Faso	No coverage	No coverage
Cambodia	Unknown	Unknown
Cameroun	No coverage	No coverage
Chile	No coverage	No coverage
China	State/Provincial/Regional	State/Provincial/Regional
Colombia	No coverage	No coverage
Costa Rica	National	National
Côte d'Ivoire	No coverage	No coverage
Croatia	National	National
Cyprus	No coverage	No coverage
Czech Republic	No coverage	No coverage
Democratic Republic of the Congo	No coverage	No coverage
Denmark	National	National
Dominican Republic	No coverage	No coverage
Ecuador	No coverage	No coverage
Egypt	No coverage	No coverage
El Salvador	No coverage	No coverage
Estonia	No coverage	National
Ethiopia	Unknown	Unknown
Finland	National	National
France	National	National
Gambia	National	National
Georgia	No coverage	No coverage
Germany	No coverage	No coverage
Ghana	No coverage	No coverage
Greece	No coverage	No coverage
Guatemala	No coverage	No coverage
Hong Kong	Unknown	Unknown
Hungary	National	National
Iceland	No coverage	No coverage
India	Unknown	Unknown
Indonesia	No coverage	No coverage
Iran	National	National
Iraq	Unknown	Unknown
Ireland	National	National
Israel		National
Italy	National State/Provincial/ Regional	National State/Provincial/ Regional
Jamaica	No coverage	No coverage
Japan	No coverage	National
Jordan	No coverage	No coverage
Kazakhstan	No coverage	No coverage
Kuwait	National No coverage	National No coverage

Chapter 3. Table 6e

(*Continued*)

	Cryopreservation of supernumerary from an IVF cycle	
Country	**Oocytes**	**Embryos**
Latvia	No coverage	National
Lebanon	No coverage	No coverage
Libya	No coverage	No coverage
Lithuania	No coverage	No coverage
Malaysia	No coverage	No coverage
Mali	No coverage	No coverage
Malta	National	National
Mexico	No coverage	No coverage
Moldova	No coverage	No coverage
Montenegro	No coverage	National
Morocco	No coverage	No coverage
Myanmar	National Private insurance	Unknown
Namibia	No coverage	No coverage
Nepal	No coverage	No coverage
New Zealand	National	National
Nicaragua	No coverage	No coverage
Nigeria	No coverage	No coverage
Norway	National	National
Pakistan	No coverage	No coverage
Panamá	No coverage	No coverage
Paraguay	No coverage	No coverage
Perú	No coverage	No coverage
Philippines	No coverage	No coverage
Polska	No coverage	State/Provincial/Regional
Portugal	National	National
Qatar	National	National
Republic of the Congo	No coverage	No coverage
Romania	No coverage	No coverage
Russia	No coverage	National State/Provincial/ Regional
Serbia	No coverage	No coverage
Singapore	National	National
Slovenia	National	National
South Africa	Private insurance	Private insurance
South Korea	No coverage	No coverage
Spain	Unknown	Unknown
Sudan	No coverage	No coverage
Sweden	National State/Provincial/ Regional	National State/Provincial/ Regional
Switzerland	No coverage	No coverage
Tajikistan	No coverage	No coverage
Tanzania	No coverage	No coverage
The Netherlands	National	National
Trinidad & Tobago	No coverage	No coverage
Tunisia	No coverage	No coverage
Uganda	No coverage	No coverage
Ukraine	No coverage	National
United Arab Emirates	National State/Provincial/ Regional	National State/Provincial/ Regional
United Kingdom	National	National
United States of America	Private insurance No coverage	Private insurance No coverage
Uruguay	National	National Private insurance
Uzbekistan	No coverage	No coverage
Venezuela	No coverage	No coverage
Vietnam	No coverage	No coverage
Zambia	No coverage	No coverage
Zimbabwe	Private insurance	Private insurance

Chapter 3. Table 6f

How are ART services reimbursed?

	Cryopreservation for fertility preservation for medical indications				
Country	**Oocytes**	**Sperm**	**Embryos**	**Testicular tissue**	**Ovarian tissue**
Albania	No coverage	No coverage	No coverage	No coverage	No coverage
Algeria	Unknown	Unknown	Unknown	Unknown	Unknown
Argentina	National Private insurance	National Private insurance	National Private insurance	National Private insurance	No coverage
Armenia	No coverage	No coverage	No coverage	No coverage	No coverage
Australia	National Private insurance	National Private insurance	National Private insurance	National Private insurance	National Private insurance
Austria	No coverage	No coverage	No coverage	No coverage	No coverage
Bangladesh	No coverage	No coverage	No coverage	No coverage	No coverage
Belarus	No coverage	No coverage	No coverage	No coverage	No coverage
Benin	No coverage	No coverage	No coverage	No coverage	No coverage
Bolivia	No coverage	No coverage	No coverage	No coverage	No coverage
Bosnia and Herzegovina	National	National	National	National	National
Brazil	Private insurance	Private insurance	Private insurance	No coverage	No coverage
Bulgaria	National	No coverage	No coverage	No coverage	No coverage
Burkina Faso	No coverage	No coverage	No coverage	No coverage	No coverage
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroun	No coverage	No coverage	No coverage	No coverage	No coverage
Chile	National	No coverage	No coverage	No coverage	No coverage
China	No coverage	No coverage	No coverage	No coverage	No coverage
Colombia	No coverage	No coverage	No coverage	No coverage	No coverage
Costa Rica	National	National	National	No coverage	No coverage
Côte d'Ivoire	No coverage	No coverage	No coverage	No coverage	No coverage
Croatia	National	National	National	National	Unknown
Cyprus	National	National	No coverage	Unknown	Unknown
Czech Republic	National	National	National	No coverage	No coverage
Democratic Republic of the Congo	No coverage	No coverage	No coverage	No coverage	No coverage
Denmark	National	National	National	National	National
Dominican Republic	No coverage	No coverage	No coverage	No coverage	No coverage
Ecuador	No coverage	No coverage	No coverage	No coverage	No coverage
Egypt	No coverage	No coverage	No coverage	No coverage	No coverage
El Salvador	No coverage	No coverage	No coverage	No coverage	No coverage
Estonia	National	National	National	National	No coverage
Ethiopia	Unknown	Unknown	No coverage	Unknown	Unknown
Finland	National	National	National	National	National
France	National	National	National	National	National
Gambia	National	National	National	National	National
Georgia	No coverage	No coverage	No coverage	No coverage	No coverage
Germany	National	National	No coverage	National	National
Ghana	No coverage	No coverage	No coverage	No coverage	No coverage
Greece	No coverage	No coverage	No coverage	No coverage	No coverage
Guatemala	No coverage	No coverage	No coverage	No coverage	No coverage
Hong Kong	Unknown	Unknown	Unknown	Unknown	Unknown
Hungary	National	No coverage	National	No coverage	No coverage
Iceland	No coverage Unknown	No coverage Unknown	No coverage Unknown	No coverage Unknown	No coverage Unknown
India	Private insurance	No coverage	Private insurance	Unknown	Unknown
Indonesia	No coverage	No coverage	No coverage	Unknown	Unknown
Iran	National	National	National	Unknown	Unknown
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown
Ireland	National	National	National	No coverage	No coverage
Israel		National	National	National	National
Italy	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional
Jamaica	No coverage	No coverage	No coverage	No coverage	No coverage
Japan	No coverage	National	National	No coverage	National
Jordan	No coverage	No coverage	No coverage	No coverage	No coverage
Kazakhstan	No coverage	No coverage	No coverage	No coverage	No coverage
Kuwait	National	National	National	National	National

Chapter 3. Table 6f

(*Continued*)

Country	Cryopreservation for fertility preservation for medical indications				
	Oocytes	Sperm	Embryos	Testicular tissue	Ovarian tissue
	No coverage	No coverage	No coverage	No coverage	No coverage
Latvia	National	National	National	National	National
				No coverage	No coverage
Lebanon	No coverage	No coverage	No coverage	No coverage	No coverage
Libya	No coverage	No coverage	No coverage	No coverage	No coverage
Lithuania	No coverage	No coverage	No coverage	No coverage	No coverage
Malaysia	No coverage	No coverage	No coverage	No coverage	No coverage
Mali	No coverage	No coverage	No coverage	No coverage	No coverage
Malta	National	National	National	National	National
Mexico	No coverage	No coverage	No coverage	No coverage	No coverage
Moldova	No coverage	No coverage	No coverage	No coverage	No coverage
Montenegro	National	National	National	National	National
Morocco	No coverage	No coverage	No coverage	No coverage	No coverage
Myanmar	National	Unknown	Unknown	Unknown	Unknown
	Private insurance				
Namibia	No coverage	No coverage	No coverage	No coverage	No coverage
Nepal	No coverage	No coverage	No coverage	No coverage	No coverage
New Zealand	National	National	National	National	National
Nicaragua	No coverage	No coverage	No coverage	No coverage	No coverage
Nigeria	No coverage	No coverage	No coverage	No coverage	No coverage
Norway	National	National	National	National	National
Pakistan	No coverage	No coverage	No coverage	No coverage	No coverage
Panamá	No coverage	No coverage	No coverage	No coverage	No coverage
Paraguay	Private insurance	No coverage	No coverage	No coverage	No coverage
Perú	No coverage	No coverage	No coverage	No coverage	No coverage
Philippines	No coverage	No coverage	No coverage	No coverage	No coverage
Polska	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional
Portugal	National	National	No coverage	National	National
Qatar	National	National	National	National	National
Republic of the Congo	No coverage	No coverage	No coverage	No coverage	No coverage
Romania	No coverage	No coverage	No coverage	No coverage	No coverage
Russia	No coverage	No coverage	No coverage	No coverage	No coverage
Serbia	No coverage	No coverage	No coverage	No coverage	No coverage
Singapore	Unknown	Unknown	National	Unknown	Unknown
Slovenia	National	National	National	National	National
South Africa	Private insurance	Private insurance	Private insurance	Private insurance	Private insurance
South Korea	No coverage	No coverage	No coverage	No coverage	No coverage
Spain	Unknown	Unknown	Unknown	Unknown	Unknown
Sudan	No coverage	No coverage	No coverage	No coverage	No coverage
Sweden	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional
Switzerland	Private insurance	Private insurance	No coverage	Private insurance	Private insurance
Tajikistan	No coverage	No coverage	No coverage	No coverage	No coverage
Tanzania	No coverage	No coverage	No coverage	No coverage	No coverage
The Netherlands	National	National	National	National	National
Trinidad & Tobago	No coverage	No coverage	No coverage	No coverage	No coverage
Tunisia	No coverage	No coverage	No coverage	No coverage	No coverage
Uganda	No coverage	No coverage	No coverage	No coverage	No coverage
Ukraine	No coverage	No coverage	No coverage	No coverage	No coverage
United Arab Emirates	National State/Provincial/ Regional	National State/Provincial/ Regional	National State/Provincial/ Regional		
United Kingdom	National	National	National	National	National
United States of America	Private insurance	Private insurance	Private insurance	Private insurance	Private insurance
	No coverage	No coverage	No coverage	No coverage	No coverage
Uruguay	National Private insurance	National Private insurance	National Private insurance	National Private insurance	National Private insurance
Uzbekistan	No coverage	No coverage	No coverage	No coverage	No coverage
Venezuela	No coverage	No coverage	No coverage	No coverage	No coverage
Vietnam	No coverage	No coverage	No coverage	No coverage	No coverage
Zambia	No coverage	No coverage	No coverage	No coverage	No coverage
Zimbabwe	Private insurance	No coverage	Private insurance	No coverage	No coverage

Chapter 3. Table 6g

How are ART services reimbursed?

	Cryopreservation for fertility preservation for non-medical indications				
Country	**Oocytes**	**Oocytes**	**Oocytes**	**Oocytes**	**Oocytes**
Albania	No coverage	No coverage	No coverage	No coverage	No coverage
Algeria	Unknown	Unknown	Unknown	Unknown	Unknown
Argentina	No coverage	No coverage	No coverage	No coverage	No coverage
Armenia	No coverage	No coverage	No coverage	No coverage	No coverage
Australia	No coverage	No coverage	No coverage	No coverage	No coverage
Austria	No coverage	No coverage	No coverage	No coverage	No coverage
Bangladesh	No coverage	No coverage	No coverage	No coverage	No coverage
Belarus	No coverage	No coverage	No coverage	No coverage	No coverage
Benin	No coverage	No coverage	No coverage	No coverage	No coverage
Bolivia	No coverage	No coverage	No coverage	No coverage	No coverage
Bosnia and Herzegovina	No coverage	No coverage	No coverage	No coverage	No coverage
Brazil	No coverage	No coverage	No coverage	No coverage	No coverage
Bulgaria	No coverage	No coverage	No coverage	No coverage	No coverage
Burkina Faso	No coverage	No coverage	No coverage	No coverage	No coverage
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroun	No coverage	No coverage	No coverage	No coverage	No coverage
Chile	No coverage	No coverage	No coverage	No coverage	No coverage
China	No coverage	No coverage	No coverage	No coverage	No coverage
Colombia	No coverage	No coverage	No coverage	No coverage	No coverage
Costa Rica	No coverage	No coverage	No coverage	No coverage	No coverage
Côte d'Ivoire	No coverage	No coverage	No coverage	No coverage	No coverage
Croatia	No coverage	No coverage	No coverage	No coverage	No coverage
Cyprus	National	No coverage	No coverage	Unknown	Unknown
Czech Republic	No coverage	No coverage	No coverage	No coverage	No coverage
Democratic Republic of the Congo	No coverage	No coverage	No coverage	No coverage	No coverage
Denmark	No coverage	No coverage	No coverage	No coverage	No coverage
Dominican Republic	No coverage	No coverage	No coverage	No coverage	No coverage
Ecuador	No coverage	No coverage	No coverage	No coverage	No coverage
Egypt	No coverage	No coverage	No coverage	No coverage	No coverage
El Salvador	No coverage	No coverage	No coverage	No coverage	No coverage
Estonia	No coverage	No coverage	No coverage	No coverage	No coverage
Ethiopia	Unknown	Unknown	Unknown	Unknown	Unknown
Finland	No coverage	No coverage	No coverage	No coverage	No coverage
France	National	National	National	National	National
Gambia	National	National	National	National	National
Georgia	No coverage	No coverage	No coverage	No coverage	No coverage
Germany	No coverage	No coverage	No coverage	No coverage	No coverage
Ghana	No coverage	No coverage	No coverage	No coverage	No coverage
Greece	No coverage	No coverage	No coverage	No coverage	No coverage
Guatemala	No coverage	No coverage	No coverage	No coverage	No coverage
Hong Kong	Unknown	Unknown	Unknown	Unknown	Unknown
Hungary	No coverage	No coverage	No coverage	No coverage	No coverage
Iceland	No coverage	No coverage	No coverage	No coverage	No coverage
India	Private insurance	No coverage	Private insurance	Unknown	Unknown
Indonesia	No coverage	No coverage	No coverage	Unknown	Unknown
Iran	No coverage	No coverage	National	Unknown	Unknown
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown
Ireland	No coverage	No coverage	No coverage	No coverage	No coverage
Israel	Private insurance	Private insurance	National	Private insurance	Private insurance
Italy	Unknown		Unknown	Unknown	Unknown
Jamaica	No coverage	No coverage	No coverage	No coverage	No coverage
Japan	No coverage	No coverage	No coverage	No coverage	No coverage
Jordan	No coverage	No coverage	No coverage	No coverage	No coverage
Kazakhstan	No coverage	No coverage	No coverage	No coverage	No coverage
Kuwait	National	National	National	National	National
	No coverage	No coverage	No coverage	No coverage	No coverage

Chapter 3. Table 6g

(Continued)

	Cryopreservation for fertility preservation for non-medical indications				
Country	**Oocytes**	**Oocytes**	**Oocytes**	**Oocytes**	**Oocytes**
Latvia	No coverage	No coverage	No coverage	No coverage	No coverage
Lebanon	No coverage	No coverage	No coverage	No coverage	No coverage
Libya	No coverage	No coverage	No coverage	No coverage	No coverage
Lithuania	No coverage	No coverage	No coverage	No coverage	No coverage
Malaysia	No coverage	No coverage	No coverage	No coverage	No coverage
Mali	No coverage	No coverage	No coverage	No coverage	No coverage
Malta	No coverage	No coverage	No coverage	No coverage	No coverage
Mexico	No coverage	No coverage	No coverage	No coverage	No coverage
Moldova	No coverage	No coverage	No coverage	No coverage	No coverage
Montenegro	No coverage	No coverage	No coverage	No coverage	No coverage
Morocco	No coverage	No coverage	No coverage	No coverage	No coverage
Myanmar	National Private insurance	Unknown	Unknown	Unknown	Unknown
Namibia	No coverage	No coverage	No coverage	No coverage	No coverage
Nepal	No coverage	No coverage	No coverage	No coverage	No coverage
Nicaragua	No coverage	No coverage	No coverage	No coverage	No coverage
Nigeria	No coverage	No coverage	No coverage	No coverage	No coverage
Norway	No coverage	No coverage	No coverage	No coverage	No coverage
Pakistan	No coverage	No coverage	No coverage	No coverage	No coverage
Panamá	No coverage	No coverage	No coverage	No coverage	No coverage
Paraguay	Private insurance	No coverage	No coverage	No coverage	No coverage
Perú	No coverage	No coverage	No coverage	No coverage	No coverage
Philippines	No coverage	No coverage	No coverage	No coverage	No coverage
Polska	State/Provincial/ Regional	State/Provincial/ Regional	State/Provincial/ Regional	State/Provincial/ Regional	State/Provincial/ Regional
Portugal	No coverage	No coverage	No coverage	No coverage	No coverage
Qatar	National	National	National	National	National
Republic of the Congo	No coverage	No coverage	No coverage	No coverage	No coverage
Romania	No coverage	No coverage	No coverage	No coverage	No coverage
Russia	No coverage	No coverage	No coverage	No coverage	No coverage
Serbia	No coverage	No coverage	No coverage	No coverage	No coverage
Singapore	No coverage	No coverage	National	Unknown	Unknown
Slovenia	No coverage	No coverage	No coverage	No coverage	No coverage
South Africa	No coverage	Private insurance	Private insurance	Private insurance	Private insurance
South Korea	No coverage	No coverage	No coverage	No coverage	No coverage
Spain	Unknown	Unknown	Unknown	Unknown	Unknown
Sudan	No coverage	No coverage	No coverage	No coverage	No coverage
Sweden	No coverage	No coverage	No coverage	No coverage	No coverage
Switzerland	No coverage	No coverage	No coverage	No coverage	No coverage
Tajikistan	No coverage	No coverage	No coverage	No coverage	No coverage
Tanzania	No coverage	No coverage	No coverage	No coverage	No coverage
The Netherlands	No coverage	No coverage	No coverage	No coverage	No coverage
Trinidad & Tobago	No coverage	No coverage	No coverage	No coverage	No coverage
Tunisia	No coverage	No coverage	No coverage	No coverage	No coverage
Uganda	No coverage	No coverage	No coverage	No coverage	No coverage
Ukraine	No coverage	No coverage	No coverage	No coverage	No coverage
United Kingdom	No coverage	No coverage	No coverage	No coverage	No coverage
United States of America	Private insurance No coverage	Private insurance No coverage	Private insurance No coverage	Private insurance No coverage	Private insurance No coverage
Uruguay	Private insurance	No coverage	No coverage	No coverage	No coverage
Uzbekistan	No coverage	No coverage	No coverage	No coverage	No coverage
Venezuela	No coverage	No coverage	No coverage	No coverage	No coverage
Vietnam	No coverage	No coverage	No coverage	No coverage	No coverage
Zambia	No coverage	No coverage	No coverage	No coverage	No coverage
Zimbabwe	No coverage	No coverage	No coverage	No coverage	No coverage

Chapter 3. Table 7

Does your country have insurance coverage or government funding for infertility treatments and are there limitations on insurance coverage or government funding?

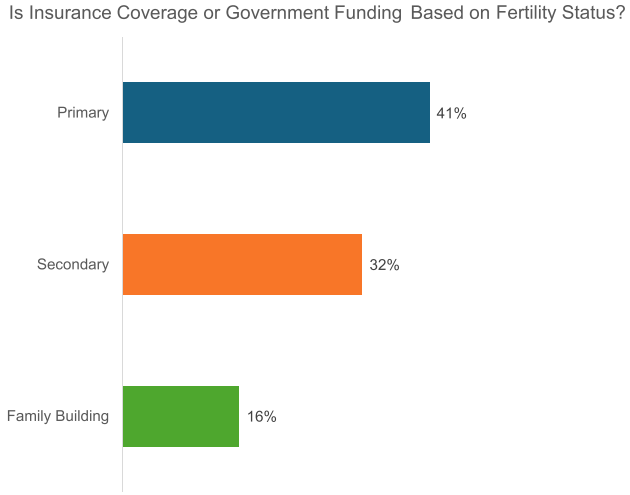
Country	Coverage or government funding?	Limits on number of IVF cycles performed	Number of cycles covered	Influenced by personal income levels?	Income level	Contingent on age limits?	Age limit	Based on the duration of infertility	Years of infertility	Contingent on implementation of SET
Albania	No									
Algeria	Yes	Unknown		No		Yes	42	No		Unknown
Argentina	Yes	Yes	3	No		No		No		No
Armenia	Yes	Yes	1	No		Yes	35	Yes	2	No
Australia	Yes	No		No		No		No		No
Austria	Yes	Yes	4	No		Yes	40	No		No
Bangladesh	No									
Barbados	No									
Belarus	Yes	Yes	1	No		Yes	40	No		No
Benin	No									
Bolivia	No									
Bosnia and Herzegovina	Yes	Yes	3	No		Yes	4	No		No
Brazil	No									
Bulgaria	Yes	Yes	4	No		Yes	43	No		Yes
Burkina Faso	No									
Cambodia	No									
Cameroun	No									
Chile	Yes	Yes	1	No		Yes	40	No		No
China	Yes	Yes	3	No		Yes	45	No		Yes
Colombia	No									
Costa Rica	Yes	Yes	2	No		Yes	50	No		No
Côte d'Ivoire	No									
Croatia	Yes	Yes	6	No		Yes	42	No		No
Cyprus	Yes	Yes	4	No		Yes	53	No		No
Czech Republic	No									
Democratic Republic of the Congo	No									
Denmark	Yes	Yes	6	No		Yes	45	Yes	1	Unknown
Dominican Republic	No									
Ecuador	No									
Egypt	No									
El Salvador	No									
Equatorial Guinea	Yes	No		No		No		No		No
Estonia	Yes	No		No		Yes	41	No		No
Ethiopia	No									
Finland	Yes	Yes	3	No		Yes	40	Yes	1	Yes
France	Yes	Yes	4	No		Yes	45	No		No
Gambia	No									
Georgia	No									
Germany	Yes	Yes	3	No		Yes	40			No
Ghana	No									
Greece	No									
Guatemala	No									
Hong Kong	Yes	Yes	3	No		Yes	40	No		No
Hungary	Yes	Yes	5	No		Yes	45	No		No
Iceland	Yes	Yes	2	No		No		No		No
India	Yes	No		Yes		Yes	50	No		No
Indonesia	No									
Iran	Yes	Yes	2	No		No		No		No
Iraq	No									
Ireland	Yes	Yes	1	No		Yes	41	No		No
Israel	Yes	No		No		Yes	45	No		No
Italy	Yes	Yes	6	No		Yes	46	No		No
Jamaica	No									
Japan	Yes	Yes	6	No		Yes	42	No		Yes
Jordan	No									
Kazakhstan	No									
Kenya	Yes	No		No		No		No		No

Chapter 3. Table 7

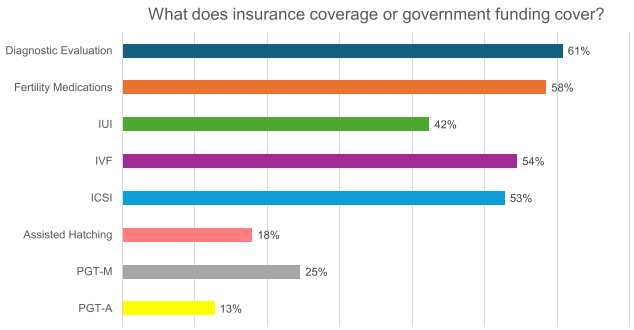
(Continued)

Country	Coverage or government funding?	Limits on number of IVF cycles performed	Number of cycles covered	Influenced by personal income levels?	Income level	Contingent on age limits?	Age limit	Based on the duration of infertility	Years of infertility	Contingent on implementation of SET
Kuwait	Yes	Yes	3	No		Yes	42	Yes	2	No
Latvia	Yes	Yes	2	No		Yes	40	No		Yes
Lebanon	No									
Libya	No									
Lithuania	Yes	Yes	2	No		Yes	42	No		No
Malaysia	Yes	Yes	3	Yes	500	Yes	45	No		No
Mali	No									
Malta	Yes	Yes	3	No		Yes	48	Yes	1	No
Mexico	No									
Moldova	No									
Montenegro	Yes	Yes	4	No		Yes	45	No		No
Morocco	Yes	No		No		No		No		No
Myanmar	Yes	No		No		No		No		No
Namibia	No									
Nepal	No									
New Zealand	Yes	Yes	2	No		Yes	39	No		Yes
Nicaragua	No									
Nigeria	No									
Norway	Yes	Yes	3	No		No		Yes	1	No
Oman	Yes	Yes	2	No		No		No		No
Pakistan	No									
Panamá	No									
Paraguay	Yes	Yes	1	No		Yes	40	No		No
Perú	No									
Philippines	No									
Polska	No									
Portugal	Yes	Yes	3	No		Yes	40	No		No
Qatar	Yes	No		No		No		No		No
Republic of the Congo	No									
Romania	Yes	No		No		No		No		No
Russia	Yes	No		No		No		No		No
Serbia	Yes	Yes	3	No		Yes	41	No		No
Singapore	Yes	Yes	3	No		Yes	40	No		Yes
Slovenia	Yes	Yes	6	No		Yes	45	No		Yes
South Africa	Yes	Yes	2	Yes		Yes	42			
South Korea	Yes	Yes	21	No		No		No		No
Spain	Yes	Yes	3	No		Yes	40	No		Yes
Sudan	No									
Sweden	Yes	Yes	3	No		Yes	40	No		Yes
Switzerland	Yes	No		No		No		No		No
Tajikistan	No									
The Netherlands	Yes	Yes	3	No		Yes	42	No		Yes
Trinidad & Tobago	No									
Tunisia	Yes	Yes	3	No		Yes	41	No		No
Turkey	Yes	Yes	3	Unknown		Yes	40	Yes	3	Yes
Uganda	No									
Ukraine	Yes			Yes	2	Yes	40	No		No
United Arab Emirates	Yes	Yes	6	No		Yes	47	No		Yes
United Kingdom	Yes	Yes	3	No		Yes	42	Yes	2	No
United States of America	Yes	Yes	6	No		Unknown		Unknown		Yes
Uruguay	Yes	Yes	3	No		Yes	40	No		Yes
Uzbekistan	No									
Venezuela	No									
Vietnam	No									
Zambia	No									
Zimbabwe	Yes	Yes	1	No		No		No		No

Chapter 3. Chart 1



Chapter 3. Chart 2a

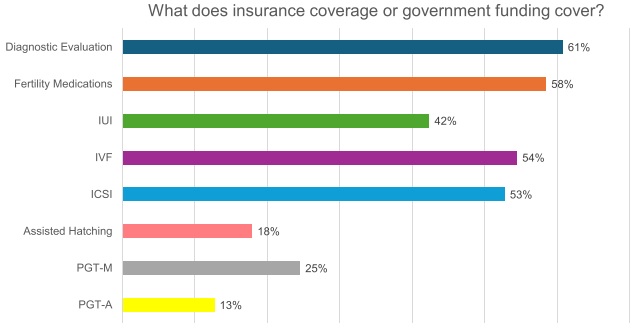


9. Is insurance or government funding influenced by personal income levels. If yes, income level?

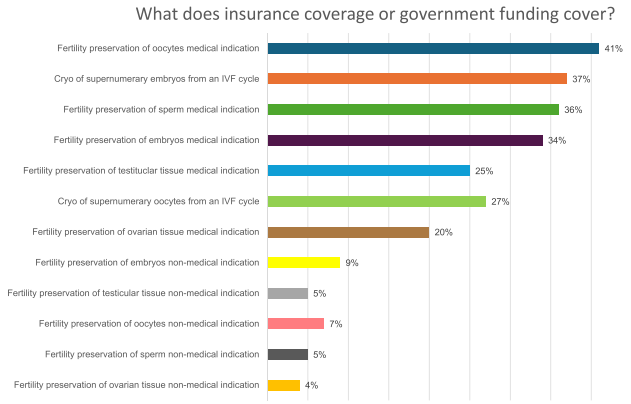
Among 62 responding countries, 57 countries (92%) do not base insurance coverage or government funding for ART services on personal income levels, while 4 countries (7%) consider income in determining coverage (Table 7). One country (2%) reported an unknown status.

Among the 2 countries that specified income levels influencing coverage, one country (50%) reported an income level of 2 as a determining factor, while another country (50%) reported an income level of 500.

Chapter 3. Chart 2a



Chapter 3. Chart 2b



10. Is insurance coverage or government funding contingent on age limits? If yes, age limit

Among 62 responding countries, 45 countries (73%) impose age limits on insurance coverage or government funding for ART services, while 16 countries (26%) have no age restrictions (Table 7). One country (2%) reported an unknown status. Among the 45 countries with age limits, 16 countries (36%) set the maximum age at 40 years, 8 countries (18%) at 42 years, and another 8 countries (18%) at 45 years. Four countries (9%) have a limit of 41 years, while two countries (4%) set the limit at 50 years. Individual age limits of 35, 39, 43, 46, 47, 48, and 53 years are reported by one country (2%) each.

11. Is insurance coverage or government funding based on the duration of infertility? If yes, years of infertility.

Among 60 responding countries, 51 countries (85%) do not base insurance coverage or government funding for ART services on the duration of infertility, while 8 countries (13%) consider infertility duration in determining coverage. One country (2%) reported an unknown status (Table 7). Among the 8 countries that set a requirement based on the duration of infertility, 4 countries (50%) require at least 1 year of infertility, 3 countries (38%) require 2 years, and 1 country (13%) requires 3 years.

12. Is insurance coverage or government funding contingent on implementation of single embryo transfer (SET, DET)?

Among 61 responding countries, 44 countries (72%) do not make insurance coverage or government funding for ART services contingent on the implementation of single embryo transfer (SET or DET), while 15 countries (25%) require adherence to SET or DET policies for coverage (Table 7). Two countries (3%) reported an unknown status.

Discussion

This most recent IFFS survey continues to demonstrate considerable variation in the level of financial support for infertility treatment, as well as the source of funding and what restrictions apply to treatments qualifying for reimbursement or financial coverage.

In 2024, 55% reported that there was some provision for either government or financial support for infertility treatment. These can be compared to 53% of respondents in 2021 and 2018. However, because of an almost 30% increase in the number of respondents to the 2024 survey (113) compared to the 2021 survey (88), these proportions are not directly comparable.

One of the greatest trends in ART treatment over the last decade has been the general increasse in SET rates around the world resulting in safer ART treatment through an education in

the ART multiple birth rates[4]. The cost of caring for twins and triplets reflect the healthcare and social support costs associated with these children[5] and convincingly add to the argument that single embryo transfer should be standard practice in most patient groups. In recognition of this around one in four countries reported that SET was a requirements of insurance coverage of government funding. However, countries and jurisdictions that provide supporting funding ART have also demonstrated that high SET rates can be achieved be reducing the incentive to achieve a pregnancy in the first ART cycle[6,7]. Interestingly, only 37% of countries, reimbursed cryopreservation of supernumerary embryos, which may also be an impediment to achieving high SET in some countries.

Providing funding for ART is increasingly being argued as a human and gender right[8,9] as well as a pronatalist policy to reduce the decline in fertility rates in a number of countries[10].

Thus, providing supportive financial support for ART makes clinical as well as economic sense, maximises the safety for mothers and their children, and is important recognition of gender equality and supporting family building[11,12].

Summary

In 2024, just over half (55%) of countries reported provided financial support for infertility treatment through insurance coverage or government funding, similar to the 53% of respondents in both 2021 and 2018. Wide variation exists between countries in the level of financial support provided, as well as the source of funding and what restrictions are placed on treatments qualifying for reimbursement or financial coverage.

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Chapter 4: Marital Status, Same Sex, and Single-Parenting Policies

Introduction

When ART became available as an independent clinical service in many countries in the 1980's, it was generally offered without specific requirements for access and with few measures in place to ensure equal availability to all. When ART services became more established, many countries set forth conditions that either limited or ensured access to groups other than heterosexual married couples. As the number of countries with specific legislation or guidelines in place continued to expand, the Triennial Report noted a general trend favouring expanded and protected access, especially for individuals who were not in married, heterosexual relationships. However, more recent data suggest a newer trend, with less access for single men and male same-sex couples compared to single women and female same-sex couples. This chapter addresses the availability and oversight of ART utilization as it pertains to marital status, sexual orientation, and gender identity.

Analysis of the Survey

The following survey questions were posed to establish whether there were requirements in place that designated a specific type of relationship (i.e., one that was stable, married, and/or heterosexual) to gain access to ART services, and, within that type of relationship, if services were available and/or if restrictions existed.

The following questions were posed in the survey:

(1) To access IVF or ART services in your country, are a couple or an individual required to be in a recognized or stable heterosexual relationship? How are these requirements governed?
(2) If there is no requirement for an official or stable heterosexual union, who is IVF or ART services accessible to?
(3) Does your country have laws that recognize the same-sex partner of a person who has used assisted reproduction as a legal parent of the resulting child?
(4) To whom are treatments allowed/permitted?
(5) To whom are treatments practised/performed?

Analysis of Survey

Respondents from 111 countries provided complete or partial answers to the five questions pertaining to access to ART services. In response to the question focused on requirements for a recognized or stable relationship in order to access ART services, 51 (46%) of 111 reported that no such requirement existed, while 58 (52%) noted the existence of such a requirement (Table 1). As a percentage, this represents a slight decrease (54% vs 52%) in countries reporting this requirement from the previous survey when 35 (44%) of 80 countries reported no such requirement and 43 (54%) reported that the requirement existed. In 2019, respondents

Chapter 4. Table 1

To access IVF or ART services in your country are a couple or an individual required to be in a recognized or stable heterosexual relationship?

Country	Response	How are these requirements governed?
Albania	Yes	Federal/National Laws/Statutes/Ordinances
Algeria	Yes	Federal/National Laws/Statutes/Ordinances State/Provincial/Regional Laws/Statutes/Ordinances Cultural practice Religious decree
Argentina	No requirement	
Armenia	No requirement	
Australia	No requirement	
Austria	No requirement	
Bangladesh	Yes	Cultural practice Religious decree
Barbados	Yes	Federal/National Laws/Statutes/Ordinances Cultural practice
Belarus	Yes	Federal/National Laws/Statutes/Ordinances
Benin	Yes	Federal/National Laws/Statutes/Ordinances
Bolivia	No requirement	
Bosnia and Herzegovina	Yes	Federal/National Laws/Statutes/Ordinances
Brazil	No requirement	
Bulgaria	No requirement	
Burkina Faso	No requirement	
Cambodia	Yes	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines
Cameroon	Yes	Federal/National Laws/Statutes/Ordinances
Chile	No requirement	
China	Yes	Federal/National Laws/Statutes/Ordinances
Colombia	No requirement	
Costa Rica	No requirement	
Côte d'Ivoire	Unknown	
Croatia	No requirement	
Cyprus	Yes	Federal/National Laws/Statutes/Ordinances
Czech Republic	Yes	Federal/National Laws/Statutes/Ordinances
Democratic Republic of the Congo	No requirement	
Denmark	No requirement	
Dominican Republic	No requirement	
Ecuador	No requirement	
Egypt	Yes	Federal/National Laws/Statutes/Ordinances State/Provincial/Regional Laws/Statutes/Ordinances Municipal Laws/Statutes/Ordinances Agency Regulations/Oversight Professional Organization Standards/Guidelines Cultural practice Religious decree
El Salvador	No requirement	
Equatorial Guinea	No requirement	
Estonia	No requirement	
Ethiopia	Yes	Federal/National Laws/Statutes/Ordinances State/Provincial/Regional Laws/Statutes/Ordinances Cultural practice Religious decree
Finland	No requirement	
France	No requirement	
Gambia	No requirement	
Georgia	Yes	Federal/National Laws/Statutes/Ordinances Cultural practice Religious decree
Germany	Yes	Federal/National Laws/Statutes/Ordinances
Ghana	Yes	Federal/National Laws/Statutes/Ordinances

Chapter 4. Table 1

(*Continued*)

Country	Response	How are these requirements governed?
		Professional Organization Standards/Guidelines
		Cultural practice
		Religious decree
Greece	No requirement	
Guatemala	No requirement	
Hong Kong	Yes	Federal/National Laws/Statutes/Ordinances State/ Provincial/Regional Laws/Statutes/Ordinances
		Agency Regulations/Oversight
Hungary	Yes	Federal/National Laws/Statutes/Ordinances
Iceland	No requirement	
India	Yes	Federal/National Laws/Statutes/Ordinances
Indonesia	No requirement	
Iran	Yes	Federal/National Laws/Statutes/Ordinances
		Cultural practice
		Religious decree
Iraq	Unknown	
Israel	No requirement	
Italy	Yes	Federal/National Laws/Statutes/Ordinances
Jamaica	No requirement	
Japan	Yes	Professional Organization Standards/Guidelines
Jordan	Yes	Professional Organization Standards/Guidelines
		Cultural practice
Kazakhstan	Yes	Federal/National Laws/Statutes/Ordinances
Kenya	No requirement	
Kuwait	Yes	Federal/National Laws/Statutes/Ordinances
Latvia	No requirement	
Libya	Yes	Municipal Laws/Statutes/Ordinances
		Professional Organization Standards/Guidelines
		Cultural practice
		Religious decree
Lithuania	Yes	Federal/National Laws/Statutes/Ordinances
Malaysia	Yes	Federal/National Laws/Statutes/Ordinances
Mali	Yes	Professional Organization Standards/Guidelines
		Cultural practice
Malta	No requirement	
Mexico	No requirement	
Moldova	Yes	Federal/National Laws/Statutes/Ordinances State/ Provincial/Regional Laws/Statutes/Ordinances
		Municipal Laws/Statutes/Ordinances
Montenegro	Yes	Federal/National Laws/Statutes/Ordinances State/ Provincial/Regional Laws/Statutes/Ordinances
		Municipal Laws/Statutes/Ordinances
Morocco	Yes	Federal/National Laws/Statutes/Ordinances
Myanmar	Yes	Federal/National Laws/Statutes/Ordinances State/ Provincial/Regional Laws/Statutes/Ordinances
		Cultural practice
		Religious decree
Namibia	No requirement	
Nepal	Yes	Federal/National Laws/Statutes/Ordinances
		Professional Organization Standards/Guidelines
		Cultural practice
New Zealand	No requirement	
Nicaragua	Yes	Federal/National Laws/Statutes/Ordinances
Nigeria	No requirement	
Norway	No requirement	
Oman	Yes	Federal/National Laws/Statutes/Ordinances
Pakistan	Yes	Professional Organization Standards/Guidelines
		Cultural practice
		Religious decree
Panamá	No requirement	
Paraguay	No requirement	
Perú	No requirement	

Chapter 4. Table 1

(*Continued*)

Country	Response	How are these requirements governed?
Philippines	Yes	Professional Organization Standards/Guidelines
Poland	Yes	Federal/National Laws/Statutes/Ordinances
Portugal	No requirement	
Qatar	Yes	Federal/National Laws/Statutes/Ordinances Cultural practice Religious decree
Republic of the Congo	Yes	Cultural practice Religious decree
Romania	No requirement	
Russia	Yes	Federal/National Laws/Statutes/Ordinances State/Provincial/Regional Laws/Statutes/Ordinances
Serbia	No requirement	
Singapore	Yes	Federal/National Laws/Statutes/Ordinances Agency Regulations/Oversight
Slovenia	Yes	Federal/National Laws/Statutes/Ordinances
South Africa	No requirement	
South Korea	Yes	Federal/National Laws/Statutes/Ordinances
Spain	Yes	Federal/National Laws/Statutes/Ordinances
Sudan	Yes	Federal/National Laws/Statutes/Ordinances
Sweden	No requirement	
Switzerland	Yes	Federal/National Laws/Statutes/Ordinances
Tajikistan	Yes	Federal/National Laws/Statutes/Ordinances Cultural practice Religious decree
Tanzania	Yes	Federal/National Laws/Statutes/Ordinances Cultural practice Religious decree
The Netherlands	No requirement	
Trinidad & Tobago	No requirement	
Tunisia	Yes	Federal/National Laws/Statutes/Ordinances
Turkey	Yes	Federal/National Laws/Statutes/Ordinances
Uganda	Yes	State/Provincial/Regional Laws/Statutes/Ordinances
United Arab Emirates	Yes	Federal/National Laws/Statutes/Ordinances Cultural practice Religious decree
United Kingdom	No requirement	
United States of America	No requirement	
Uruguay	No requirement	
Uzbekistan	Yes	Federal/National Laws/Statutes/Ordinances Agency Regulations/Oversight Cultural practice Religious decree
Venezuela	No requirement	
Vietnam	Yes	Federal/National Laws/Statutes/Ordinances
Zambia	No requirement	
Zimbabwe	Yes	Federal/National Laws/Statutes/Ordinances Cultural practice

to the survey reported that 52 (62%) of 84 countries had no requirements for a recognized or stable relationship, while 32 (38%) countries reported that this was a requirement for ART services. Thus, there has been an overall increase in the number of countries that now require this type of relationship as a contingency for access to ART services, but the most recent data suggests the increase may have plateaued. Most European countries responded that they had no requirements for a recognized relationship to provide access to ART services; exceptions included countries with federal laws, statutes, or ordinances that establish this requirement.

A slight majority of countries, 58 (52%) of 111 did require that individuals provided with ART services be in a stable heterosexual relationship (Chart 1). Of these, 26 (48%) of 58 countries reported that this was regulated by federal or national laws, statutes, or ordinances (Table 1). Representatives from Bangladesh, Japan, Jordan, Mali, Pakistan, the Philippines, and Republic of Congo all noted that access to ART services was limited to individuals in a stable relationship as mandated by professional organizations, cultural practice, or religious decree.

The countries with no requirement for a stable heterosexual union were surveyed and asked whether services were available to single men, single women, male and female same-sex couples, and/or individuals identifying as transgender or intersex (Table 2). Twenty-eight (27%) of countries reported offering

Chapter 4. Table 2

If there is no requirement for an official or stable heterosexual union is IVF or ART services accessible to?

Country	Single women	Single men	Same sex female couples	Same sex male couples	Transgender	Intersex Individuals
Argentina	Yes	No	Yes	No	No	No
Armenia	Yes	Yes	No	No	Unknown	Unknown
Australia	Yes	Yes	Yes	Yes	Yes	Yes
Austria	No	No	Yes	No	Yes	Yes
Bolivia	Yes	Yes	Yes	Yes	Yes	Yes
Brazil	Yes	Yes	Yes	Yes	Yes	Yes
Bulgaria	Yes	No	Yes	No	Unknown	Unknown
Burkina Faso	Yes	No	No	No	No	No
Chile	Yes	No	Yes	No	No	No
Colombia	Yes	Yes	Yes	Yes	Yes	Yes
Costa Rica	Yes	No	No	No	No	No
Côte d'Ivoire	Yes	Yes	Unknown	Unknown	Unknown	Unknown
Croatia	Yes	No	No	No	Unknown	Unknown
Democratic Republic of the Congo	Yes	No	No	No	No	No
Denmark	Yes	No	Yes	No	Yes	Yes
Dominican Republic	Yes	Yes	Yes	Yes	Yes	Yes
Ecuador	Yes	No	Yes	No	Yes	Yes
El Salvador	Yes	Unknown	Yes	Yes	Unknown	Unknown
Equatorial Guinea	Yes	Unknown	No	No	Unknown	Unknown
Estonia	Yes	No	Yes	No	Unknown	Unknown
Finland	Yes	No	Yes	No	No	No
France	Yes	No	Yes	No	Yes	Yes
Gambia	Yes	Unknown	Unknown	Unknown	Unknown	Unknown
Greece	Yes	No	No	No	No	No
Guatemala	Yes	Yes	Yes	Yes	Yes	Yes
Iceland	Yes	No	Yes	No	Yes	Yes
Indonesia	Yes	Yes	No	No	No	No
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	Yes	Yes	Yes	Yes	Yes	Yes
Jamaica	Yes	Yes	Yes	Yes	Unknown	Unknown
Kenya	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Latvia	Yes	No	No	No	No	No
Malta	Yes	Yes	Yes	Yes	Yes	Yes
Mexico	Yes	Yes	Yes	Yes	Yes	Yes
Namibia	Yes	Yes	Yes	Yes	Unknown	Unknown
New Zealand	Yes	Yes	Yes	Yes	Yes	Yes
Nigeria	Yes	No	No	No	No	No
Norway	Yes	No	Yes	No	Yes	No
Panamá	Yes	No	Yes	No	Unknown	Unknown
Paraguay	Yes	Yes	Yes	Yes	Yes	Yes
Perú	Yes	Unknown	Yes	Unknown	Unknown	Unknown
Portugal	Yes	No	Yes	No	Yes	Unknown
Romania	Yes	Unknown	Yes	Yes	Unknown	Unknown
Serbia	No	No	No	No	No	No
South Africa	Yes	Yes	Yes	Yes	Yes	Yes
Sweden	Yes	No	Yes	No	Yes	Yes
The Netherlands	Yes	Yes	Yes	Yes	Yes	Yes
Trinidad & Tobago	Yes	No	Yes	No	Yes	Yes
United Kingdom	Yes	No	Yes	No	Yes	Unknown
United States of America	Yes	Yes	Yes	Yes	Yes	Yes
Uruguay	Yes	No	Yes	No	Unknown	Unknown
Venezuela	Yes	No	Yes	No	No	No
Zambia	Yes	Yes	Unknown	No	Unknown	Unknown

access for all. In the 2022 report, 12 (35%) of 35 countries reported access for all. In 2019, 25% (13) of 52 countries reported that the same groups had access to ART services, which represented no significant change over the previous three years. Several countries reported access to single individuals or same-sex couples but responded "unknown" regarding transgender and intersex persons. Seventeen countries reported that single women and female same-sex couples had access to ART services but responded "no" or "unknown" when asked about access by single men and same sex male couples. Burkina Faso, Costa Rica, Democratic Republic of the Congo, Greece, Latvia, and Nigeria reported that single women had access to ART services, with all others having "no access", or "unknown". Serbia reported "no access" to ART services for all the groups.

Chapter 4. Table 3a

To whom are treatments allowed/permitted?

Country	Diagnostic Evaluation	Intrauterine Insemination
Albania	Single Women	Single Women
Algeria	Not allowed	Not allowed
Argentina	Single Women	Single Women
	Single Men	Same Sex Female Married Couple Transgender
	Same Sex Female Married Couple	Intersex Individuals
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Armenia	Single Women	Single Women
	Single Men	Single Men
Australia	Single Women	Single Women
	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender
	Intersex Individuals	Intersex Individuals
Austria	Single Women	Same Sex Female Married Couple Transgender
	Single Men Same	Intersex Individuals
	Sex Female Married Couple	
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Bangladesh	Single Women	Single Women
	Single Men	Single Men
Belarus	Single Women	Single Women
	Intersex Individuals	Intersex Individuals
Benin	Not allowed	Not allowed
Bolivia	Single Women	Single Women
	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender
	Intersex Individuals	Intersex Individuals
Bosnia and Herzegovina	Not allowed	Not allowed
Brazil	Single Women	Single Women
	Single Men	Single Men
	Same Sex Female Married Couple Same	Same Sex Female Married Couple
	Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender
	Intersex Individuals	Intersex Individuals
Bulgaria	Single Women	Single Women
	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Burkina Faso	Intersex Individuals	Intersex Individuals
Cambodia	Not allowed	Not allowed
Cameroun	Same Sex Female Married Couple	Same Sex Female Married Couple
Chile	Single Women	Single Women
	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
China	Single Women	
	Single Men	
Colombia	Single Women	Single Women
	Single Men	Same Sex Female Married Couple Transgender
	Same Sex Female Married Couple	Intersex Individuals
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Costa Rica	Single Women	Single Women
	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Côte d'Ivoire	Single Women	Single Women
	Single Men	
Croatia	Single Women	Single Women
Cyprus	Single Women	Single Women
	Single Men	
Czech Republic	Single Women	Not allowed
	Single Men	
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Democratic Republic of the Congo	Single Women	Single Women
	Single Men	Single Men
Denmark	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple
	Transgender	

Chapter 4. Table 3a

(*Continued*)

Country	Diagnostic Evaluation	Intrauterine Insemination
	Intersex Individuals	
Dominican Republic	Single Women	Single Women
	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender
	Intersex Individuals	Intersex Individuals
Ecuador	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple
Egypt	Not allowed	Not allowed
El Salvador	Single Women	Single Women
	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
Equatorial Guinea	Single Women	Single Women
	Single Men	
Estonia	Single Women	Single Women
	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	
Ethiopia	Single Women	
	Single Men	
Finland	Single Women	Single Women
	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	
France	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple Transgender
	Transgender	Intersex Individuals
	Intersex Individuals	
Gambia	Single Women	Single Women
Georgia	Single Women	Not allowed
	Single Men	
Germany	Single Women	Single Women
	Single Men	Same Sex Female Married Couple Transgender
	Same Sex Female Married Couple	Intersex Individuals
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Ghana	Single Women	Not allowed
Greece	Single Women	Single Women
	Single Men	
Guatemala	Single Women	Single Women
	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Hong Kong	Single Women	Transgender
	Single Men	Intersex Individuals
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Hungary	Single Women	Single Women
Iceland	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple Transgender
	Transgender	Intersex Individuals
	Intersex Individuals	
India	Single Women	Single Women
	Single Men	
Indonesia	Single Women	Not allowed
	Single Men	
Iran	Single Women	Not allowed
	Single Men	
	Transgender	
Iraq	Not allowed	Not allowed
Israel	Single Women	Single Women
	Single Men	Same Sex Female Married Couple Transgender
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
	Transgender	
Italy	Single Women	
	Single Men	
Jamaica	Single Women	Single Women
	Single Men	Single Men
Japan	Intersex Individuals	Intersex Individuals
Jordan	Single Women	
	Single Men	
Kazakhstan	Single Women	Single Women
Kuwait	Single Women	Not allowed
	Single Men	
Latvia	Single Women	Single Women
	Single Men	
Libya	Not allowed	Not allowed

Chapter 4. Table 3a

(*Continued*)

Country	Diagnostic Evaluation	Intrauterine Insemination
Lithuania	Single Women	Not allowed
	Single Men	
Malaysia	Single Women	Not allowed
	Single Men	
Mali	Single Women	
	Single Men	
Malta	Single Women	Single Women
	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender
	Intersex Individuals	Intersex Individuals
Mexico	Single Women	Single Women
	Single Men	Same Sex Female Married Couple Transgender
	Same Sex Female Married Couple	Intersex Individuals
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Moldova	Not allowed	Not allowed
Montenegro	Single Women	Not allowed
	Single Men	
	Transgender	
	Intersex Individuals	
Morocco	Not allowed	Not allowed
Myanmar	Not allowed	Not allowed
Namibia	Single Women	Single Women
	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	
	Intersex Individuals	
Nepal	Single Women	Intersex Individuals
	Single Men	
	Intersex Individuals	
New Zealand	Single Women	Single Women
	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender
	Intersex Individuals	Intersex Individuals
Nigeria	Single Women	Single Women
Norway	Single Women	Single Women
	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Oman	Single Women	
	Single Men	
Pakistan	Not allowed	Not allowed
Panamá	Single Women	Single Women
	Single Men	Same Sex Female Married Couple Transgender
	Same Sex Female Married Couple	Intersex Individuals
Paraguay	Single Women	Single Women
	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
Perú	Single Women	
	Single Men	
	Same Sex Female Married Couple	
	Same Sex Male Married Couple	
	Transgender	
	Intersex Individuals	
Philippines	Single Women	Not allowed
	Single Men	
Poland	Single Women	Not allowed
	Single Men	
Portugal	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple Transgender
	Transgender	
Qatar	Single Women	Not allowed
	Single Men	
Republic of the Congo	Intersex Individuals	Intersex Individuals
Romania	Single Women	Single Women
	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender
	Intersex Individuals	Intersex Individuals
Russia	Single Women	Single Women
Serbia	Single Women	Not allowed
Singapore	Single Women	Not allowed
	Single Men	

Chapter 4. Table 3a

(Continued)

Country	Diagnostic Evaluation	Intrauterine Insemination
Slovenia	Single Women Single Men Transgender Intersex Individuals	Not allowed
South Africa	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals
Spain		Single Women Same Sex Female Married Couple Same Sex Male Married Couple
Sudan	Single Women Single Men	Not allowed
Sweden	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Switzerland	Not allowed	Not allowed
Tajikistan	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Intersex Individuals
Tanzania	Single Women Single Men	Single Women Single Men
The Netherlands	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Trinidad & Tobago	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals
Tunisia	Single Women Single Men	Not allowed
Uganda	Single Women Single Men	Single Women Single Men
United Arab Emirates	Single Women Single Men	
United Kingdom	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
United States of America	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Uruguay	Single Women Single Men Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Intersex Individuals
Uzbekistan	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Not allowed
Venezuela	Single Women Single Men Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Vietnam	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Not allowed
Zambia	Single Women Single Men	Single Women
Zimbabwe	Single Women Single Men	Single Women Single Men

Chapter 4. Table 3b

To whom are treatments allowed/permitted?

Country	IVF	PGT Monogenic disorders	PGT Aneuploidy
Albania	Single Women	Single Women	Single Women
Algeria	Not allowed	Not allowed	Not allowed
Argentina	Single Women Same Sex Female Married Couple Transgender Intersex Individuals		
Armenia	Single Women Single Men	Single Women Single Men	Single Women Single Men
Australia	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Austria	Single Men Same Sex Male Married Couple Transgender Intersex Individuals	Same Sex Female Married Couple Transgender Intersex Individuals	Same Sex Female Married Couple Transgender Intersex Individuals
Bangladesh	Single Women Single Men	Single Women Single Men	Single Women Single Men
Belarus	Single Women Intersex Individuals	Single Women Intersex Individuals	Single Women Intersex Individuals
Benin	Not allowed	Not allowed	Not allowed
Bolivia	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Bosnia and Herzegovina	Not allowed	Not allowed	Not allowed
Brazil	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Bulgaria	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Burkina Faso	Intersex Individuals	Intersex Individuals	Intersex Individuals
Cambodia	Not allowed	Not allowed	Not allowed
Cameroon	Same Sex Female Married Couple	Not allowed	
Chile	Single Women Same Sex Female Married Couple	Single Women Single Men Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Colombia	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Costa Rica	Single Women Same Sex Female Married Couple	Not allowed	Not allowed
Côte d'Ivoire	Single Women	Not allowed	Not allowed
Croatia	Single Women	Single Women	
Cyprus	Single Women	Single Women	Single Women
Czech Republic	Not allowed	Not allowed	Not allowed
Democratic Republic of the Congo	Single Women		
Denmark	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Dominican Republic	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Ecuador	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Egypt	Not allowed	Not allowed	Not allowed
El Salvador	Single Women Same Sex Female Married Couple Same Sex Male Married Couple	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple
Equatorial Guinea	Single Women	Single Women	Single Women
Estonia	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Finland	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
France	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	
Gambia	Single Women	Not allowed	Not allowed
Georgia	Not allowed	Not allowed	Not allowed
Germany	Single Women		

Chapter 4. Table 3b

(*Continued*)

Country	IVF	PGT Monogenic disorders	PGT Aneuploidy
	Same Sex Female Married Couple Transgender		
	Intersex Individuals		
Ghana	Not allowed	Not allowed	Not allowed
Greece	Single Women	Single Women	Single Women
Guatemala	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Hong Kong	Transgender	Transgender	Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Hungary	Single Women	Single Women	Not allowed
Iceland	Single Women		
	Same Sex Female Married Couple Transgender		
	Intersex Individuals		
India	Single Women	Single Women	Single Women
Indonesia	Not allowed	Not allowed	Not allowed
Iran	Not allowed	Not allowed	Not allowed
Iraq	Not allowed	Not allowed	Not allowed
Israel	Single Women	Single Women	Single Women
		Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender
Jamaica	Single Women Single Men	Single Women	Single Women
		Single Men	Single Men
Japan	Intersex Individuals	Intersex Individuals	Intersex Individuals
Kazakhstan	Single Women	Single Women	Single Women
Kuwait	Not allowed	Not allowed	Not allowed
Latvia	Single Women	Single Women	Single Women
Libya	Not allowed	Not allowed	Not allowed
Lithuania	Not allowed	Not allowed	Not allowed
Malaysia	Not allowed	Not allowed	Not allowed
Malta	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Mexico	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Moldova	Not allowed	Not allowed	Not allowed
Montenegro	Not allowed	Not allowed	Not allowed
Morocco	Not allowed	Not allowed	Not allowed
Myanmar	Not allowed	Not allowed	Not allowed
Namibia	Single Women		
	Single Men Same Sex Female Married Couple		
	Same Sex Male Married Couple		
Nepal	Intersex Individuals	Intersex Individuals	Intersex Individuals
New Zealand	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Nigeria	Single Women	Single Women	Single Women
Norway	Single Women	Single Women	Not allowed
	Same Sex Female Married Couple	Same Sex Female Married Couple	
Pakistan	Not allowed	Not allowed	Not allowed
Panamá	Single Women	Single Women	Single Women Same Sex Female Married Couple Transgender Intersex Individuals
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender	
	Intersex Individuals	Intersex Individuals	
Paraguay	Single Women	Single Women	Single Women Same Sex Female Married Couple
	Same Sex Female Married Couple	Same Sex Female Married Couple	
Philippines	Not allowed	Not allowed	Not allowed
Poland	Not allowed	Not allowed	Not allowed
Portugal	Single Women	Single Women	Single Women
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender
Qatar	Not allowed	Not allowed	Not allowed
Republic of the Congo	Intersex Individuals		
Romania	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Russia	Single Women	Single Women	Single Women
Serbia	Not allowed	Not allowed	Not allowed
Singapore	Not allowed	Not allowed	Not allowed
Slovenia	Not allowed		
South Africa	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married	Same Sex Female Married Couple Same Sex Male Married	Same Sex Female Married Couple Same Sex Male Married Couple

Chapter 4. Table 3b

(*Continued*)

Country	IVF	PGT Monogenic disorders	PGT Aneuploidy
	Couple Transgender	Couple Transgender	Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Spain	Single Women		
	Same Sex Female Married Couple Transgender		
	Intersex Individuals		
Sudan	Not allowed	Not allowed	Not allowed
Sweden	Single Women	Single Women	Not allowed
	Same Sex Female Married Couple	Same Sex Female Married Couple	
Switzerland	Not allowed	Not allowed	Not allowed
Tajikistan	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Tanzania	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
The Netherlands	Single Women	Not allowed	Not allowed
	Single Men		
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender		
	Intersex Individuals		
Trinidad & Tobago	Single Women	Single Women	Single Women
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Tunisia	Not allowed	Not allowed	Not allowed
Uganda	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
United Kingdom	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
United States of America	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Uruguay	Single Women	Single Women	Single Women
	Same Sex Female Married Couple Intersex Individuals	Same Sex Female Married Couple Intersex Individuals	Same Sex Female Married Couple Intersex Individuals
Uzbekistan	Not allowed		Not allowed
Venezuela	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Vietnam	Not allowed	Not allowed	Not allowed
Zambia	Single Women	Single Women	Single Women
		Single Men	Single Men
Zimbabwe	Single Women		
	Single Men		

Individuals and same-sex couples had access to various diagnostic and therapeutic interventions (Tables 3a–3d, 4). Twenty-five (27%) of 91 countries reported that they were permitted to offer diagnostic evaluations to single women, single men, female same-sex couples, male same-sex couples, and intersex and transgender individuals. In 53 countries with no requirement for an official or stable heterosexual union, 49 (92%) of countries reported that they were permitted to provide IVF or ART services to single women and 37 (70%) to same-sex female couples. However, most of these countries excluded single men and male same-sex couples. A substantial number excluded intersex (25%) and transgender (23%) individuals.

The legal parenting status of the partner of a same-sex couple was also assessed. Most respondents indicated that their country did not recognize the same-sex partner as a legal parent. This was the case for both female same-sex couples, in 73 (66.4%) of 110 countries and male same-sex couples in 86 (78.2%) of 110 countries. Twenty-nine (26.3%) countries recognized the partner as a legal parent in female same-sex couples, but only 16 (14.5%) countries) did so for male same-sex couples. Eight countries responded "unknown" regarding both the legal status of the partner for male same-sex couples and the legal status of the female partner in a same-sex couple (Table 5, Chart 2).

Discussion

These results continue to reflect substantial differences among countries' attitudes with respect to acceptance of *non-traditional* couples and single individuals desiring children and their access to ART services, primarily based on differences in cultural and religious influences. Demand for ART services has been increasing in many countries in Europe and North America where delayed childbearing has become the norm and non-marital and non-heterosexual childbearing has become commonplace. Many individuals in "non-traditional" roles and/or relationships require medical assistance to conceive[1]. The survey conducted in 2024, like the 2021 survey, suggests more countries now require the existence of a recognized and/or stable relationship to gain access to ART services. It is difficult to draw accurate comparisons between the two surveys since the present reached a significantly larger number of countries. These

Chapter 4. Table 3c

To whom are treatments allowed/permitted?

Country	Donor Sperm	Donor Egg	Donor Embryos
Albania	Single Women	Single Women	Single Women
Algeria	Not allowed	Not allowed	Not allowed
Argentina	Single Women	Single Women	
	Same Sex Female Married Couple	Same Sex Female Married Couple	
		Transgender	
		Intersex Individuals	
Armenia	Single Women	Single Women Single Men	Single Women
Australia	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple	Same Sex Female Married Couple
		Same Sex Male Married Couple Transgender	Same Sex Male Married Couple
	Intersex Individuals	Intersex Individuals	Transgender
			Intersex Individuals
Austria	Same Sex Female Married Couple Transgender Intersex Individuals	Same Sex Female Married Couple Transgender Intersex Individuals	Not allowed
Bangladesh	Not allowed	Not allowed	Not allowed
Belarus	Single Women	Single Women Intersex Individuals	Not allowed
	Intersex Individuals		
Benin	Not allowed	Not allowed	Not allowed
Bolivia	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Bosnia and Herzegovina	Not allowed	Not allowed	Not allowed
Brazil	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Bulgaria	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Burkina Faso	Intersex Individuals	Intersex Individuals	Not allowed
Cambodia	Not allowed	Not allowed	Not allowed
Cameroon	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Chile	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Colombia	Single Women	Single Men	Single Women
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Same Sex Male	Same Sex Female Married Couple Transgender
	Intersex Individuals	Married Couple Transgender	Intersex Individuals
		Intersex Individuals	
Costa Rica	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Côte d'Ivoire	Single Men	Single Women	Single Women
Croatia	Single Women	Single Women	Single Women
Cyprus	Single Women	Single Women	Single Women
Czech Republic	Not allowed	Not allowed	Not allowed
Democratic Republic of the Congo	Single Women	Single Women	Not allowed
Denmark	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Dominican Republic	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Ecuador	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Egypt	Not allowed	Not allowed	Not allowed
El Salvador	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple Same Sex Male Married Couple	Same Sex Female Married Couple
Equatorial Guinea	Single Women	Single Women	Single Women
			Same Sex Female Married Couple

Chapter 4. Table 3c

(Continued)

Country	Donor Sperm	Donor Egg	Donor Embryos
Estonia	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Ethiopia	Not allowed	Not allowed	Not allowed
Finland	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
France	Single Women	Single Women	Single Women
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Gambia	Single Women	Single Women	Single Women
Georgia	Not allowed	Not allowed	Not allowed
Germany	Single Women		
	Same Sex Female Married Couple Transgender		
	Intersex Individuals		
Ghana	Not allowed	Not allowed	Not allowed
Greece	Single Women	Single Women	Single Women
Guatemala	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Hong Kong	Transgender	Transgender	Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Hungary	Single Women	Not allowed	Single Women
Iceland	Single Women	Single Women	Not allowed
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender	
	Intersex Individuals	Intersex Individuals	
India	Single Women	Single Women	Single Women
Indonesia	Not allowed	Not allowed	Not allowed
Iran	Not allowed	Not allowed	Not allowed
Iraq	Not allowed	Not allowed	Not allowed
Israel	Single Women	Single Women	
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender	
Jamaica	Single Women	Single Women	Single Women
		Single Men	
Japan	Intersex Individuals		
Jordan	Not allowed	Not allowed	Not allowed
Kazakhstan	Single Women	Single Women	Single Women
Kuwait	Not allowed	Not allowed	Not allowed
Latvia	Single Women	Single Women	Single Women
Libya	Not allowed	Not allowed	Not allowed
Lithuania	Not allowed	Not allowed	Not allowed
Malaysia	Not allowed	Not allowed	Not allowed
Malta	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Mexico	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Moldova	Not allowed	Not allowed	Not allowed
Montenegro	Not allowed	Not allowed	Not allowed
Morocco	Not allowed	Not allowed	Not allowed
Myanmar	Not allowed	Not allowed	Not allowed
Namibia	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Nepal	Intersex Individuals	Intersex Individuals	Intersex Individuals
New Zealand	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Nigeria	Single Women	Single Women	Single Women
Norway	Single Women	Same Sex Female Married Couple	Not allowed
	Same Sex Female Married Couple		
Pakistan	Not allowed	Not allowed	Not allowed
Panamá	Single Women	Single Women	Single Women

Chapter 4. Table 3c

(***Continued***)

Country	Donor Sperm	Donor Egg	Donor Embryos
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Paraguay	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Single Men	Same Sex Female Married Couple
		Same Sex Female Married Couple	
Philippines	Not allowed	Not allowed	Not allowed
Poland	Not allowed	Not allowed	Not allowed
Portugal	Single Women	Single Women	Single Women
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender
Qatar	Not allowed	Not allowed	Not allowed
Republic of the Congo	Intersex Individuals	Intersex Individuals	Intersex Individuals
Romania	Single Women	Single Women	Single Women
	Single Men	Single Men	
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	
	Intersex Individuals	Intersex Individuals	
Russia	Single Women	Single Women	Single Women
Serbia	Not allowed	Not allowed	Not allowed
Singapore	Not allowed	Not allowed	Not allowed
Slovenia	Not allowed	Not allowed	Not allowed
South Africa	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Sudan	Not allowed	Not allowed	Not allowed
Sweden	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Switzerland	Not allowed	Not allowed	Not allowed
Tajikistan	Single Women	Single Women	Single Women
	Intersex Individuals	Intersex Individuals	
Tanzania	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
The Netherlands	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Trinidad & Tobago	Single Women	Single Women	Single Women
	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender	Same Sex Female Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Tunisia	Not allowed	Not allowed	Not allowed
Uganda	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
United Kingdom	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
United States of America	Single Women	Single Women	Single Women
	Single Men	Single Men Same Sex Female Married Couple	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Uruguay	Single Women	Single Women	Single Women
	Same Sex Female Married Couple Intersex Individuals	Same Sex Female Married Couple Intersex Individuals	Same Sex Female Married Couple Intersex Individuals
Uzbekistan	Not allowed	Not allowed	Not allowed
Venezuela	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Vietnam	Single Women	Not allowed	Not allowed
Zambia	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
Zimbabwe	Single Women		

Chapter 4. Table 3d

To whom are treatments allowed/permitted?

Country	Traditional Surrogacy	Gestational Surrogacy using donated ova and commissioning person's sperm	Gestational Surrogacy using donated ova and donated sperm
Albania	Not allowed		Not allowed
Algeria	Not allowed	Not allowed	Not allowed
Armenia		Single Women Single Men	Single Women
Australia	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Austria	Not allowed	Not allowed	Not allowed
Bangladesh	Not allowed	Not allowed	Not allowed
Belarus	Not allowed	Intersex Individuals	Not allowed
Benin	Not allowed	Not allowed	Not allowed
Bolivia	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Bosnia and Herzegovina	Not allowed	Not allowed	Not allowed
Brazil	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Bulgaria	Not allowed	Not allowed	Not allowed
Burkina Faso	Not allowed	Not allowed	Not allowed
Cambodia	Not allowed	Not allowed	Not allowed
Cameroon		Not allowed	Not allowed
Colombia	Same Sex Female Married Couple	Single Men	Not allowed
		Same Sex Male Married Couple Transgender	
Costa Rica	Not allowed	Not allowed	Not allowed
Côte d'Ivoire	Not allowed	Not allowed	Not allowed
Cyprus	Single Women	Single Women	Single Women
Czech Republic	Not allowed	Not allowed	Not allowed
Democratic Republic of the Congo	Single Women	Single Women	Single Women
Denmark	Not allowed	Not allowed	Not allowed
Dominican Republic	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Same Sex Female Married Couple Same Sex Male Married Couple Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Ecuador	Not allowed	Single Women	Single Women
		Same Sex Female Married Couple	Same Sex Female Married Couple
Egypt	Not allowed	Not allowed	Not allowed
El Salvador	Not allowed	Not allowed	Not allowed
Equatorial Guinea	Single Women	Single Men	Single Women
			Single Men
Estonia	Not allowed	Not allowed	Not allowed
Ethiopia	Not allowed	Not allowed	Not allowed
Finland	Not allowed	Not allowed	Not allowed
Gambia	Single Women	Single Women	Single Women
Georgia	Not allowed	Not allowed	Not allowed
Ghana	Not allowed	Not allowed	Not allowed
Greece	Not allowed	Single Women	Single Women
Guatemala	Not allowed	Not allowed	Not allowed
Hong Kong	Not allowed	Not allowed	Not allowed
Hungary	Not allowed	Not allowed	Not allowed
Iceland	Not allowed	Not allowed	Not allowed
Indonesia	Not allowed	Not allowed	Not allowed
Iran	Not allowed	Not allowed	Not allowed
Iraq	Not allowed	Not allowed	Not allowed
Israel	Not allowed	Not allowed	Not allowed
Jamaica	Single Women	Single Women	Single Women
	Single Men	Single Men	
Jordan	Not allowed	Not allowed	Not allowed
Kazakhstan	Not allowed	Not allowed	
Kuwait	Not allowed	Not allowed	Not allowed
Latvia	Not allowed	Not allowed	Not allowed

Chapter 4. Table 3d

(*Continued*)

Country	Traditional Surrogacy	Gestational Surrogacy using donated ova and commissioning person's sperm	Gestational Surrogacy using donated ova and donated sperm
Libya	Not allowed	Not allowed	Not allowed
Lithuania	Not allowed	Not allowed	Not allowed
Malaysia	Not allowed	Not allowed	Not allowed
Malta	Not allowed	Not allowed	Not allowed
Mexico		Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Moldova	Not allowed	Not allowed	Not allowed
Montenegro	Not allowed	Not allowed	Not allowed
Morocco	Not allowed	Not allowed	Not allowed
Myanmar	Not allowed	Not allowed	Not allowed
Namibia	Not allowed	Not allowed	Not allowed
Nepal	Not allowed	Not allowed	Not allowed
New Zealand	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Nigeria	Not allowed	Single Women	Single Women
Norway	Not allowed	Not allowed	Not allowed
Pakistan	Not allowed	Not allowed	Not allowed
Panamá	Not allowed	Not allowed	Not allowed
Paraguay	Not allowed	Not allowed	Not allowed
Philippines	Not allowed	Not allowed	Not allowed
Poland	Not allowed	Not allowed	
Qatar	Not allowed	Not allowed	Not allowed
Romania	Not allowed	Not allowed	Not allowed
Russia		Single Women	
Serbia	Not allowed	Not allowed	Not allowed
Singapore	Not allowed	Not allowed	Not allowed
Slovenia	Not allowed	Not allowed	Not allowed
South Africa		Single Men Same Sex Male Married Couple Transgender Intersex Individuals	
Sudan	Not allowed	Not allowed	Not allowed
Sweden	Not allowed	Not allowed	Not allowed
Switzerland	Not allowed	Not allowed	Not allowed
Tajikistan	Not allowed	Not allowed	Not allowed
The Netherlands	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Trinidad & Tobago	Not allowed	Not allowed	Not allowed
Tunisia	Not allowed	Not allowed	Not allowed
Uganda	Not allowed	Single Women Single Men	Single Women Single Men
United Kingdom	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
United States of America	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Uruguay	Single Women Intersex Individuals	Intersex Individuals	Intersex Individuals
Uzbekistan	Not allowed	Not allowed	Not allowed
Venezuela	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Vietnam	Not allowed	Not allowed	Not allowed
Zambia	Single Women Single Men	Single Women Single Men	Single Women Single Men

Chapter 4. Table 4

To whom are treatments practised/performed?

Country	Diagnostic Evaluation	Intrauterine Insemination	IVF
Albania	Single Women	Single Women	Single Women
Algeria	Intersex Individuals		
Argentina	Single Women	Single Women	Single Women
	Single Men	Single Men	Same Sex Female Married Couple
	Same Sex Female Married Couple	Same Sex Female Married Couple	Transgender
	Same Sex Male Married Couple	Same Sex Male Married Couple	Intersex Individuals
	Transgender	Transgender	
	Intersex Individuals	Intersex Individuals	
Armenia	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
Australia	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender	Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Austria	Single Women	Same Sex Female Married Couple	Same Sex Female Married Couple
	Single Men	Same Sex Male Married Couple	Same Sex Male Married Couple
	Same Sex Female Married Couple	Transgender	Transgender
	Same Sex Male Married Couple	Intersex Individuals	
	Transgender		
	Intersex Individuals		
Bangladesh	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
Belarus	Single Women	Single Women	Single Women
	Single Men	Intersex Individuals	Intersex Individuals
	Intersex Individuals		
Bolivia	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender	Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Brazil	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender	Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Bulgaria	Single Women	Single Women	Single Women
	Single Men	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Female Married Couple		
	Same Sex Male Married Couple		
	Transgender		
Burkina Faso	Intersex Individuals	Intersex Individuals	Intersex Individuals
Cameroun	Single Women	Single Women	
	Single Men		
Chile	Single Women	Single Women	Single Women
	Single Men	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Female Married Couple		
	Same Sex Male Married Couple		
China	Single Women		
	Single Men		
Colombia	Single Women	Single Women	Single Women
	Single Men	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Female Married Couple	Transgender	Transgender
	Same Sex Male Married Couple	Intersex Individuals	
	Transgender		
	Intersex Individuals		
Costa Rica	Single Women	Single Women	Single Women
	Single Men	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Female Married Couple		

Chapter 4. Table 4

(Continued)

Country	Diagnostic Evaluation	Intrauterine Insemination	IVF
	Same Sex Male Married Couple Transgender Intersex Individuals		
Côte d'Ivoire	Single Women Single Men	Single Women	Single Women
Croatia	Single Women	Single Women	Single Women
Cyprus	Single Women Single Men	Single Women	Single Women
Czech Republic	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals		
Democratic Republic of the Congo	Single Women Single Men	Single Women Single Men	Single Women Single Men
Denmark	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Dominican Republic	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Ecuador	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Egypt	Single Women Single Men		
El Salvador	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple Same Sex Male Married Couple
Equatorial Guinea	Single Women Single Men	Single Women	Single Women
Estonia	Single Women Single Men Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Ethiopia	Single Women Single Men	Single Women Single Men	
Finland	Single Women Single Men Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
France	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals
Gambia	Single Women	Single Women Single Men Intersex Individuals	Single Women Intersex Individuals
Germany	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals
Ghana	Single Women	Single Women	Single Women
Greece	Single Women Single Men	Single Women	Single Women
Guatemala	Single Women Single Men	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple

Chapter 4. Table 4

(*Continued*)

Country	Diagnostic Evaluation	Intrauterine Insemination	IVF
	Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals		
Hong Kong	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Transgender Intersex Individuals	Transgender Intersex Individuals
Hungary	Single Women	Single Women	Single Women
Iceland	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals
India	Single Women Single Men	Single Women	Single Women
Indonesia	Single Women Single Men		
Iran	Single Women Single Men Transgender Intersex Individuals		
Iraq	Single Women Single Men		Single Women Single Men
Israel	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Single Women Same Sex Female Married Couple Transgender	
Italy	Single Women Single Men		
Jamaica	Single Women Single Men	Single Women	Single Women Single Men
Japan	Intersex Individuals	Intersex Individuals	Intersex Individuals
Jordan	Single Women Single Men		
Kazakhstan	Single Women	Single Women	Single Women
Kuwait	Single Women Single Men		
Latvia	Single Women Single Men	Single Women	Single Women
Lithuania	Single Women Single Men		
Malaysia	Single Women Single Men	Intersex Individuals	Intersex Individuals
Mali	Single Women Single Men	Single Women Single Men	Single Women Single Men
Malta	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender
Mexico	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Single Women Same Sex Female Married Couple	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender
Montenegro	Single Women	Single Women	Single Women
Namibia	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple

Chapter 4. Table 4

(*Continued*)

Country	Diagnostic Evaluation	Intrauterine Insemination	IVF
	Intersex Individuals		
Nepal	Single Women Single Men Intersex Individuals	Intersex Individuals	Intersex Individuals
New Zealand	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Nigeria	Single Women	Single Women	Single Women
Norway	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Oman	Single Women Single Men		
Panamá	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals
Paraguay	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Perú	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Philippines	Single Women Single Men Intersex Individuals		
Poland	Single Women Single Men	Single Women Single Men	
Portugal	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Qatar			
Republic of the Congo	Intersex Individuals	Intersex Individuals	Intersex Individuals
Romania	Single Women Single Men Same Sex Female Married Couple	Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple
Russia	Single Women	Single Women	Single Women
Serbia	Single Women Single Men	Intersex Individuals	Intersex Individuals
Singapore	Single Women Single Men		
Slovenia	Single Women Single Men Transgender Intersex Individuals		
South Africa	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals	Single Women Same Sex Female Married Couple Transgender Intersex Individuals	Single Women Single Men Same Sex Female Married Couple Same Sex Male Married Couple Transgender Intersex Individuals
Spain		Single Women Same Sex Female Married Couple	Single Women Same Sex Female Married Couple

Chapter 4. Table 4

(Continued)

Country	Diagnostic Evaluation	Intrauterine Insemination	IVF
		Transgender	Transgender
		Intersex Individuals	Intersex Individuals
Sweden	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Tajikistan	Single Women	Single Women	Single Women
	Single Men	Intersex Individuals	Intersex Individuals
	Same Sex Female Married Couple		
	Same Sex Male Married Couple		
	Transgender		
	Intersex Individuals		
The Netherlands	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender	Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Trinidad & Tobago	Single Women	Single Women	Single Women
	Single Men	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Female Married Couple	Transgender	Transgender
	Same Sex Male Married Couple	Intersex Individuals	Intersex Individuals
	Transgender		
	Intersex Individuals		
Uganda	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
United Arab Emirates	Single Women		
	Single Men		
United Kingdom	Single Women	Single Women	Single Women
	Single Men	Same Sex Female Married Couple	Single Men
	Same Sex Female Married Couple	Transgender	Same Sex Female Married Couple
	Same Sex Male Married Couple	Intersex Individuals	Same Sex Male Married Couple
	Transgender		Transgender
	Intersex Individuals		Intersex Individuals
United States of America	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Male Married Couple	Same Sex Male Married Couple	Same Sex Male Married Couple
	Transgender	Transgender	Transgender
	Intersex Individuals	Intersex Individuals	Intersex Individuals
Uruguay	Single Women	Single Women	Single Women
	Single Men	Same Sex Female Married Couple	Same Sex Female Married Couple
	Same Sex Female Married Couple	Intersex Individuals	Intersex Individuals
	Transgender		
	Intersex Individuals		
Uzbekistan	Single Women		
	Single Men		
	Same Sex Female Married Couple		
	Same Sex Male Married Couple		
	Transgender		
	Intersex Individuals		
Venezuela	Single Women	Single Women	Single Women
	Same Sex Female Married Couple	Same Sex Female Married Couple	Same Sex Female Married Couple
Vietnam	Single Women		
	Single Men		
	Same Sex Female Married Couple		
	Same Sex Male Married Couple		
	Transgender		
	Intersex Individuals		
Zambia	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men
Zimbabwe	Single Women	Single Women	Single Women
	Single Men	Single Men	Single Men

Chapter 4. Table 5

Does your country have laws that recognize the same-sex partner of a person who has used assisted reproduction as a legal parent of the resulting child?

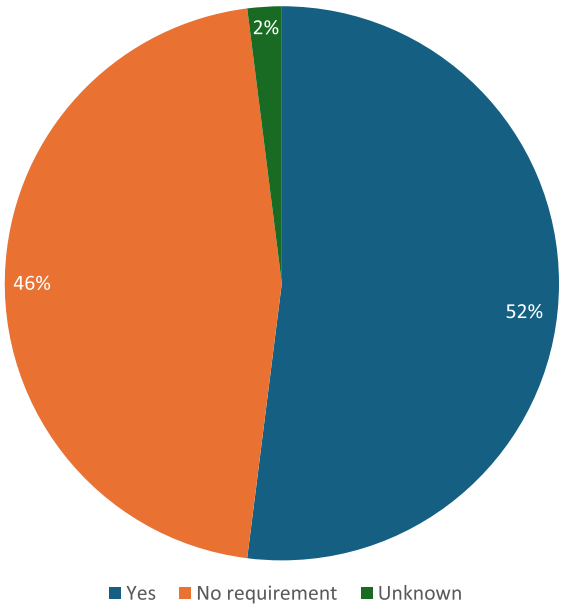
Country	Same sex partner of a woman	Same sex partner of a man
Albania	No	No
Algeria	No	No
Argentina	Yes	Yes
Armenia	No	No
Australia	Yes	Yes
Austria	Yes	No
Bangladesh	No	No
Barbados	No	No
Belarus	No	No
Benin	No	No
Bolivia	No	No
Bosnia and Herzegovina	No	No
Brazil	Yes	Yes
Bulgaria	No	No
Burkina Faso	No	No
Cambodia	Unknown	Unknown
Cameroon	No	No
Chile	Yes	No
China	No	No
Colombia	Yes	Yes
Costa Rica	No	No
Côte d'Ivoire	No	No
Croatia	No	No
Cyprus	Unknown	Unknown
Czech Republic	No	No
Democratic Republic of the Congo	No	No
Denmark	Yes	No
Dominican Republic	No	No
Ecuador	Yes	No
Egypt	No	No
El Salvador	No	No
Equatorial Guinea	No	No
Estonia	Yes	No
Ethiopia	No	No
Finland	Yes	No
France	Yes	No
Gambia	No	No
Georgia	No	No
Germany	No	No
Ghana	No	No
Greece	Yes	Yes
Guatemala	No	No
Hong Kong	No	No
Hungary	No	No
Iceland	Yes	No
India	Yes	No
Indonesia	No	No
Iran	No	No
Iraq	Unknown	Unknown
Israel	Yes	Yes
Jamaica	No	No
Japan	No	No
Jordan	No	No
Kazakhstan	No	No

Chapter 4. Table 5

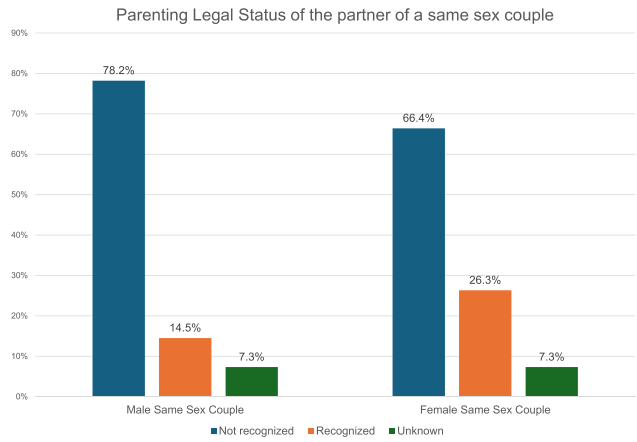
(*Continued*)

Country	Same sex partner of a woman	Same sex partner of a man
Kenya	Unknown	Unknown
Kuwait	No	No
Latvia	No	No
Libya	No	No
Lithuania	No	No
Malaysia	No	No
Mali	No	No
Malta	Yes	Yes
Mexico	Yes	Yes
Moldova	No	No
Montenegro	No	No
Morocco	No	No
Myanmar	No	No
Namibia	No	No
Nepal	Unknown	Unknown
New Zealand	Yes	Yes
Nicaragua	No	No
Nigeria	No	No
Norway	Yes	No
Oman	No	No
Pakistan	Unknown	Unknown
Panamá	No	No
Paraguay	No	No
Perú	Yes	Yes
Philippines	No	No
Poland	No	No
Portugal	Yes	No
Qatar	Unknown	Unknown
Republic of the Congo	No	No
Romania	No	No
Russia	No	No
Serbia	No	No
Singapore	No	No
Slovenia	No	No
South Africa	Yes	Yes
South Korea	No	No
Spain	Yes	No
Sudan	No	No
Sweden	Yes	Yes
Switzerland	Yes	Yes
Tajikistan	No	No
Tanzania	Unknown	Unknown
The Netherlands	Yes	Yes
Trinidad & Tobago	No	No
Tunisia	No	No
Turkey	No	No
Uganda	No	No
United Arab Emirates	No	No
United Kingdom	Yes	Yes
United States of America	Yes	Yes
Uruguay	Yes	No
Uzbekistan	No	No
Venezuela	No	No
Vietnam	No	No
Zambia	No	No
Zimbabwe	No	No

Chapter 4. Chart 1



Chapter 4. Chart 2



findings do suggest that access to ART services by single men, single women, male and female same-sex couples, as well as transgender and intersex individuals has become more limited, although fewer restrictions on single women and female same-sex couples were noted than among the other subgroups. There is evidence to suggest that, as demand for ART services has increased, couples and individuals who do not have access to the desired services in one country are choosing to travel to countries that offer these services without restrictions[2]. Utilization of cross-border reproductive care (CBRC) by single men and women and same sex couples is among the most important drivers of this phenomenon (see CC4).

The opportunity to have and raise children is a universal value and may be an integral component of one's identity or relationship. Individuals and couples, regardless of marital status, sexual orientation, or gender identity can have an interest in childrearing. Current evidence supports the view that relationship status, sexual orientation, and gender identity do not have an adverse impact on child welfare or parenting ability[3]. In some jurisdictions, anti-discrimination legislation prohibits programs from denying fertility services to LGBTQI+ individuals or couples. Pursuant to such laws ART programs are required to treat all persons equally without regard to marital status, sexual orientation, or gender identity. Additionally, several reproductive medicine societies have taken the position that access to reproductive services is a basic human right[3,4]. This is not interpreted as a "right to have a family" but rather affirms that services should be equally available to all where they are available.

Summary

Previously, the 2021 Survey revealed for the first time that most (54%) of the responding countries limit access to ART services to couples in recognized and/or stable relationships. This year's survey further substantiates that trend, showing that 52% of the responding countries limit access in this way.

As previously, the provision of ART services to single women was more widely accepted and permitted than treatment of single men. Similarly, ART services for female same-sex couples were more widely accepted than treatment of male same-sex couples. Of note, the legal parent status of the partner in a same-sex relationship was not recognized in most countries for both female same-sex couples in, 73 of 110 countries (66%), and male same-sex couples, 86 of 110 countries (78%).

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CHAPTER 5: REGULATIONS GOVERNING THE NUMBER OF EMBRYOS FOR TRANSFER

Introduction

It has been more than 45 years since the birth of Louise Brown, the first IVF baby. In the years immediately following her birth, success rates were low, and an attempt was made to mitigate the low implantation rate by transferring multiple embryos. As the technology began to improve and pregnancy rates increased, there was soon an epidemic of high order multiple pregnancies (HOMs). The risks of multiple gestations are well documented and include obstetric and neonatal complications, principally

Chapter 5. Table 1

Is the number of embryos transferred regulated in your country?

Country	Regulated?	Regulated by?
Albania	Yes	Federal/National Laws/Statutes/Ordinances
Algeria	No	
Argentina	No	
Armenia	No	
Australia	No	
Austria	No	
Bangladesh	No	
Barbados	Unknown	
Belarus	Yes	Federal/National Laws/Statutes/Ordinances
Benin	No	
Bolivia	No	
Bosnia and Herzegovina	Yes	Federal/National Laws/Statutes/Ordinances
Brazil	Yes	Agency Regulations/Oversight Professional Organization Standards/ Guidelines
Bulgaria	Yes	Federal/National Laws/Statutes/Ordinances
Burkina Faso	No	
Cambodia	No	
Chile	No	
China	Yes	Federal/National Laws/Statutes/Ordinances
Colombia	No	
Costa Rica	Yes	Federal/National Laws/Statutes/Ordinances
Côte d'Ivoire	Unknown	
Croatia	Yes	Federal/National Laws/Statutes/Ordinances
Cyprus	Yes	Federal/National Laws/Statutes/Ordinances
Czech Republic	Yes	Federal/National Laws/Statutes/Ordinances
Democratic Republic of the Congo	No	
Denmark	Yes	Federal/National Laws/Statutes/Ordinances
Dominican Republic	No	
Ecuador	No	
Egypt	No	
El Salvador	No	
Equatorial Guinea	Yes	Federal/National Laws/Statutes/Ordinances
Estonia	Yes	Federal/National Laws/Statutes/Ordinances
Ethiopia	Yes	Agency Regulations/Oversight Professional Organization Standards/ Guidelines
Finland	Yes	Professional Organization Standards/ Guidelines
France	No	
Gambia	Unknown	
Georgia	No	
Germany	Yes	Federal/National Laws/Statutes/Ordinances
Ghana	Yes	Professional Organization Standards/ Guidelines
Greece	Yes	Federal/National Laws/Statutes/Ordinances
Guatemala	No	
Hong Kong	Yes	Agency Regulations/Oversight
Hungary	Yes	Federal/National Laws/Statutes/Ordinances
Iceland	Yes	Federal/National Laws/Statutes/Ordinances
India	Yes	Federal/National Laws/Statutes/Ordinances
Indonesia	Yes	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/ Guidelines
Iran	No	
Iraq	No	
Israel	Yes	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/ Guidelines
Italy	Yes	Professional Organization Standards/ Guidelines
Jamaica	No	

Chapter 5. Table 1

(*Continued*)

Country	Regulated?	Regulated by?
Japan	Yes	Professional Organization Standards/ Guidelines
Jordan	No	
Kazakhstan	No	
Kenya	No	
Kuwait	Yes	Federal/National Laws/Statutes/Ordinances
Latvia	Yes	Federal/National Laws/Statutes/Ordinances Agency Regulations/Oversight
Libya	No	
Lithuania	Yes	Federal/National Laws/Statutes/Ordinances
Malaysia	No	
Mali	No	
Malta	Yes	Federal/National Laws/Statutes/Ordinances Agency Regulations/Oversight
Mexico	No	
Moldova	Yes	Federal/National Laws/Statutes/Ordinances State/Provincial/Regional Laws/Statutes/ Ordinances Municipal Laws/Statutes/Ordinances
Montenegro	Yes	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/ Guidelines
Morocco	No	
Myanmar	Yes	Agency Regulations/Oversight Professional Organization Standards/ Guidelines
Namibia	No	
Nepal	No	
New Zealand	Yes	State/Provincial/Regional Laws/Statutes/ Ordinances Agency Regulations/Oversight Professional Organization Standards/ Guidelines
Nicaragua	Yes	Federal/National Laws/Statutes/Ordinances
Nigeria	Yes	Professional Organization Standards/ Guidelines
Norway	No	
Oman	Yes	Federal/National Laws/Statutes/Ordinances
Pakistan	No	
Panamá	No	
Paraguay	No	
Perú	No	
Philippines	No	
Polska	Yes	Federal/National Laws/Statutes/Ordinances
Portugal	Yes	Agency Regulations/Oversight
Qatar	Yes	Federal/National Laws/Statutes/Ordinances
Republic of the Congo	No	
Romania	No	
Russia	Yes	Federal/National Laws/Statutes/Ordinances
Serbia	Yes	Federal/National Laws/Statutes/Ordinances
Singapore	Yes	Federal/National Laws/Statutes/Ordinances Agency Regulations/Oversight Professional Organization Standards/ Guidelines
Slovenia	Yes	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/ Guidelines
South Africa	Yes	Federal/National Laws/Statutes/Ordinances
South Korea	Yes	Federal/National Laws/Statutes/Ordinances
Spain	No	
Sudan	No	
Sweden	Yes	Federal/National Laws/Statutes/Ordinances
Switzerland	Yes	Federal/National Laws/Statutes/Ordinances

Chapter 5. Table 1

(*Continued*)

Country	Regulated?	Regulated by?
Tajikistan	Yes	Agency Regulations/Oversight
Tanzania	No	
The Netherlands	Yes	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/ Guidelines
Trinidad & Tobago	No	
Tunisia	No	
Turkey	Yes	Federal/National Laws/Statutes/Ordinances
Uganda	No	
Ukraine	Yes	Federal/National Laws/Statutes/ Ordinances Professional Organization Standards/ Guidelines
United Arab Emirates	Yes	State/Provincial/Regional Laws/Statutes/ Ordinances
United Kingdom	Yes	Federal/National Laws/Statutes/ Ordinances
United States of America	No	
Uruguay	Yes	Federal/National Laws/Statutes/ Ordinances
Uzbekistan	No	
Venezuela	No	
Vietnam	No	
Zambia	No	
Zimbabwe	No	

prematurity and low birth weight, higher healthcare costs, and psychosocial risks. The challenge remains to maximize pregnancy rates while decreasing multiple pregnancy rates. HOM rates have declined markedly in recent years and the focus has now shifted to reducing the incidence of twin pregnancies[1-4]. Advances in laboratory techniques, including blastocyst culture, vitrification and pre-implantation genetic testing have significantly improved success rates and have potentiated making transfer of a single embryo the preferred standard of care[5].

Analysis of Survey

Four questions were included in the survey to assess current practice regarding the number of embryos transferred in a single cycle:

(1) Is the number of embryos transferred regulated in your country? If so, who is it regulated by?
(2) If the number of embryos transferred is under governance in your country, is there a penalty for violation? If so, what is the violation and is it variable?
(3) What is the maximum number of embryos transferred based on age?
(4) What is the number of embryos to be transferred based on?

In response to the first question, "is the number of embryos transferred regulated in your country and if so, who is it regulated by", 111 countries responded. Of the 111 countries, 55 (49.5%) replied that the number is regulated, 53 (47.7%) countries responded that the number of embryos transferred was not regulated, and three (2.7%) countries responded "did not know" if the number of embryos transferred was regulated in their respective countries (Table 1, Chart 1). These numbers suggest little change since 2021 when 40 (50%) respondents from 80 countries noted the presence of regulations governing the number of embryos transferred.

Of the 55 countries responding that the number of embryos transferred is regulated:

- 32 (58%) reported being regulated by federal/national laws, statutes or ordinances.
- 6 (11%) reported being regulated by federal/national laws, statutes or ordinances in addition to professional standards/ guidelines.
- 5 (9%) reported being regulated by professional organization standards/guidelines only.
- Three countries reported being regulated by agency regulations/oversight only.
- Three countries reported being regulated by agency regulations/oversight in combination with professional organization standards/guidelines.
- Two countries reported being regulated by federal/national laws/statutes/ordinances/agency regulations/oversight.
  - Single countries reported the number of embryos transferred being regulated by:
  - State/provincial/regional laws/statutes/ordinances;
  - Federal/national laws/statutes/ordinances, state/provincial/ regional laws/statutes/ordinances, municipal laws/statutes/ ordinances;
  - Federal/national laws/statutes/ordinances, agency regulations/ oversight, professional organization standards/guidelines
  - State/provincial/regional laws/statutes/ordinances, agency regulations/oversight, professional organization standards/ guidelines

Regarding the question, "if the number of embryos transferred is under governance in your country, is there a penalty for

Chapter 5. Table 2

If the number of embryos transferred is under governance in your country, is there a penalty for violation?

Country	Penalty?	What is the violation and is it variable and why?
Albania	Yes	Not precise
Algeria	No	
Argentina	No	
Australia	No	
Austria	No	
Bangladesh	Unknown	
Barbados	Unknown	
Belarus	Yes	Violation of legal requirements may result in license suspension
Benin	Unknown	
Bolivia	No	
Bosnia and Herzegovina	No	
Brazil	Yes	Professional council reprimands and eventually suspension
Bulgaria	Unknown	
Burkina Faso	Unknown	
Cambodia	No	
Cameroon	No	
Chile	No	
China	No	
Costa Rica	Yes	More than 2 embryos http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=80115&nValor3=101568&strTipM=TC#:~:text=Actualmente%2C%20debido%20a%20la%20falta,a%20la%20posibilidad%20de%20procrear.
Côte d'Ivoire	Unknown	
Croatia	Yes	Money fee
Cyprus	Yes	Criminal offense that can result to up to 2 years of imprisonment and/or up to €100.000 penalty.
Czech Republic	Unknown	
Democratic Republic of the Congo	No	
Denmark	Unknown	
Ecuador	No	
Egypt	No	
El Salvador	Unknown	
Equatorial Guinea	Yes	It is forbidden to replace more than three embryos per transfer.
Estonia	Yes	Licence suspension?
Ethiopia	Unknown	
Finland	No	
France	No	
Gambia	No	
Georgia	No	
Germany	Yes	
Ghana	No	
Greece	Yes	If the number of embryos transferred is higher than what is allowed by the law and regulatory authority, there is a fine and licence suspension of at least 6 months up to permanent suspension if this is repeated.
Hong Kong	Yes	
Hungary	Unknown	
Iceland	No	
India	Yes	All offenses under the ART Act carry the same penalties
Indonesia	Unknown	
Iran	No	
Iraq	No	
Israel	Unknown	
Italy	No	
Jamaica	No	
Japan	No	
Kazakhstan	No	
Kenya	No	

Chapter 5. Table 2

(Continued)

Country	Penalty?	What is the violation and is it variable and why?
Kuwait	Yes	Removal of medical license
Latvia	Unknown	
Libya	No	
Lithuania	No	
Malaysia	Unknown	
Mali	Unknown	
Malta	No	
Mexico	No	
Moldova	Unknown	
Montenegro	Yes	ET usually 1-2 embryos, maximum 3 embryos in case of advance female age, previous IVF/ICSI failure, poor response. low quality of embryos
Morocco	No	
Myanmar	No	
Namibia	Unknown	
Nepal	No	
New Zealand	No	
Nicaragua	Yes	
Nigeria	Yes	Only one state has regulations in this regard. The fine is a financial penalty
Norway	No	
Oman	Unknown	
Pakistan	Unknown	
Panamá	No	
Paraguay	No	
Perú	No	
Polska	Unknown	
Portugal	No	
Qatar	Unknown	
Republic of the Congo	No	
Romania	No	
Russia	Yes	Administrative or criminal punishment
Serbia	No	
Singapore	Yes	Fine and/or suspension of licenses
Slovenia	Yes	There are countless areas in the national law that are subject to the unfair and material liability of both the institution and the ART provider.
South Africa	Yes	Criminal offense as per the National Health Act to violate the law
South Korea	Yes	There is a disadvantage in institutional evaluation, and the evaluation grade of the institution is announced low.
Spain	No	
Sweden	Unknown	
Switzerland	Yes	Withdrawal of licence to practice
Tajikistan	No	
Tanzania	No	
The Netherlands	Yes	Reimbursement is only possible if a strict SET protocol is adhered, if not: no reimbursement (so financial penalty)
Trinidad & Tobago	Unknown	
Turkey	Yes	Administrative fines, termination of activities and upon repetition of violation decertification.
Uganda	No	
Ukraine	No	
United Arab Emirates	Yes	
United Kingdom	Yes	Decided by Regulator
United States of America	No	
Uruguay	Unknown	
Uzbekistan	No	
Venezuela	No	
Vietnam	Unknown	
Zambia	Unknown	
Zimbabwe	Unknown	

Chapter 5. Table 3

What is the maximum number of embryos transferred based on age?

Country	Oocyte age < 35	Oocyte age 35-38	Oocyte age > = 39
Albania	2	2	2
Algeria	Unknown	Not addressed	Not addressed
Argentina	Not addressed	Not addressed	Not addressed
Armenia	Not addressed	Not addressed	Not addressed
Australia	Not addressed	Not addressed	Not addressed
Austria	Not addressed	Not addressed	Not addressed
Bangladesh	Not addressed	Not addressed	Not addressed
Belarus	2	3	3
Benin	Unknown	Unknown	Unknown
Bolivia	Not addressed	Not addressed	Not addressed
Bosnia and Herzegovina	Not addressed	Not addressed	Not addressed
Brazil	2	2	3
Bulgaria	1	1	2
Burkina Faso	Not addressed	Not addressed	Not addressed
Cambodia	Not addressed	Not addressed	Not addressed
Cameroon		Not addressed	Not addressed
Chile	2	2	2
China	2	2	2
Costa Rica	2	2	2
Côte d'Ivoire	Not addressed	Not addressed	Not addressed
Croatia	2	2	3
Cyprus	1	1	2
Czech Republic	1	2	2
Democratic Republic of the Congo	Not addressed	Not addressed	Not addressed
Denmark	Not addressed	Not addressed	Not addressed
Dominican Republic	Not addressed	Not addressed	Not addressed
Ecuador	1	2	2
Egypt	Not addressed	Not addressed	Not addressed
El Salvador	2	2	2
Equatorial Guinea	3	3	3
Estonia	3	3	3
Ethiopia	2	3	3
Finland	1	1	1
France	Not addressed	Not addressed	Not addressed
Gambia		3	3
Georgia	2	2	2
Germany	3	3	3
Greece	2	3	3
Guatemala	Not addressed	Not addressed	Not addressed
Hong Kong	3	3	3
Hungary	1	1	2
Iceland	1	2	2
India	3	3	3
Indonesia	2	3	3
Iran	Unknown	Unknown	Unknown
Iraq	Not addressed	Not addressed	Not addressed
Ireland	Not addressed	Not addressed	Not addressed
Israel	3	3	4
Italy	Not addressed	Not addressed	Not addressed
Jamaica	Not addressed	Not addressed	Not addressed
Japan	1	2	2
Jordan	Not addressed	Not addressed	Not addressed
Kazakhstan	Not addressed	Not addressed	Not addressed
Kenya	Not addressed	Not addressed	Not addressed
Kuwait	2	3	3
Latvia	Not addressed	Not addressed	Not addressed
Libya	Not addressed	Not addressed	Not addressed
Lithuania	3	3	3
Malaysia	Unknown	Unknown	Unknown
Mali	Unknown	Unknown	Unknown
Malta	2	2	3
Mexico	Not addressed	Not addressed	Not addressed

Chapter 5. Table 3

(Continued)

Country	Oocyte age < 35	Oocyte age 35-38	Oocyte age > = 39
Moldova	Unknown	Unknown	Unknown
Montenegro	Not addressed	Not addressed	Unknown
Morocco	Not addressed	Not addressed	Not addressed
Myanmar	1	1	
Nepal	Not addressed	Not addressed	Not addressed
New Zealand	1	1	3
Nicaragua	1	2	2
Norway	Not addressed	Not addressed	Not addressed
Oman	2	2	3
Pakistan	2	3	3
Panamá	Not addressed	Not addressed	Not addressed
Paraguay	Not addressed	Not addressed	Not addressed
Perú	Not addressed	Not addressed	Not addressed
Polska	1	2	2
Portugal	2	2	2
Qatar	2	2	2
Republic of the Congo	Unknown	Unknown	Unknown
Romania	Not addressed	Not addressed	Not addressed
Russia	2	2	2
Serbia	3	Unknown	Not addressed
Singapore	2	2	3
Slovenia	3	2	3
South Africa	2	2	2
South Korea	2	3	3
Spain	2	2	1
Sudan	Not addressed	Not addressed	Not addressed
Sweden	1	1	1
Switzerland	3	3	3
Tajikistan	2	2	2
Tanzania	Not addressed	Not addressed	Not addressed
The Netherlands	1	1	2
Trinidad & Tobago	Not addressed	Not addressed	Not addressed
Turkey	1	2	2
Uganda	3	3	3
Ukraine	3	3	3
United Arab Emirates	2	2	2
United Kingdom	2	2	3
United States of America	Not addressed	Not addressed	Not addressed
Uruguay	1	2	2
Uzbekistan	Unknown	Unknown	Unknown
Vietnam	Unknown	Unknown	Unknown
Zambia	Not addressed	Not addressed	Not addressed

violation" 104 responded. 26 (25%) of the 104 indicated there was a penalty for violation; 50 (48%) noted that no penalty existed; and 28 (27%) countries responded "unknown" (Table 2). In 2021 and 2018, 25% and 35%, respectively, answered affirmative to this question. The types of violations included:

- License suspension or loss
- Professional reprimands
- Financial penalties
- Imprisonment (if found to be a criminal offense)
- Administrative or criminal punishment
- Low evaluation grade for the institution
- Termination of activities

Regarding the question "what is the maximum number of embryos transferred based on age?" (Table 3), 105 countries provided complete answers from respondents as follows:

- Oocyte age < 35 year of age:
  - 16 (15.2%) countries limited to one embryo
  - 26 (24.8%) countries limited to two embryos
  - 12 (11.4%) countries limited to three embryos
  - 39 (37.1%) countries, not addressed
  - 9 countries, "unknown"
  - 3 countries did not respond
- Oocyte age 35-38 years of age:
  - Eight countries limited to one embryo
  - 28 (26.7%) countries limited to two embryos
  - 18 (17.1%) countries limited to three embryos
  - 41 (39%) countries, not addressed
  - Nine countries, "unknown"
  - One country did not respond
- Oocyte age ≥ 39 years of age:
  - Three countries limited to one embryo

Chapter 5. Table 4

Is the number of embryos to be transferred based on?

Country	Age of the Donor Oocyte Recipient	Age of the Oocyte Donor	Quality of the Embryos	Stage of the Embryo
Albania	No	No	No	No
Algeria	Not addressed	Not addressed	Not addressed	Not addressed
Argentina	Yes	Yes	Yes	Yes
Armenia	Yes	Yes	Yes	Yes
Australia	Not addressed	Not addressed	Not addressed	Not addressed
Austria	Yes	Yes	Yes	Yes
Bangladesh	Not addressed	Not addressed	Yes	Not addressed
Barbados	Unknown	Unknown	Yes	Yes
Belarus	Yes	Yes	Not addressed	Not addressed
Benin	Yes	Yes	Yes	Yes
Bolivia	Yes	Yes	Yes	Yes
Bosnia and Herzegovina	Not addressed	Not addressed	Yes	Yes
Brazil	No	Yes	No	No
Bulgaria	Yes	No	Yes	Yes
Burkina Faso	Yes	Yes	Yes	No
Cambodia	Not addressed	Not addressed	Not addressed	Not addressed
Cameroon	Yes	No	Yes	Yes
Chile	Yes	Yes	Yes	Yes
China			Yes	Yes
Colombia	Yes	Yes	Yes	Yes
Costa Rica	No	No	Yes	Yes
Côte d'Ivoire	Unknown	Unknown	Yes	Yes
Croatia	Yes	No	No	No
Cyprus	No	Yes	No	No
Czech Republic	Yes	Yes	Yes	Unknown
Democratic Republic of the Congo	Yes	Unknown	Yes	Yes
Denmark	No	No	Unknown	No
Dominican Republic	Yes	Yes	Yes	Yes
Ecuador	Yes	Yes	Yes	Yes
Egypt	Not addressed	Not addressed	Yes	Yes
El Salvador			Yes	
Equatorial Guinea	No	Yes	No	Yes
Estonia	No	No	No	No
Ethiopia	Not addressed	Not addressed	Yes	
Finland	No	No	No	No
France	Not addressed	Not addressed	Not addressed	Not addressed
Gambia	Yes	Yes	Yes	Yes
Georgia	Not addressed	Not addressed	Not addressed	Not addressed
Germany	No	No	No	No
Ghana	Yes	No	Yes	No
Greece	No	Yes	Yes	Yes
Guatemala	Not addressed	Not addressed	Not addressed	Not addressed
Hong Kong	Not addressed	Not addressed	Not addressed	Not addressed
Hungary	Yes	Yes	No	Yes
Iceland	No	Yes	Yes	Yes
India	No	No	Yes	No
Indonesia	Not addressed	Not addressed	Yes	Yes
Iran	Yes	Yes	Yes	Yes
Iraq	Not addressed	Not addressed	Not addressed	Not addressed
Israel	Yes	No	Yes	Yes
Italy	Yes	No	Yes	Yes
Jamaica	Yes	Yes	Yes	Yes
Japan	Not addressed	Not addressed	No	No
Jordan	Not addressed	Not addressed	Not addressed	Not addressed
Kazakhstan	No	Yes	Yes	Yes
Kenya	Not addressed	Not addressed	Not addressed	Not addressed
Kuwait	Unknown	Unknown	Yes	Yes
Latvia	No	No	No	No
Libya	Not addressed	Not addressed	Yes	Not addressed
Lithuania	Not addressed	Not addressed	Not addressed	Not addressed
Malaysia	Unknown	Unknown	Unknown	Unknown
Mali	Not addressed	Not addressed	Not addressed	Not addressed

Chapter 5. Table 4

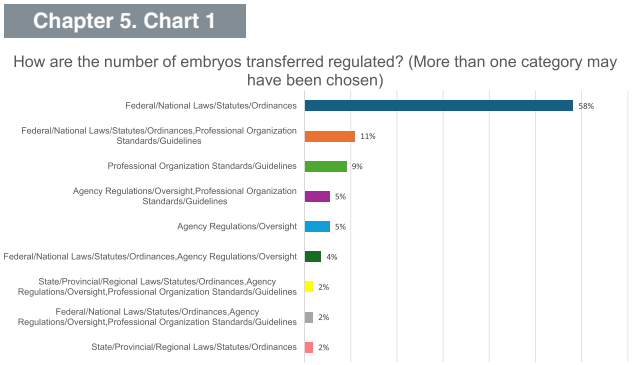
(*Continued*)

Country	Age of the Donor Oocyte Recipient	Age of the Oocyte Donor	Quality of the Embryos	Stage of the Embryo
Malta	Yes	Yes		
Mexico	Yes	Yes	Yes	Yes
Moldova	Unknown	Unknown	Unknown	Unknown
Montenegro	Yes		Yes	Yes
Morocco	No	No	Yes	Unknown
Myanmar	No	Yes	Yes	Yes
Namibia	No	Yes	Yes	Yes
Nepal	No	No	No	No
New Zealand	No	Yes	Yes	Yes
Nicaragua	Yes	Yes	Yes	Yes
Nigeria	Yes	Yes	Yes	Yes
Norway	Not addressed	Not addressed	Not addressed	Not addressed
Oman			Yes	Yes
Pakistan	Not addressed	Not addressed	Yes	Yes
Panamá	Yes	No	Yes	Yes
Paraguay	No	Yes	Yes	Yes
Perú	Yes	No	Yes	Yes
Philippines			Yes	Yes
Polska	Yes	No	Yes	No
Portugal	Not addressed	Yes	Yes	Yes
Qatar	Not addressed	Not addressed	Yes	Yes
Republic of the Congo	Unknown	Unknown	Unknown	Unknown
Romania	Not addressed	Not addressed	Not addressed	Not addressed
Russia	Not addressed	Not addressed	Not addressed	Not addressed
Serbia	No	No	No	No
Singapore	No	No	Yes	Yes
Slovenia	Yes	Not addressed	Yes	Yes
South Africa	No	No	No	No
South Korea				Yes
Spain	Yes	No	Yes	Yes
Sudan	Not addressed	Not addressed	Not addressed	Not addressed
Sweden	No	No	Yes	Yes
Switzerland	No	No	No	No
Tajikistan	No	No	No	No
Tanzania	Not addressed	Not addressed	Not addressed	Not addressed
The Netherlands	Yes	Yes	Yes	No
Trinidad & Tobago	Not addressed	Not addressed	Not addressed	Not addressed
Tunisia	Not addressed	Not addressed	Yes	Yes
Uganda	No	No	No	No
Ukraine	Unknown	Unknown	Unknown	Unknown
United Arab Emirates			Yes	
United Kingdom	No	Yes	Yes	Yes
United States of America	Not addressed	Not addressed	Not addressed	Not addressed
Uruguay	No	Yes	Yes	No
Uzbekistan	No	No	Yes	No
Venezuela	Yes	Yes	Yes	Yes
Vietnam	Not addressed	Not addressed	Not addressed	Not addressed
Zambia	Not addressed	Not addressed	Not addressed	Not addressed
Zimbabwe		Yes	Yes	Yes

- 24 (22.9%) countries limited to two embryos
- 25 (23.8%) countries limited to three embryos
- 1 country limited to four embryos
- 41 (39%) countries, not addressed
- Nine countries, "unknown"
- Two countries did not respond

Of the 111 countries responding to the survey, 104 responded to the question regarding criteria for the number of embryos to be transferred based on the age of the donor oocyte *recipient:* 35 (34%) countries responded that criteria for the number of embryos to be transferred existed; 30 (29%) countries responded that they did not; 32 (31%) countries responded that it was not addressed; and 7 countries responded "unknown" (Table 4).

Considering the age of the oocyte *donor,* 104 countries responded as follows: 36 (35%) countries responded that criteria for the number of embryos to be transferred existed; 28 (27%) countries responded that they did not; 32 (31%) countries responded that it was not addressed; and 8 countries (8%) responded "unknown" (Table 4).



109 countries responded to the query whether embryo quality is a determining factor in the number of embryos to transfer. Sixty-five (60%) countries replied that embryo quality is an important determining factor; 17 (16%) countries replied that it was not; 22 (20%) countries responded that it was not addressed; and, 5 countries replied "unknown" (Table 4).

Finally, 107 countries addressed whether embryo development stage (cleaved or blastocyst) is a determining factor for the number of embryos to be transferred. Responses were as follows: 54 (51%) countries responded that it was; 23 (22%) countries responded that it was not; 24 (22%) countries responded that it was not addressed; and, six countries reported "unknown" (Table 4).

Discussion

About one half of the respondent countries cite the existence of regulations governing the number of embryos for transfer and the 2024 survey does not reveal a significant change in the proportion of countries that have implemented these policies or in the penalties imposed for failure to follow such regulations. With 32 more countries providing responses in 2024 than in 2021 to the query regarding whether single embryo transfer was mandatory for women < 35, the number of positive responses increased from 9 to 16 (15.2%) countries over the three years. The four criteria used to determine the number of embryos transferred were consistent between the two surveys and included: age of the donor oocyte recipient (34% in 2024 vs 44% in 2021); age of the oocyte donor (35% in 2024 vs 46% in 2021), embryo quality (60% in 2024 vs 55% in 2021), and stage of the embryo (51% in 2024 vs 50% in 2021).

It is universally accepted that multiple pregnancies often result in serious health risks and medical complications for both mother and baby. Single embryo transfer has been confirmed to reduce these risks, but this advantage is often offset by the potential for lower live birth rates and patient preferences, often expressed as autonomy[6-8].

The American Society for Reproductive Medicine and the European Society of Human Reproduction and Embryology have developed guidelines to assist ART clinics and patients in determining the number of embryos to transfer. Both organizations recommend elective single embryo transfer as standard procedure for good prognosis patients for whom more than one embryo is available for transfer[9-10]. They recommend double embryo transfer for patients with non-favorable factors including advanced maternal age, poor embryo quality or previous failed ART cycle(s).

Summary

Single embryo transfer (SET) is the most effective way to reduce multiple births and is preferable whenever more than one embryo is available for transfer. Overall, utilization of SET rates is gradually increasing as more successful technology is adopted and success rates have improved; however, significant global variation remains[11]. This is a consequence of the need to balance the preferences and concerns of the patients, the caregivers and the payors with each prioritizing success and safety differently. This is a particularly challenging paradigm for older and poor prognosis patients. In addition, sociological, cultural, and religious factors each play significant roles impacting ART services.

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CHAPTER 6: CRYOPRESERVATION

Introduction

Cryopreservation is a process that involves freezing and suspending tissues or cells in a manner that causes little to no disruption to the material's viability. When reproductive tissues are cryopreserved, their potential to be used in treatments and future attempts at pregnancy is retained. The first successful freezing of mammalian embryos was reported in 1972 with a mouse model[1,2]. Just over a decade later the first pregnancy[3] and live birth[4] from frozen human embryos were reported, and shortly after, a live birth from a frozen egg[5]. In the decades following, several scientific

Chapter 6. Table 1a

Is cryopreservation for fertility treatment or fertility preservation of reproductive tissues allowed/permitted or practised/performed in your country?

	Cryopreserved for fertility treatment		
Country	**Sperm**	**Oocytes**	**Fertilized Oocytes (Pre-zygotes to Blastocysts)**
Albania	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Algeria	Never Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Infrequently Practised/Performed
Argentina	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Infrequently Practised/Performed
Armenia	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
Australia	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Infrequently Practised/Performed
Austria	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Never Practised/Performed
Bangladesh	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Barbados	Unknown	Unknown	Unknown
Belarus	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
Benin	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Bolivia	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Never Practised/Performed
Bosnia and Herzegovina	Allowed/Permitted		Allowed/Permitted
Brazil	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
Bulgaria	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Burkina Faso	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Cambodia	Commonly Practised/Performed	Infrequently Practised/Performed	Never Practised/Performed
Cameroun	Infrequently Practised/Performed	Infrequently Practised/Performed	Never Practised/Performed
Chile	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
China	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Colombia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Costa Rica	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Côte d'Ivoire	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Croatia	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
Cyprus	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
Czech Republic	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
Democratic Republic of the Congo	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Denmark	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Dominican Republic	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Ecuador	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Egypt	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
El Salvador	Commonly Practised/Performed	Commonly Practised/Performed	
Equatorial Guinea	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
Estonia	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Infrequently Practised/Performed
Ethiopia	Infrequently Practised/Performed	Infrequently Practised/Performed	Never Practised/Performed
Finland	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
France	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted
Gambia	Allowed/Permitted Commonly Practised/Performed		
Georgia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Germany	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed
Ghana	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Greece	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted

Chapter 6. Table 1a

(*Continued*)

	Cryopreserved for fertility treatment		
Country	**Sperm**	**Oocytes**	**Fertilized Oocytes (Pre-zygotes to Blastocysts)**
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Guatemala	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Hong Kong	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Hungary	Allowed/Permitted	Infrequently Practised/Performed	Allowed/Permitted
	Commonly Practised/Performed		Commonly Practised/Performed
Iceland	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
India	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Infrequently Practised/Performed	Commonly Practised/Performed
Indonesia	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed
	Commonly Practised/Performed		
Iran	Allowed/Permitted	Allowed/Permitted	Infrequently Practised/Performed
	Commonly Practised/Performed	Commonly Practised/Performed	
Iraq	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Israel	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Jamaica	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Japan	Commonly Practised/Performed	Allowed/Permitted	Allowed/Permitted
Jordan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Infrequently Practised/Performed	Commonly Practised/Performed
Kazakhstan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Kenya	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Kuwait	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Infrequently Practised/Performed
Latvia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Libya	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Lithuania	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Infrequently Practised/Performed	Infrequently Practised/Performed	Commonly Practised/Performed
Malaysia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Mali	Commonly Practised/Performed	Infrequently Practised/Performed	Never Practised/Performed
Malta	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Mexico	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Moldova	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Montenegro	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Morocco	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Myanmar	Never Practised/Performed	Allowed/Permitted	Allowed/Permitted
Namibia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Nepal	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
New Zealand	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Nicaragua	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Nigeria	Allowed/Permitted	Allowed/Permitted	Infrequently Practised/Performed
	Commonly Practised/Performed	Commonly Practised/Performed	
Norway	Allowed/Permitted	Allowed/Permitted	Unknown
	Commonly Practised/Performed	Commonly Practised/Performed	
Oman	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Pakistan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Panamá	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Paraguay	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Perú	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Philippines	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Polska	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Portugal	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Qatar	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Republic of the Congo	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed
Romania	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Russia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted

Chapter 6. Table 1a

(*Continued*)

	Cryopreserved for fertility treatment		
Country	**Sperm**	**Oocytes**	**Fertilized Oocytes (Pre-zygotes to Blastocysts)**
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Serbia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Singapore	Allowed/Permitted	Allowed/Permitted	Commonly Practised/Performed
Slovenia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
South Africa	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Infrequently Practised/Performed
South Korea	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Spain	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
		Commonly Practised/Performed	Commonly Practised/Performed
Sudan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed		Commonly Practised/Performed
Sweden	Allowed/Permitted	Allowed/Permitted	Infrequently Practised/Performed
	Commonly Practised/Performed	Commonly Practised/Performed	
Switzerland	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Tajikistan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Infrequently Practised/Performed	Commonly Practised/Performed
Tanzania	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
The Netherlands	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Trinidad & Tobago	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Tunisia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Turkey	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Uganda	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Ukraine	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
United Arab Emirates	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
United States of America	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Uruguay	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Infrequently Practised/Performed
Uzbekistan	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Venezuela	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed
Vietnam	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/Performed	Commonly Practised/Performed	Never Practised/Performed
Zambia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Zimbabwe	Commonly Practised/Performed	Infrequently Practised/Performed	

advancements greatly improved cryopreservation technology, leading to greater efficacy and success[6]. Cryopreservation has since transformed ART practice, minimissing waste of surplus reproductive tissues and providing greater flexibility in managing treatment cycles and future attempts at pregnancy.

There are several reasons why reproductive tissues may be cryopreserved. Broadly, cryopreservation is performed for two reasons. It may be employed as part of 'fertility treatment', when tissues (either sperm, oocytes, or pre-implantation embryos) are cryopreserved with the intent of producing a pregnancy in the foreseeable future with previously frozen embryos. This is often done as part of an ART cycle when additional testing such as Preimplantation Genetic Testing (PGT) is performed, and embryo transfer must be postponed until the results are available. It is also employed when the planned transfer is cancelled or delayed as when there is no sperm sample available on the day of oocyte retrieval; as part of a treatment procedure such as preparation for microTESE; or there are patient objections to cryopreservation of surplus embryos. Gametes are also cryopreserved prior to use in a donor cycle.

Cryopreservation of reproductive tissue is also more increasingly used for fertility preservation for intended use further in the future, often at an unspecified time. Fertility preservation may be undertaken for medical indications, before gonadotoxic treatments, or when fertility potential might be jeopardized by other illnesses or non-medical indications when individuals elect to defer childbearing for personal reasons. Indications for cryopreservation may overlap the two groups[7].

Demand for cryopreservation has dramatically increased in recent years. The number of oocyte cryopreservation cycles increased by 1261%, 1030%, and 1453% from 2011 to 2021 in Australia/New Zealand, the UK, and the US, respectively[8-11]. Similarly, the number of embryo freeze-all cycles in which all embryos are frozen and no fresh embryo transfers are performed, increased by 4,560% between 2011 and 2021 in the UK[9] and by an average of 17.2% per year between 2017 and 2021 in Australia/New Zealand[8].

Chapter 6. Table 1b

Is cryopreservation for fertility treatment or fertility preservation of reproductive tissues allowed/permitted or practised/performed in your country?

	Medical indications e.g. malignancy				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Albania	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed
Algeria	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Infrequently Practised/ Performed	Never Practised/Performed	Never Practised/Performed
Argentina	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted	Unknown	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted
Armenia	Infrequently Practised/ Performed	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed
Australia	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed
Austria	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Bangladesh	Unknown	Unknown	Unknown	Unknown	Unknown
Barbados	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Benin	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Infrequently Practised/ Performed	Allowed/Permitted
Bolivia	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Commonly Practised/ Performed
Bosnia and Herzegovina	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Brazil	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Bulgaria	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Burkina Faso	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Never Practised/Performed	Commonly Practised/ Performed
Cambodia	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/ Performed
Cameroun	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Allowed/Permitted
Chile	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
China	Allowed/Permitted	Infrequently Practised/ Performed	Allowed/Permitted	Infrequently Practised/ Performed	Allowed/Permitted
Colombia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Costa Rica	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed
Cyprus	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Commonly Practised/ Performed
Czech Republic	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Democratic Republic of the Congo	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Denmark	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Dominican Republic	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown
Ecuador	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted		Allowed/Permitted
Egypt	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted

Chapter 6. Table 1b

(*Continued*)

	Medical indications e.g. malignancy				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed
El Salvador	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed		
Equatorial Guinea	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Never Practised/Performed	Never Practised/Performed
Estonia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Allowed/Permitted
	Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed		Never Practised/Performed
Ethiopia	Never Practised/Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Never Practised/Performed	Infrequently Practised/ Performed
Finland	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed
France	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed
		Infrequently Practised/Performed		Infrequently Practised/ Performed	
Georgia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Germany	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed
Ghana	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Allowed/Permitted
Greece	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Commonly Practised/ Performed
Guatemala	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Never Practised/Performed	Never Practised/Performed
Hong Kong	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Hungary	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Unknown	Unknown
Iceland	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Never Practised/Performed	Commonly Practised/ Performed
India	Infrequently Practised/ Performed	Allowed/Permitted	Unknown	Unknown	Unknown
		Commonly Practised/ Performed			
Indonesia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Infrequently Practised/ Performed	Unknown
	Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed		
Iran	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Infrequently Practised/ Performed	Infrequently Practised/ Performed
	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed		
Iraq	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Israel	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Jamaica	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Japan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Jordan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Commonly Practised/ Performed	Infrequently Practised/ Performed	Commonly Practised/ Performed	Unknown	Commonly Practised/ Performed
Kazakhstan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Kenya	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Infrequently Practised/ Performed
Kuwait	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Allowed/Permitted
	Commonly Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed		Commonly Practised/ Performed
Latvia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed

Chapter 6. Table 1b

(*Continued*)

	Medical indications e.g. malignancy				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Libya	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Lithuania	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Malaysia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown
Mali	Infrequently Practised/ Performed	Unknown	Never Practised/Performed	Unknown	Never Practised/Performed
Malta	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted	Allowed/Permitted
Mexico	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Moldova	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown	Unknown
Montenegro	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Morocco	Allowed/Permitted	Commonly Practised/ Performed	Infrequently Practised/ Performed	Never Practised/Performed	Allowed/Permitted
Myanmar	Never Practised/Performed	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Namibia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed
Nepal	Commonly Practised/ Performed	Commonly Practised/ Performed	Never Practised/Performed Unknown	Never Practised/Performed Unknown	Never Practised/Performed Unknown
New Zealand	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed
Nicaragua	Infrequently Practised/ Performed			Never Practised/Performed	Infrequently Practised/ Performed
Nigeria	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Unknown	Unknown
Norway	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Oman	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown
Pakistan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Panamá	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Allowed/Permitted
Paraguay	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed
Perú	Commonly Practised/ Performed	Infrequently Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Philippines	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown
Polska	Commonly Practised/ Performed	Infrequently Practised/ Performed	Unknown	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Portugal	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed		Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Qatar	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Infrequently Practised/ Performed	Allowed/Permitted
Republic of the Congo	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Romania	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Russia	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Serbia	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Singapore	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Slovenia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
South Africa	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed
South Korea	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted

Chapter 6. Table 1b

(*Continued*)

	Medical indications e.g. malignancy				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Spain	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed
Sudan	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Sweden	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Switzerland	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Tajikistan	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Never Practised/Performed
Tanzania	Commonly Practised/ Performed	Infrequently Practised/ Performed	Commonly Practised/ Performed	Unknown	Infrequently Practised/ Performed
The Netherlands	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed
Trinidad & Tobago	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Never Practised/Performed
Tunisia	Allowed/Permitted	Never Practised/Performed	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Turkey	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Uganda	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Ukraine	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Unknown
United Arab Emirates	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed		
United States of America	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed
Uruguay	Allowed/Permitted	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Uzbekistan	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed
Venezuela	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Vietnam	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed
Zambia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Allowed/Permitted
Zimbabwe	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Never Practised/Performed	Never Practised/Performed

Cryopreservation was offered as a clinical service before governance was established. Subsequently, there has been significant controversy regarding access, indications and funding for it. Significant variation exists among nations regarding the addressing of these issues and, ultimately, equity of access is impacted. If treatment cannot be accessed in their home country, patients may seek treatment abroad, which has been associated with greater burdens and risks[12]. The 2022 and 2019 Triennial Reports found disparities between the permissibility and regulation of cryopreserved reproductive tissue, with fewer nations permitting and regulating cryopreservation when it was sought for non-medical indications versus medical indications or if used as part of fertility treatment. This year's

Chapter 6. Table 1c

Is cryopreservation for fertility treatment or fertility preservation of reproductive tissues allowed/permitted or practised/performed in your country?

	Non-medical indications e.g. deliberate deferral of childbearing for personal reasons				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Albania	Allowed/Permitted	Allowed/Permitted	Unknown	Never Practised/Performed	Never Practised/Performed
Algeria	Allowed/Permitted Commonly Practised/Performed	Never Practised/Performed	Infrequently Practised/Performed	Never Practised/Performed	Never Practised/Performed
Argentina	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Unknown	Allowed/Permitted	Allowed/Permitted
Armenia	Never Practised/Performed	Infrequently Practised/Performed	Infrequently Practised/Performed	Never Practised/Performed	Never Practised/Performed
Australia	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Infrequently Practised/Performed
Austria	Never Practised/Performed	Never Practised/Performed	Unknown	Never Practised/Performed	Never Practised/Performed
Bangladesh	Unknown	Unknown	Unknown	Unknown	Unknown
Barbados	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Infrequently Practised/Performed	Infrequently Practised/Performed
Benin	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Bolivia	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Commonly Practised/Performed
Bosnia and Herzegovina		Allowed/Permitted	Never Practised/Performed	Allowed/Permitted	Allowed/Permitted
Brazil	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Infrequently Practised/Performed
Bulgaria	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Burkina Faso	Commonly Practised/Performed	Infrequently Practised/Performed	Infrequently Practised/Performed	Never Practised/Performed	Commonly Practised/Performed
Cambodia	Unknown	Unknown	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Cameroun	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Chile	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Infrequently Practised/Performed
China	Allowed/Permitted	Infrequently Practised/Performed	Never Practised/Performed	Never Practised/Performed	Unknown
Colombia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Costa Rica	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Allowed/Permitted Commonly Practised/Performed	Unknown	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Cyprus	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Unknown	Allowed/Permitted Infrequently Practised/Performed
Czech Republic	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Unknown	Allowed/Permitted Never Practised/Performed
Democratic Republic of the Congo	Never Practised/Performed	Never Practised/Performed	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed
Denmark	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed Unknown	Unknown
Dominican Republic	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown
Ecuador	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Allowed/Permitted
Egypt	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Commonly Practised/Performed	Allowed/Permitted Infrequently Practised/Performed	Allowed/Permitted Infrequently Practised/Performed
El Salvador	Commonly Practised/Performed	Commonly Practised/Performed	Commonly Practised/Performed		

Chapter 6. Table 1c

(*Continued*)

	Non-medical indications e.g. deliberate deferral of childbearing for personal reasons				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Equatorial Guinea	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Never Practised/Performed
Estonia	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Never Practised/Performed	Allowed/Permitted Never Practised/Performed
Ethiopia	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Finland	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
France	Never Practised/Performed Unknown	Never Practised/Performed Unknown	Never Practised/Performed	Never Practised/Performed Unknown	Never Practised/Performed Unknown
Georgia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Germany	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Ghana	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Allowed/Permitted
Greece	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Unknown	Unknown
Guatemala	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Never Practised/Performed	Never Practised/Performed
Hong Kong	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Hungary	Allowed/Permitted Infrequently Practised/ Performed	Never Practised/Performed	Never Practised/Performed	Unknown	Unknown
Iceland	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Infrequently Practised/ Performed
India	Unknown	Allowed/Permitted Commonly Practised/ Performed	Infrequently Practised/ Performed	Unknown	Unknown
Indonesia	Allowed/Permitted	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Unknown	Unknown
Iran	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Iraq	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Israel	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown	Unknown
Jamaica	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Japan	Commonly Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Jordan	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Unknown	Allowed/Permitted Commonly Practised/ Performed
Kazakhstan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Kenya	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown
Kuwait	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Unknown	Never Practised/Performed	Allowed/Permitted Infrequently Practised/ Performed
Latvia	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Never Practised/Performed
Libya	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Lithuania	Never Practised/Performed	Unknown	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Malaysia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown
Mali	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Unknown	Infrequently Practised/ Performed
Malta	Never Practised/Performed	Never Practised/Performed	Unknown	Never Practised/Performed	Never Practised/Performed

Chapter 6. Table 1c

(*Continued*)

	Non-medical indications e.g. deliberate deferral of childbearing for personal reasons				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Mexico	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Moldova	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown	Unknown
Montenegro	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Morocco	Allowed/Permitted	Commonly Practised/ Performed	Commonly Practised/ Performed	Never Practised/Performed	Allowed/Permitted
Myanmar	Never Practised/Performed	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Namibia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed
Nepal	Infrequently Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed Never Practised/Performed	Never Practised/Performed Unknown	Never Practised/Performed Unknown
New Zealand	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Never Practised/Performed	Never Practised/Performed
Nicaragua	Infrequently Practised/ Performed			Never Practised/Performed	Infrequently Practised/ Performed
Nigeria	Infrequently Practised/ Performed	Commonly Practised/ Performed	Infrequently Practised/ Performed	Unknown	Unknown
Norway	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Infrequently Practised/ Performed
Oman	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown
Pakistan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Panamá	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Allowed/Permitted
Paraguay	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed
Perú	Infrequently Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Never Practised/Performed	Infrequently Practised/ Performed
Philippines	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Unknown
Polska	Unknown	Infrequently Practised/ Performed	Unknown	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Portugal	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Commonly Practised/ Performed		Allowed/Permitted Never Practised/Performed	Allowed/Permitted Never Practised/Performed
Qatar	Allowed/Permitted	Never Practised/Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Republic of the Congo	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Romania	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Infrequently Practised/ Performed	Infrequently Practised/ Performed
Russia	Unknown	Allowed/Permitted Commonly Practised/ Performed	Unknown	Never Practised/Performed	Unknown
Serbia	Never Practised/Performed	Allowed/Permitted	Never Practised/Performed	Never Practised/Performed	Never Practised/Performed
Singapore	Infrequently Practised/ Performed	Allowed/Permitted	Infrequently Practised/ Performed	Never Practised/Performed	Never Practised/Performed
Slovenia	Unknown	Unknown	Unknown	Unknown	Unknown
South Africa	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
South Korea	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Spain	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed
Sudan	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Never Practised/Performed	Never Practised/Performed
Sweden	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Never Practised/Performed	Never Practised/Performed
Switzerland	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted

Chapter 6. Table 1c

(*Continued*)

	Non-medical indications e.g. deliberate deferral of childbearing for personal reasons				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Tajikistan	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Never Practised/Performed
Tanzania	Commonly Practised/ Performed	Infrequently Practised/ Performed	Commonly Practised/ Performed		Unknown
The Netherlands	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Trinidad & Tobago	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Never Practised/Performed
Tunisia	Allowed/Permitted		Allowed/Permitted	Allowed/Permitted	Never Practised/Performed
Turkey	Never Practised/Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Never Practised/Performed	Never Practised/Performed
Uganda	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Ukraine	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Unknown	Allowed/Permitted Unknown
United States of America	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Unknown	Allowed/Permitted Commonly Practised/ Performed
Uruguay	Never Practised/Performed	Never Practised/Performed	Unknown	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed
Uzbekistan	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed	Commonly Practised/ Performed
Venezuela	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Infrequently Practised/ Performed
Vietnam	Allowed/Permitted Infrequently Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Commonly Practised/ Performed	Allowed/Permitted Never Practised/Performed	Allowed/Permitted Never Practised/Performed
Zambia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown	Allowed/Permitted
Zimbabwe	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Infrequently Practised/ Performed	Never Practised/Performed	Never Practised/Performed

report, which includes responses from over 100 nations provides an opportunity to further assess trends in cryopreservation as demand for these procedures as continued to expand.

Analysis of Survey

The following questions were included in the analysis and are summarised by tissue type and indication for cryopreservation as follows:

(1) Is cryopreservation for fertility treatment or fertility preservation of reproductive tissues allowed/permitted or practiced/performed in your country?
(2) If cryopreservation is allowed/permitted in your country, is it regulated?
(3) What is the duration of storage for cryopreserved tissue?

Sperm cryopreservation

Fertility treatment

Eighty-seven (80.5%) of 108 countries reported that sperm cryopreservation for fertility treatment is allowed/permitted and of this group, only 2 countries reported it was infrequently practiced/performed. Fifty-four (50%) reported the procedure was commonly practiced/performed, and 5 countries reported it was never or infrequently performed (Table 1a).

The procedure was regulated in 70 (64.2%) of 109 countries; unregulated in 33 (47.1%) countries and 6 respondents answered, "did not know". Of the countries that regulated the procedure for this reason, 33 (50%) of 66 indicated it was done through federal/national laws/statutes/ordinances alone; 10 countries indicated the same with the addition of professional organisation standards/guidelines, and five countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 2).

For the majority of countries, either no storage limit applied, or storage limits were not addressed; 49 (45.8%), and 25 (23.4%) of 107 countries, respectively. Fourteen (13.1%) countries were uncertain whether storage limits applied. Of the 19 (17.8%) countries where storage limits did apply, 12 (11.2%) employed a 10-year limit, four had a five-year limit; two had a 30-year limit and one had a two-year limit (Table 5a).

Chapter 6. Table 2

If cryopreservation is allowed/permitted in your country, is it regulated?

	Sperm		Oocyte		Fertilized oocytes (pre-zygotes to blastocysts)	
Country	Allowed/ Permitted	Regulatory Type	Allowed/ Permitted	Regulatory Type	Allowed/ Permitted	Regulatory Type
Albania	No		No		No	
Algeria	No		No		No	
Argentina	Yes	Professional Organization	Yes	Professional Organization	Yes	Professional Organization
Armenia	Yes	Federal/National Professional Organization	No		Yes	Federal/National Professional Organization
Australia	Yes	Agency Professional Organization	Yes	Federal/National State/Provincial/Regional Agency Professional Organization	Yes	Federal/National State/Provincial/Regional Agency Professional Organization
Austria	Yes	Federal/National	Yes	Federal/National	No	
Bangladesh	No		No		No	
Barbados	Unknown		Unknown		Yes	Unknown
Belarus	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization
Benin	No		No		No	
Bolivia	No		No		No	
Bosnia and Herzegovina	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Brazil	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Bulgaria	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Burkina Faso	No		No		No	
Cambodia	Unknown		Unknown		Unknown	
Cameroun	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Chile	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization
China	Yes	Federal/National State/Provincial/Regional Agency Professional Organization	Yes	Federal/National State/Provincial/Regional Agency Professional Organization	Yes	Federal/National State/Provincial/Regional Agency Professional Organization
Colombia	Yes	Federal/National Agency	Yes	Federal/National Agency	Yes	Federal/National Agency
Costa Rica	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Côte d'Ivoire	Unknown		Unknown		Unknown	
Croatia	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization
Cyprus	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Czech Republic	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Democratic Republic of the Congo	No		No		No	
Denmark	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Dominican Republic	No		No		No	
Ecuador	No		No		No	
Egypt	Yes	Professional Organization Cultural Practice Religious Decree	Yes	Professional Organization Cultural Practice Religious Decree	Yes	Professional Organization Cultural Practice Religious Decree
El Salvador	No		No		No	
Equatorial Guinea	Unknown		Unknown		Unknown	
Estonia	No		No		No	
Ethiopia	Yes	Federal/National State/Provincial/Regional Professional Organization	Yes	Federal/National State/Provincial/Regional	Yes	State/Provincial/Regional Professional Organization
Finland	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
France	No		Yes	Federal/National Agency	Yes	Federal/National Agency
Georgia	No		No		No	
Germany	Yes	Federal/National State/Provincial/Regional Professional Organization	Yes	Federal/National State/Provincial/Regional Professional Organization	Yes	Federal/National State/Provincial/Regional Professional Organization
Ghana	Yes	Professional Organization	Yes	Professional Organization	Yes	Professional Organization
Greece	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Guatemala	No		No		No	
Hong Kong	Yes	Federal/National State/Provincial/Regional Agency	Yes	Federal/National State/Provincial/Regional Agency	Yes	Federal/National State/Provincial/Regional Agency
Hungary	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Iceland	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
India	Yes	Federal/National Cultural Practice	Yes	Federal/National	Yes	Federal/National
Indonesia	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization	Unknown	
Iran	No		No		No	
Iraq	Yes	Professional Organization	Yes	Professional Organization	Unknown	
Israel	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization
Jamaica	No		No		No	
Japan	Yes	Professional Organization	Yes	Professional Organization	Yes	Professional Organization
Jordan	No		No		No	
Kazakhstan	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Kenya	No		No		No	
Kuwait	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Latvia	Yes	Federal/National Agency	Yes	Federal/National Agency	Yes	Federal/National Agency

Chapter 6. Table 2

(*Continued*)

	Sperm		Oocyte		Fertilized oocytes (pre-zygotes to blastocysts)	
Country	**Allowed/ Permitted**	**Regulatory Type**	**Allowed/ Permitted**	**Regulatory Type**	**Allowed/ Permitted**	**Regulatory Type**
Libya	Yes	Municipal Religious Decree	Yes	Municipal Religious Decree	Yes	Municipal Religious Decree
Lithuania	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Malaysia	Yes	Unknown	Yes	Unknown	Yes	Unknown
Mali	No		No		No	
Malta	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Mexico	No		No		No	
Moldova	Yes	Federal/National State/Provincial/Regional Municipal	No		Yes	Federal/National State/Provincial/Regional Municipal
Montenegro	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization
Morocco	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Myanmar	Yes	Agency Professional Organization	Yes	Agency Professional Organization	Yes	Agency Professional Organization
Namibia	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Nepal	Yes	Professional Organization	Yes	Professional Organization	Yes	Professional Organization
New Zealand	Yes	Federal/National Municipal Laws/Statues/ Ordinances Professional Organization	Yes	Federal/National	Yes	Federal/National
Nicaragua	No		No		No	
Nigeria	No		No		No	
Norway	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Oman	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Pakistan	Yes	Professional Organization Religious Decree	Yes	Professional Organization Religious Decree	Yes	Professional Organization Religious Decree
Panamá	No		No		No	
Paraguay	No		No		No	
Perú	No		No		No	
Philippines	No		No		No	
Polska	Yes	Federal/National	Yes	Federal/National		
Portugal	Yes	Agency	Yes	Agency	Yes	Agency
Qatar	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Republic of the Congo	No		No		No	
Romania	Yes	Agency Professional Organization	Yes	Agency Professional Organization	Yes	Agency Professional Organization
Russia	Yes	Federal/National Professional Organization Cultural Practice	Yes	Federal/National Professional Organization Cultural Practice	Yes	Federal/National Professional Organization Cultural Practice
Serbia	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Singapore	Yes	Federal/National Agency Professional Organization	Yes	Federal/National Agency Professional Organization	Yes	Agency Professional Organization
Slovenia	Yes	Federal/National Agency Professional Organization	Yes	Federal/National Agency Professional Organization	Yes	Federal/National Agency Professional Organization
South Africa	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
South Korea	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Spain	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Sudan	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization
Sweden	No		No		Yes	Federal/National
Switzerland	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Tajikistan	Yes	Agency Federal/National	Yes	Federal/National Agency	Yes	Agency
Tanzania	No		No		No	
The Netherlands	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization
Trinidad & Tobago	No		No		No	
Tunisia	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Turkey	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Uganda	No		No		No	
Ukraine	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization	Yes	Federal/National Professional Organization
United Arab Emirates	Yes	Federal/National State/Provincial/Regional Professional Organization	Yes	Federal/National State/Provincial/Regional Professional Organization	Yes	Federal/National State/Provincial/Regional Professional Organization
United States of America	No		No		No	
Uruguay	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Uzbekistan	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Venezuela	No		No		No	
Vietnam	Yes	Federal/National	Yes	Federal/National	Yes	Federal/National
Zambia	Unknown		Unknown		Unknown	
Zimbabwe	Unknown		Unknown			

Chapter 6. Table 3

If cryopreservation for non-medical indications (deliberate deferral of childbearing for personal reasons) is allowed/permitted in your country, is it regulated?

Country	Sperm Regulated? How?	Oocytes Regulated? How?	Preimplantation Embryos Regulated? How?	Ovarian Tissue Regulated? How?	Testicular Sperm Regulated? How?
Albania	No	No	No	No	No
Algeria	No	No	No	No	No
Argentina	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization
Armenia	Unknown	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization
Australia	Yes Federal/National State/Provincial/Regional Agency Professional Organization	Yes Federal/National State/Provincial/Regional Agency Professional Organization	Yes Federal/National State/Provincial/Regional Agency Professional Organization	Yes Federal/National State/Provincial/Regional Agency Professional Organization	Yes Federal/National State/Provincial/Regional Agency Professional Organization
Austria	Yes Federal/National	No	No	Yes Federal/National	Yes Federal/National
Bangladesh	No	No	No	No	No
Barbados	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization
Benin	No	No	No	No	
Bolivia	No	No	No	No	No
Bosnia and Herzegovina	Yes Federal/National	Yes Federal/National	Unknown	Yes Federal/National	Yes Federal/National
Brazil	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Bulgaria	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Burkina Faso	No	No	No	No	No
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroon	Yes Federal/National	Yes Federal/National	Yes Federal/National	No	No
Chile	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Unknown	Yes Unknown
China	Yes Federal/National State/Provincial/Regional Agency Professional Organization	Unknown	Unknown	Unknown	Yes Federal/National State/Provincial/Regional Agency Professional Organization
Colombia	Yes Federal/National Agency	Yes Federal/National Agency	Yes Federal/National Agency	Yes Federal/National Agency	Yes Federal/National Agency
Costa Rica	No	No	No	No	No
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Yes Professional Organization	Unknown	Unknown	Unknown	Unknown
Cyprus	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Czech Republic	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Democratic Republic of the Congo	No	No	No	No	No
Denmark	Yes Federal/National	Yes Federal/National	Yes Federal/National		
Dominican Republic	No	No	No	No	No
Ecuador	No	No	No	No	No
Egypt	Yes Professional Organization Cultural Practice Religious Decree	No	No	Yes Professional Organization Cultural Practice Religious Decree	Yes Professional Organization Cultural Practice Religious Decree
El Salvador	No	No	No	No	No
Equatorial Guinea	Unknown	Unknown			Unknown
Estonia	No	No	No		Unknown
Ethiopia	No	No	No	No	No
Finland	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
France	Yes Federal/National Agency	Unknown	Unknown	Yes Federal/National Agency	Unknown
Georgia	No	No	No	No	No
Germany	Yes Federal/National State/Provincial/Regional Professional Organization	Yes Federal/National State/Provincial/Regional Professional Organization	Yes Federal/National State/Provincial/Regional Professional Organization	Yes Federal/National State/Provincial/Regional	Yes Federal/National State/Provincial/Regional Professional Organization
Ghana	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization
Greece	Yes	Yes	Yes	Unknown	Unknown

Chapter 6. Table 3

(*Continued*)

Country	Sperm Regulated? How?	Oocytes Regulated? How?	Preimplantation Embryos Regulated? How?	Ovarian Tissue Regulated? How?	Testicular Sperm Regulated? How?
	Federal/National	Federal/National	Federal/National		
Guatemala	No	No	No	No	No
Hong Kong	Yes	Yes	Yes	Yes	Yes
	Federal/National	Federal/National	Federal/National	Federal/National	Federal/National
	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional	State/Provincial/Regional
	Agency	Agency	Agency	Agency	Agency
Hungary	Yes	Unknown	Unknown	Unknown	Unknown
	Federal/National				
Iceland	Yes	Yes	Yes	Unknown	Unknown
	Federal/National	Federal/National	Federal/National		
India	Yes	Yes	Yes	Unknown	Unknown
	Federal/National	Federal/National	Federal/National		
	Professional Organization				
Indonesia	Yes	Yes	Yes	Unknown	Yes
	Federal/National	Federal/National	Federal/National		Federal/National
	Professional Organization	Professional Organization	Professional Organization		Professional Organization
Iran	No	No	No	No	No
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	Yes	Yes	Yes	No	No
	Federal/National	Federal/National	Federal/National		
	Professional Organization	Professional Organization	Professional Organization		
Jamaica	No	No	No	No	No
Japan	No	No	No	No	No
Jordan	No	No	No	No	No
Kazakhstan	Yes	Yes	Yes	Yes	Yes
	Federal/National	Federal/National	Federal/National	Federal/National	Federal/National
Kenya	No	No	No	No	No
Kuwait	Yes	Yes	No	No	Yes
	Federal/National	Federal/National			Federal/National
Latvia	Yes	Yes	Yes	Yes	Yes F
	Federal/National	Federal/National	Federal/National	Federal/National	Federal/National
	Agency	Agency	Agency	Agency	Agency
Libya	Yes	Yes	Yes	Yes	Yes
	Municipal	Municipal	Municipal	Municipal	Municipal
	Religious Decree	Religious Decree	Religious Decree	Religious Decree	Religious Decree
Malaysia	Yes	Yes	Yes	Yes	Unknown
	Unknown	Unknown	Unknown	Unknown	
Mali	No	No	No	No	No
Malta	No	No	No	No	No
Mexico	No	No	No	No	No
Moldova	No	No	No	No	No
Montenegro	Yes	Yes	Yes	Yes	Yes
	Federal/National	Federal/National	Professional Organization	Federal/National	Federal/National
	Professional Organization	Professional Organization	Federal/National	Professional Organization	Professional Organization
Morocco	Yes	Yes	No	No	Yes Federal/National
	Federal/National	Federal/National			
Myanmar	No	Yes Agency	No	No	No
		Professional Organization			
Namibia	Yes	Yes	Yes	Yes	Yes
	Federal/National	Federal/National	Federal/National	Federal/National	Federal/National
Nepal	Yes	Yes	Unknown	Unknown	Unknown
	Professional Organization	Professional Organization			
New Zealand	Yes	Yes	Yes	Yes	Yes
	Federal/National	Federal/National	Federal/National	Federal/National	Federal/National
Nicaragua	No	No	No	No	No
Nigeria	No	No	No	No	No
Norway	Yes	Yes	Yes	Yes	Yes
	Federal/National	Federal/National	Federal/National	Federal/National	Federal/National
Oman	Yes	Yes	Yes	Unknown	Unknown
	Federal/National	Federal/National	Federal/National		
Pakistan	Yes	Yes	Yes	Yes	Yes
	Professional Organization	Professional Organization	Professional Organization	Professional Organization	Professional Organization
	Religious Decree	Religious Decree	Religious Decree	Religious Decree	Religious Decree
Panamá	No	No	No	Yes	No
				Federal/National	
Paraguay	No	No	No	No	No
Perú	No	No	No	No	No
Philippines	No	No	No	No	No
Polska	No	No	No	No	No
Portugal		No		No	No
Qatar	Unknown	Unknown	Yes	Unknown	Unknown
			Federal/National		
Republic of the Congo	No	No	No	No	No
Romania	Yes	Yes	Yes	Unknown	Unknown
	Professional Organization	Agency	Agency		
	Agency		Professional Organization		

Chapter 6. Table 3

(*Continued*)

Country	Sperm Regulated? How?	Oocytes Regulated? How?	Preimplantation Embryos Regulated? How?	Ovarian Tissue Regulated? How?	Testicular Sperm Regulated? How?
Russia	Unknown	Yes Federal/National Professional Organization Cultural Practice	Unknown	Unknown	Unknown
Serbia	Yes Federal/National	No	Yes Federal/National	No	No
Singapore		Yes Agency Professional Organization	Yes Federal/National Agency Professional Organization	Yes Federal/National Agency Professional Organization	Yes Agency Professional Organization
Slovenia	Unknown	Unknown	Unknown	Unknown	Unknown
South Africa	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	No
South Korea	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Spain	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Sudan	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Unknown	Unknown	Unknown
Sweden	No	No	Yes Federal/National	No	No
Switzerland	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Tajikistan	Yes Federal/National Agency	Yes Federal/National Agency	Yes Federal/National Agency	No	No
Tanzania	Unknown	Unknown	Unknown	Unknown	Unknown
The Netherlands		Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization
Trinidad & Tobago	No	No	No	No	No
Tunisia	Yes Federal/National	No	Yes Federal/National	No	
Turkey	Unknown	Yes Federal/National	Yes Federal/National	Unknown	Unknown
Uganda	No	No	No	No	No
Ukraine	Unknown	Unknown	Yes Federal/National Professional Organization	Unknown	Unknown
United Arab Emirates	Unknown	Unknown	Unknown	Unknown	Unknown
United States of America	No	No	No	No	No
Uruguay	Yes Federal/National	Yes Federal/National	Yes Federal/National	No	No
Uzbekistan	Unknown	Unknown	Unknown	Unknown	Unknown
Venezuela	No	No	No	No	No
Vietnam	No	No	No	No	No
Zambia	Unknown	Unknown	Unknown	Unknown	Unknown
Zimbabwe	No	No	No	Unknown	

Medical indications

Sperm cryopreservation for medical indications was permitted in 85 (77.8%) and 46 (42.2%) of 109 countries, reported that it was commonly practiced/performed for these indications. The procedure was infrequently or never performed in 19 (17.4%) countries, including 7 countries that permitted the procedure for this reason (Table 1b).

The procedure was regulated in 61(57.5%) of 106 countries; unregulated in 36 (34.0%) countries and nine countries responded, "did not know". Of the countries that regulated the procedure, 29 (47.5%) of 61 indicated that it was accomplished via federal/national laws/statutes/ordinances alone; seven countries indicated the same with the addition of professional organisation standards/guidelines, and four countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 4).

For the majority of countries, either no storage limit applied, or storage limits were not addressed; 50 (48.1%), and 24(23.1%) of 104 countries, respectively. Fourteen (13.4%) country respondents were uncertain whether storage limits applied. Of the 16 (15.3%) countries where storage limits did apply, nine employed a 10-year limit, five had a five-year limit; one had a 15-year limit, and one had a 50-year limit (Table 5c).

*Non-medical indications (*Table 1b)

Seventy-one (66.4%) of 107 countries reported that sperm cryopreservation for non-medical indications was allowed/permitted, and 23 (21.5%) of those reported that it was commonly practiced/performed. The procedure was infrequently or never performed in 41 (38.3%) countries for non-medical indications (Table 1c).

The procedure was regulated in 50 (47.6%) of 105 countries ; unregulated in 40 (38.1%) countries and 10 respondents replied, "did not know". Of the countries that regulated the procedure, 26 (52%) of 50 indicated it was done with federal/national laws/

Chapter 6. Table 4

If cryopreservation for medical indications (malignancies, required treatment with or exposure to toxic agents) is allowed/permitted in your country, is it regulated?

Country	Sperm Regulated? How?	Oocytes Regulated? How?	Preimplantation Embryos Regulated? How?	Ovarian Tissue Regulated? How?	Testicular Tissue Regulated? How?
Albania	No	No	No	No	No
Algeria	No	No	No	No	No
Argentina	Yes Professional Organization	Yes Federal/National Professional Organization	No	Yes Professional Organization	No
Armenia	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization
Australia	Yes Agency Federal/National State/Provincial/ Regional Professional Organization	Yes Agency Federal/National State/Provincial/ Regional Professional Organization	Yes Agency Federal/National State/Provincial/ Regional Professional Organization	Yes Agency Federal/National State/Provincial/ Regional Professional Organization	Yes Agency Federal/National State/Provincial/ Regional
Austria	No	No	No	No	No
Bangladesh	No	No	No	No	No
Barbados	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization
Benin		Yes Unknown		No	No
Bolivia	No	No	No	No	No
Bosnia and Herzegovina	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Brazil	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Bulgaria	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Burkina Faso	No	No	No	No	No
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroon	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Chile	Yes Unknown	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Unknown
China	Yes Agency Federal/National State/Provincial/ Regional Professional Organization	Yes Agency Federal/National State/Provincial/ Regional Professional Organization	Yes Agency Federal/National State/Provincial/ Regional Professional Organization	Yes Agency Federal/National State/Provincial/ Regional Professional Organization	Yes Agency Federal/National State/ Provincial/Regional
Colombia	Yes Agency Federal/National	Yes Agency Federal/National	Yes Agency Federal/National	Yes Agency Federal/National	Yes Agency Federal/National
Costa Rica	Yes Federal/National	Yes Federal/National	Yes Federal/National	No	No
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Unknown	Yes Federal/National Professional Organization
Cyprus	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Czech Republic	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Democratic Republic of the Congo	No	No	No	No	No
Denmark	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Dominican Republic	No	No	No	No	No
Ecuador	No	No	No	No	No
Egypt	Yes Cultural Practice Religious Decree Professional Organization	Yes Cultural Practice Religious Decree Professional Organization	Yes Cultural Practice Religious Decree Professional Organization	Yes Cultural Practice Religious Decree Professional Organization	Yes Cultural Practice Religious Decree Professional Organization
El Salvador	No	No	No	No	No
Equatorial Guinea	Unknown	Unknown	Unknown	Unknown	Unknown
Ethiopia	Yes State/Provincial/Regional Professional Organization	Yes State/Provincial/Regional Professional Organization	Yes State/Provincial/Regional Professional Organization	Unknown	Unknown
Finland	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
France	Yes Agency Federal/National	Yes Federal/National Agency	Yes Federal/National Agency	Yes Federal/National Agency	Yes Federal/National Agency
Georgia	No	No	No	No	No
Germany	Yes Federal/National State/Provincial/ Regional Professional Organization	Yes Federal/National State/Provincial/ Regional Professional Organization	Yes Federal/National State/Provincial/ Regional Professional Organization	Yes Federal/National State/Provincial/ Regional Professional Organization	Yes Federal/National State/Provincial/ Regional Professional Organization
Ghana	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization

Chapter 6. Table 4

(*Continued*)

Country	Sperm Regulated? How?	Oocytes Regulated? How?	Preimplantation Embryos Regulated? How?	Ovarian Tissue Regulated? How?	Testicular Tissue Regulated? How?
Greece	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Guatemala	No	No	No	No	No
Hong Kong	Yes Agency Federal/National State/Provincial/ Regional	Yes Agency Federal/National State/Provincial/ Regional	Yes Agency Federal/National State/Provincial/ Regional	Yes Agency Federal/National State/Provincial/ Regional	Yes Agency Federal/National State/Provincial/ Regional
Hungary	Unknown	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Iceland	Yes Federal/National	Yes Federal/National	Yes Federal/National	Unknown	Unknown
India	Yes Federal/National	Yes Federal/National	Yes Federal/National	Unknown	Yes Federal/National
Indonesia	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization
Iran	No	No	No	No	No
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization		Yes Federal/National Professional Organization
Jamaica	No	No	No	No	No
Japan	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization
Jordan	No	No	No	No	No
Kazakhstan	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Kenya	No	No	No	No	No
Kuwait	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Latvia	Yes Agency Federal/National	Yes Agency Federal/National	Yes Agency Federal/National	Yes Agency Federal/National	Yes Agency Federal/National Agency
Libya	Yes Municipal Religious Decree	Yes Municipal Religious Decree	Yes Municipal Religious Decree	Yes Municipal Religious Decree	Yes Municipal Religious Decree
Lithuania	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Malaysia	Yes Unknown	Yes Unknown	Yes Unknown	Yes Unknown	No
Mali	No	No	No	No	No
Malta	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Mexico	No	No	No	No	No
Moldova	Yes Municipal Federal/National State/ Provincial/Regional	Yes Municipal Federal/National State/ Provincial/Regional	Yes Municipal Federal/National State/ Provincial/Regional	No	No
Montenegro	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization
Morocco	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Myanmar	No	Yes Agency Professional Organization	No	No	No
Namibia	Yes Federal/National	Yes Federal/National	Yes Federal/National	No	No
Nepal	Unknown	Unknown	Unknown	Unknown	Unknown
New Zealand	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Nicaragua	No	No	No	No	No
Nigeria	No	No	No	No	No
Norway	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Oman	Yes Federal/National	Yes Federal/National	Yes Federal/National	Unknown	Unknown
Pakistan	Yes State/Provincial/Regional Professional Organization	Yes Religious Decree Professional Organization	Yes Religious Decree Professional Organization	Yes Religious Decree Professional Organization	Yes Religious Decree Professional Organization
Panamá	No	No	No	Yes Federal/National	No
Paraguay	No	No	No	No	No
Perú	No	No	No	No	No
Philippines	No	No	No	No	Unknown
Polska	No	No	No	No	No
Portugal	Yes Agency	Yes Agency		No	No
Qatar	Yes Federal/National	Yes Federal/National	Yes Federal/National	Unknown	Unknown

Chapter 6. Table 4

(*Continued*)

Country	Sperm Regulated? How?	Oocytes Regulated? How?	Preimplantation Embryos Regulated? How?	Ovarian Tissue Regulated? How?	Testicular Tissue Regulated? How?
Republic of the Congo	No	No	No	No	No
Romania	Yes Agency Federal/National	Yes Agency Professional Organization	Yes Agency Professional Organization	Unknown	Unknown
Russia	Yes Federal/National Cultural Practice Professional Organization	Yes Federal/National Cultural Practice Professional Organization	Yes Federal/National Cultural Practice Professional Organization	Yes Federal/National Cultural Practice Professional Organization	Yes Federal/National Professional Organization
Serbia	No	No	No	No	No
Singapore	Yes Agency Federal/National	Yes Agency Professional Organization	Yes Agency Professional Organization	Yes Agency Professional Organization	Yes Agency Professional Organization
Slovenia	Yes Agency Federal/National Professional Organization	Yes Agency Federal/National Professional Organization	Yes Agency Federal/National Professional Organization	Yes Agency Federal/National Professional Organization	Yes Agency Federal/National Professional Organization
South Africa	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
South Korea	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Spain	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Sudan	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization
Sweden	No	No	Yes Federal/National	No	No
Switzerland	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Tajikistan	Yes Agency Federal/National	Yes Agency Federal/National	Yes Agency Federal/National	No	No
Tanzania	No	No	No	No	No
The Netherlands	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization
Trinidad & Tobago	No	No	No	No	No
Turkey	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Uganda	No	No	No	No	No
Ukraine	Unknown	Unknown	Unknown	Unknown	Unknown
United Arab Emirates	Yes Federal/National State/Provincial/ Regional Professional Organization	Yes Federal/National State/Provincial/ Regional Professional Organization	Yes Federal/National State/Provincial/ Regional Professional Organization	Unknown	Unknown
United States of America	No	No	No	No	No
Uruguay	Yes Federal/National	Yes Federal/National	Yes Federal/National	No	No
Uzbekistan	Yes Federal/National	Yes Federal/National	Yes Federal/National Cultural Practice Religious Decree	Yes Federal/National	Yes Federal/National
Venezuela	No	No	No	No	No
Vietnam	No	No	No	No	No
Zambia	Unknown	Unknown	Unknown	Unknown	Unknown
Zimbabwe	No	No	No		

statutes/ordinances alone; seven countries indicated the same with the addition of professional organisation standards/guidelines; likewise, another four with the addition of agency regulations/ oversight. Four countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 3).

For the majority of countries either no storage limit applied, or storage limits were not addressed 42 (40.4%), and 26 (25%) of 104 countries, respectively). Twenty-three (22.1%) countries were uncertain whether storage limits applied. Of the 13 (12.5%) countries where storage limits did apply, nine employed a 10-year limit, two had a five-year limit; one had a 2-year limit, and one had a 50-year limit (Table 5b).

Oocyte cryopreservation

Fertility treatment

Ninety-one (84.3%) of 108 countries reported that oocyte cryopreservation for fertility treatment is allowed/permitted and 50 (46.2%) countries reported that it was commonly practiced/performed. Thirteen (12.0%) countries reported the procedure was never or infrequently performed, including 6 countries that permitted the procedure for fertility treatment (Table 1a).

The procedure was regulated in 69 (63.3%) ; unregulated in 34 (31.1%) of 109 countries and six respondents replied, "did not know". Of the countries that regulated the procedure , 35 (50.7%) of 69) indicated it was accomplished by federal/

Chapter 6. Table 5a

What is the duration of storage for cryopreserved tissue?

	Cryopreservation for fertility treatment		
Country	**Sperm**	**Oocytes**	**Fertilized Oocytes (Pre-zygotes to Blastocysts)**
Albania	Not addressed	Not addressed	Not addressed
Algeria	Unknown	Not addressed	Unknown
Argentina	No Limit	No Limit	No Limit
Armenia	No Limit	No Limit	No Limit
Australia	10 years	10 years	10 years
Austria	Not addressed	Not addressed	10 years
Bangladesh	No Limit	No Limit	No Limit
Barbados	Unknown	Unknown	Unknown
Belarus	No Limit	No Limit	No Limit
Benin	Unknown	Unknown	Unknown
Bolivia	No Limit	No Limit	No Limit
Bosnia and Herzegovina	No Limit	No Limit	No Limit
Brazil	No Limit	No Limit	No Limit
Bulgaria	5 years	5 years	5 years
Burkina Faso	No Limit	No Limit	No Limit
Cambodia	Unknown	Unknown	Unknown
Cameroon	No Limit	No Limit	No Limit
Chile	No Limit	No Limit	No Limit
China	Not addressed	Not addressed	3 years
Colombia	No Limit	No Limit	No Limit
Costa Rica	10 years	10 years	10 years
Côte d'Ivoire	Unknown	Unknown	Unknown
Croatia	No Limit	No Limit	No Limit
Cyprus	10 years	10 years	10 years
Czech Republic	Not addressed	Not addressed	Not addressed
Democratic Republic of the Congo	Unknown	Unknown	Unknown
Denmark	No Limit	Unknown	Unknown
Dominican Republic	No Limit	No Limit	No Limit
Ecuador	No Limit	No Limit	No Limit
Egypt	No Limit	No Limit	No Limit
El Salvador	Not addressed	Not addressed	Not addressed
Equatorial Guinea	Unknown	Unknown	Unknown
Estonia	No Limit	No Limit	7 years
Ethiopia	Not addressed	Not addressed	Not addressed
Finland	No Limit	No Limit	No Limit
France	Not addressed	Not addressed	Not addressed
Georgia	Unknown	Unknown	Unknown
Germany	Not addressed	Not addressed	Not addressed
Ghana	10 years	10 years	10 years
Greece	No Limit	No Limit	No Limit
Guatemala	Not addressed	Not addressed	Not addressed
Hong Kong	10 years	10 years	
Hungary	30 years	15 years	15 years
Iceland	30 years	50 years	35 years
India	10 years	10 years	10 years
Indonesia	2 years	5 years	Not addressed
Iran	Unknown	Unknown	Unknown
Iraq	Not addressed	Not addressed	Not addressed
Israel	No Limit	No Limit	
Jamaica	Not addressed	Not addressed	Not addressed
Japan	Not addressed	Not addressed	Not addressed
Jordan	Not addressed	Not addressed	Not addressed
Kazakhstan	No Limit	No Limit	No Limit
Kenya	Not addressed	Not addressed	Not addressed
Kuwait	No Limit	No Limit	No Limit
Latvia	No Limit	No Limit	No Limit
Libya	Not addressed	Not addressed	Not addressed
Lithuania	No Limit	No Limit	10 years
Malaysia	Not addressed	Not addressed	Not addressed

Chapter 6. Table 5a

(*Continued*)

	Cryopreservation for fertility treatment		
Country	**Sperm**	**Oocytes**	**Fertilized Oocytes (Pre-zygotes to Blastocysts)**
Mali	No Limit	Unknown	Unknown
Malta	No Limit	No Limit	No Limit
Mexico	No Limit	No Limit	No Limit
Moldova	Unknown	Unknown	Unknown
Montenegro	10 years	10 years	10 years
Morocco	10 years	10 years	10 years
Myanmar	Not addressed	20 years	Not addressed
Namibia	No Limit	No Limit	No Limit
Nepal	Not addressed	Not addressed	Not addressed
New Zealand	10 years	10 years	10 years
Nigeria	No Limit	Not addressed	No Limit
Norway	No Limit	No Limit	10 years
Oman	5 years	5 years	5 years
Pakistan	No Limit	No Limit	No Limit
Panamá	No Limit	No Limit	No Limit
Paraguay	Not addressed	Not addressed	Not addressed
Perú	Not addressed	Not addressed	Not addressed
Philippines	No Limit	No Limit	No Limit
Polska	Unknown	Unknown	Unknown
Portugal	No Limit	No Limit	
Qatar	10 years	10 years	5 years
Republic of the Congo	Unknown	Unknown	Unknown
Romania	Unknown	No Limit	Unknown
Russia	No Limit	No Limit	No Limit
Serbia	Not addressed	No Limit	2 years
Singapore	No Limit	No Limit	No Limit
Slovenia	10 years	10 years	10 years
South Africa	No Limit	No Limit	No Limit
South Korea	No Limit	No Limit	5 years
Spain	No Limit	No Limit	No Limit
Sudan	No Limit	No Limit	No Limit
Sweden	No Limit	No Limit	10 years
Switzerland	10 years	10 years	10 years
Tajikistan	No Limit	No Limit	No Limit
Tanzania	No Limit	No Limit	Not addressed
The Netherlands	No Limit	No Limit	No Limit
Trinidad & Tobago	Not addressed	Not addressed	Not addressed
Turkey	5 years	5 years	5 years
Uganda	Not addressed	Not addressed	Not addressed
Ukraine	No Limit	No Limit	No Limit
United Arab Emirates	5 years	5 years	5 years
United States of America	Unknown	Unknown	Unknown
Uruguay	No Limit	10 years	No Limit
Uzbekistan	No Limit	No Limit	No Limit
Venezuela	No Limit	No Limit	No Limit
Vietnam	Not addressed	Not addressed	Not addressed
Zambia	Not addressed	Not addressed	Not addressed
Zimbabwe	No Limit	No Limit	No Limit

national laws/statutes/ordinances alone; nine countries indicated the same with the addition of professional organisation standards/guidelines, and five countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 2).

For the majority of countries either no storage limit applied, or storage limits were not addressed 47(43.9%), and 25 (23.4%) of 107 countries, respectively). Fourteen (13.1%) countries were uncertain whether storage limits applied. Of the 21 countries where storage limits did apply, 13 (61.9%) employed a 10-year limit, five had a five-year limit; and the remaining three countries, each had 15-year, 20-year or 50-year limits (Table 5a).

Medical indications

Regarding oocyte cryopreservation for fertility preservation, 85 (78.7%) of 108 countries permitted it for medical indications, and 39 (36.1%) countries reported it was commonly practiced/performed for these indications. The procedure was infrequently or

Chapter 6. Table 5b

What is the duration of storage for cryopreserved tissue?

	Non-medical indications, e.g. deliberate deferral of childbearing for personal reasons				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Albania	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Algeria	Unknown	Not addressed	Not addressed	Not addressed	Not addressed
Argentina	No Limit	No Limit	No Limit	No Limit	Unknown
Armenia	No Limit	No Limit	No Limit	No Limit	No Limit
Australia	10 years	10 years	10 years	20 years	20 years
Austria	Unknown	Unknown	10 years	Not addressed	Unknown
Bangladesh	No Limit	No Limit	No Limit	Not addressed	Not addressed
Barbados	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	No Limit	No Limit	No Limit	No Limit	No Limit
Benin	Unknown	Unknown	Unknown	Unknown	Unknown
Bolivia	No Limit	No Limit	No Limit	No Limit	No Limit
Bosnia and Herzegovina	No Limit	No Limit	No Limit	No Limit	No Limit
Brazil	No Limit	No Limit	No Limit	No Limit	No Limit
Bulgaria	5 years		5 years	5 years	5 years
Burkina Faso	No Limit	No Limit	No Limit	No Limit	No Limit
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroon	Not addressed	Unknown	Not addressed	Not addressed	Not addressed
Chile	No Limit	No Limit	No Limit	No Limit	No Limit
China	Unknown	Unknown	Not addressed	Unknown	Not addressed
Colombia	No Limit	No Limit	No Limit	No Limit	No Limit
Costa Rica	No Limit	No Limit	No Limit	Not addressed	Not addressed
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Cyprus	10 years	10 years	10 years	10 years	10 years
Czech Republic	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Democratic Republic of the Congo	Unknown	Not addressed	Not addressed	Not addressed	Not addressed
Denmark	No Limit	5 years	Unknown	Unknown	Unknown
Dominican Republic	No Limit	No Limit	No Limit	Unknown	Unknown
Ecuador	No Limit	No Limit	No Limit	No Limit	No Limit
Egypt	No Limit	No Limit	No Limit	No Limit	No Limit
El Salvador	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Equatorial Guinea	Unknown	Unknown	Unknown	Unknown	Unknown
Estonia	No Limit	No Limit	7 years	No Limit	No Limit
Ethiopia	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Finland	No Limit	No Limit	No Limit	No Limit	No Limit
France	Unknown	Unknown	Unknown	Unknown	Unknown
Georgia	Unknown	Unknown	Unknown	Unknown	Unknown
Germany	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Ghana	10 years	10 years	10 years	10 years	10 years
Greece	No Limit	No Limit	No Limit	Unknown	Unknown
Guatemala	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Hong Kong	10 years	10 years	10 years	10 years	10 years
Hungary	Unknown	Not addressed	Not addressed	Not addressed	Not addressed
Iceland	50 years	20 years	35 years	Not addressed	Not addressed
India	Unknown	10 years	10 years	Unknown	Unknown
Indonesia	2 years	5 years	5 years	Unknown	2 years
Iran	Unknown	Unknown	Unknown	Not addressed	Unknown
Iraq	Not addressed	Not addressed		Not addressed	Not addressed
Israel	No Limit	No Limit	No Limit		No Limit
Jamaica	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Japan	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Jordan	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Kazakhstan	No Limit	No Limit	No Limit	No Limit	No Limit
Kenya	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Kuwait	No Limit		No Limit	Not addressed	No Limit
Latvia	No Limit	No Limit	No Limit	No Limit	No Limit
Libya	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Malaysia	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Mali	No Limit	Unknown	5 years	Unknown	No Limit

Chapter 6. Table 5b

(*Continued*)

	Non-medical indications, e.g. deliberate deferral of childbearing for personal reasons				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Malta	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Mexico	No Limit	No Limit	No Limit	No Limit	No Limit
Moldova	Unknown	Unknown	Unknown	Not addressed	Not addressed
Montenegro	10 years	10 years	10 years	10 years	10 years
Morocco	10 years	10 years	10 years	10 years	10 years
Myanmar	Not addressed	20 years	Not addressed	Not addressed	Not addressed
Namibia	No Limit	No Limit	No Limit	Not addressed	Not addressed
Nepal	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
New Zealand	10 years		10 years	10 years	10 years
Nigeria	No Limit	No Limit	No Limit	No Limit	Not addressed
Norway	No Limit	No Limit	10 years	No Limit	No Limit
Oman	5 years	5 years	5 years	Unknown	Unknown
Pakistan	No Limit	No Limit	No Limit	No Limit	No Limit
Panamá	No Limit	No Limit	No Limit	Not addressed	No Limit
Paraguay	Not addressed		Not addressed	Not addressed	Not addressed
Perú	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Philippines	No Limit	No Limit	No Limit	No Limit	Unknown
Polska	Unknown	Unknown	Unknown	Unknown	Unknown
Portugal	No Limit	No Limit		Not addressed	Not addressed
Qatar	10 years	10 years	5 years	Unknown	Unknown
Republic of the Congo	Unknown	Unknown	Unknown	Unknown	Unknown
Romania	Unknown	Unknown	Unknown	Not addressed	Not addressed
Russia	Unknown	No Limit	Unknown	Unknown	Unknown
Serbia	Not addressed	No Limit	Unknown	Not addressed	Not addressed
Singapore		No Limit	Not addressed	Not addressed	
Slovenia	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
South Africa	No Limit	No Limit	No Limit	No Limit	No Limit
South Korea	No Limit	No Limit		No Limit	No Limit
Spain	No Limit	No Limit	No Limit	No Limit	No Limit
Sudan	Unknown	Unknown	Unknown	Unknown	Unknown
Sweden	No Limit	No Limit	10 years	No Limit	No Limit
Switzerland	10 years	10 years	10 years	10 years	No Limit
Tajikistan	No Limit	No Limit	No Limit	Not addressed	Not addressed
Tanzania	Unknown	Not addressed	Not addressed	Not addressed	Not addressed
The Netherlands	No Limit	No Limit	No Limit	No Limit	No Limit
Trinidad & Tobago	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Turkey	Unknown	5 years	5 years	Not addressed	Not addressed
Uganda	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Ukraine	No Limit	No Limit	No Limit	No Limit	No Limit
United States of America	Unknown	Unknown	Unknown	Unknown	Unknown
Uruguay	No Limit	10 years	No Limit	No Limit	No Limit
Uzbekistan	No Limit	No Limit	No Limit	No Limit	No Limit
Venezuela	No Limit	No Limit	No Limit	No Limit	No Limit
Vietnam	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Zambia	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Zimbabwe	No Limit	No Limit	No Limit		

never performed in 26 (24.1%) countries, including 14 (13.0%) countries that permitted the procedure for this reason (Table 1b).

The procedure was regulated in 64 (59.8%); unregulated in 35 (32.7%) of 107 countries and eight respondents replied, "did not know". Of the countries that regulated the procedure, 30 (46.9%) of 64 noted that it was accomplished through federal/national laws/statutes/ordinances alone; eight countries indicated the same in addition to professional organisation standards/guidelines; and another four did it with the addition of agency regulations/oversight. Four countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 4).

For the majority of countries either no storage limit applied, or storage limits were not addressed 51 (48.1%), and 26 (24.5%) of 106 countries, respectively. Twelve (11.3%) countries were uncertain whether storage limits applied. Of the 17 (16.0%) countries where storage limits did apply, 10 employed a 10-year limit, five had a five-year limit; and the remaining two countries had a 20-year and 50-year limit, respectively (Table 5c).

Chapter 6. Table 5c

What is the duration of storage for cryopreserved tissue?

	Medical indications, e.g. malignancy				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Albania		Not addressed	Not addressed	Not addressed	Not addressed
Algeria	Unknown	Not addressed	Not addressed	Not addressed	Not addressed
Argentina	No Limit	No Limit	No Limit	No Limit	Unknown
Armenia	No Limit		No Limit	No Limit	No Limit
Australia	10 years	10 years	10 years	20 years	20 years
Austria	No Limit	No Limit		No Limit	No Limit
Bangladesh	No Limit	No Limit	No Limit	Not addressed	No Limit
Barbados	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	No Limit	No Limit	No Limit	No Limit	No Limit
Benin	Unknown	Unknown	Unknown	Unknown	Unknown
Bolivia	No Limit	No Limit	No Limit	No Limit	No Limit
Bosnia and Herzegovina	No Limit	No Limit	No Limit	No Limit	No Limit
Brazil	No Limit	No Limit	No Limit	No Limit	No Limit
Bulgaria	5 years	5 years	5 years	5 years	5 years
Burkina Faso	No Limit	No Limit	No Limit	No Limit	No Limit
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroon	No Limit	No Limit	No Limit	No Limit	No Limit
Chile	No Limit	No Limit	No Limit	No Limit	No Limit
China	No Limit	No Limit	No Limit	No Limit	No Limit
Colombia	No Limit	No Limit	No Limit	No Limit	No Limit
Costa Rica	No Limit	No Limit	10 years	Not addressed	Not addressed
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	No Limit	No Limit	No Limit	Not addressed	No Limit
Cyprus	10 years	10 years	10 years	10 years	10 years
Czech Republic	Not addressed	Not addressed	Not addressed	Not addressed	
Democratic Republic of the Congo	Unknown	Not addressed	Not addressed	Not addressed	Not addressed
Denmark	No Limit	No Limit	No Limit	No Limit	No Limit
Dominican Republic	No Limit	No Limit	No Limit	Unknown	Unknown
Ecuador	No Limit	No Limit	No Limit		No Limit
Egypt	No Limit	No Limit	No Limit	No Limit	No Limit
El Salvador	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Equatorial Guinea	Unknown	Unknown	Unknown	Unknown	Unknown
Estonia	No Limit	No Limit	7 years	No Limit	No Limit
Ethiopia	Not addressed	Not addressed	Not addressed		Not addressed
Finland	No Limit	No Limit	No Limit	No Limit	No Limit
France	Not addressed	Not addressed	Not addressed	No Limit	No Limit
Georgia	Unknown	Unknown	Unknown	Unknown	Unknown
Germany	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Ghana	10 years	10 years	10 years	10 years	10 years
Greece	No Limit	No Limit	No Limit	No Limit	No Limit
Guatemala	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Hong Kong	10 years	10 years		10 years	10 years
Hungary	15 years	No Limit	15 years	Unknown	Unknown
Iceland	50 years	20 years	35 years	Not addressed	Not addressed
India	10 years	10 years	10 years	Unknown	Not addressed
Indonesia	5 years	5 years	5 years	Unknown	2 years
Iran	Unknown	Unknown	Unknown	Not addressed	Unknown
Iraq	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Israel	No Limit	No Limit	No Limit	No Limit	No Limit
Jamaica	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Japan	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Jordan	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Kazakhstan	No Limit	No Limit	No Limit	No Limit	No Limit
Kenya	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Kuwait	No Limit	No Limit	No Limit	Not addressed	No Limit
Latvia	No Limit	No Limit	No Limit	No Limit	No Limit
Libya	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Lithuania	No Limit	No Limit	Not addressed	No Limit	No Limit
Malaysia	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed

Chapter 6. Table 5c

(*Continued*)

	Medical indications, e.g. malignancy				
Country	**Sperm**	**Oocytes**	**Pre-implantation embryos**	**Ovarian tissue**	**Testicular tissue**
Mali	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Malta	No Limit	No Limit	No Limit	No Limit	No Limit
Mexico	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Moldova	Unknown	Unknown	Unknown	Not addressed	Not addressed
Montenegro	No Limit	No Limit	No Limit	No Limit	No Limit
Morocco	10 years	10 years	10 years	10 years	10 years
Myanmar	Not addressed	20 years	Not addressed	Not addressed	Not addressed
Namibia	No Limit	No Limit	No Limit	Not addressed	Not addressed
Nepal	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
New Zealand	10 years	10 years			10 years
Nigeria	No Limit	No Limit	No Limit	Not addressed	Not addressed
Norway	No Limit	No Limit	10 years	No Limit	No Limit
Oman	5 years	5 years	5 years	Unknown	Unknown
Pakistan	No Limit	No Limit	No Limit	No Limit	No Limit
Panamá	No Limit	No Limit	No Limit	Not addressed	No Limit
Paraguay	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Perú	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Philippines	No Limit	No Limit	No Limit	No Limit	Unknown
Polska	Unknown	Unknown	Unknown	Unknown	Unknown
Portugal	No Limit	No Limit		Not addressed	Not addressed
Qatar	10 years	10 years	5 years	Unknown	10 years
Republic of the Congo	Unknown	Unknown	Unknown	Unknown	Unknown
Romania	Unknown	Unknown	Unknown	Not addressed	Not addressed
Russia	No Limit	No Limit	No Limit	No Limit	No Limit
Serbia	No Limit	No Limit	Unknown	Not addressed	Not addressed
Singapore	No Limit	No Limit	No Limit	No Limit	No Limit
Slovenia	10 years	10 years	5 years	Not addressed	Not addressed
South Africa	No Limit	No Limit	No Limit	No Limit	No Limit
South Korea	No Limit	No Limit	5 years	No Limit	No Limit
Spain	No Limit	No Limit	No Limit	No Limit	No Limit
Sudan	No Limit	No Limit	No Limit	No Limit	No Limit
Sweden		No Limit	10 years	No Limit	No Limit
Switzerland	No Limit	No Limit	10 years	No Limit	No Limit
Tajikistan	No Limit	No Limit	No Limit	Not addressed	Not addressed
Tanzania	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
The Netherlands	No Limit	No Limit	No Limit	No Limit	No Limit
Trinidad & Tobago	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Turkey	5 years	5 years	5 years	5 years	5 years
Uganda	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Ukraine		No Limit	No Limit	No Limit	No Limit
United Arab Emirates	5 years	5 years	5 years		
United States of America	Unknown	Unknown	Unknown	Unknown	Unknown
Uruguay	No Limit	10 years	No Limit	No Limit	No Limit
Uzbekistan	No Limit	No Limit	No Limit	No Limit	No Limit
Venezuela	No Limit	No Limit	No Limit	No Limit	No Limit
Vietnam	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Zambia	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Zimbabwe	No Limit	No Limit	No Limit		

Non-medical indications

Seventy-one (67%) reported that oocyte cryopreservation for non-medical indications was allowed/permitted, and 36 (34%) of 106 countries reported it was commonly practiced/performed. The procedure was infrequently or never performed in 29 (27.4%) countries for non-medical indications, including 10 countries despite it being permitted (Table 1c).

The procedure was regulated in 48 (44.4%) of 108 countries unregulated in 44 (40.7%) countries and sixteen (14.8%) respondents replied, "did not know". Of the countries that regulated the procedure , 24 (50%) of 48 countries indicated it was done through federal/national laws/statutes/ordinances alone; seven countries indicated the same with the addition of professional organisation standards/guidelines; and four countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 3).

For the majority of countries either no storage limit applied, or storage limits were not addressed 41(40.6%), and 26 (25.7%) of 101 countries, respectively. Eighteen (17.8%) countries were

uncertain whether storage limits applied. Of the 16 (15.8%) countries where storage limits did apply, 10 employed a 10-year limit, four had a five-year limit; and of the remaining two countries, each had 20-year or 50-year limits (Table 5b).

Pre-implantation embryos

Fertility treatment

Eighty-four (78.5%) of 107 countries reported that cryopreservation of pre-implantation embryos for fertility treatment is allowed/permitted and 43 (40.2%) countries reported that it was commonly practiced/performed. Twenty (18.7%) countries reported the procedure was never or infrequently performed, including eight countries where it was permitted. (Table 1a).

The procedure was regulated in 69 (64.5%) of 107 countries unregulated in 32 (29.9%) countries and six respondents answered, "did not know". Of the countries that regulated the procedure, 34 (49.3%) of 69 indicated that it was accomplished by federal/national laws/statutes/ordinances alone; nine countries indicated that professional organisation standards/guidelines existed in addition to federal/national laws/statutes/ordinances , and four countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 2).

For the majority of countries either no storage limit applied, or storage limits were not addressed, 39 (37.5%), and 24 (23.1%) of 104 countries, respectively. Sixteen (15.4%) countries were uncertain whether storage limits applied. Of the 25 (24.0%) countries where storage limits existed, 14 (13.5%) employed a 10-year limit, six had a five-year limit; and each of the remaining five countries had 2-year, 3-year, 7-year, 15-year, or 35-year limits (Table 5a).

Medical indications

Seventy-nine (73.8%) of 107 countries permitted cryopreservation of pre-implantation embryos for medical indications, and 32 (30%) countries reported it was commonly practiced/performed for these indications. The procedure was infrequently or never performed in 30 (28.0%) countries, including 16 (15.0%) countries that permitted it (Table 1b).

The procedure was regulated in 61(58.1%) of 105 countries; unregulated in 36 (34.2%) countries and eight respondents answered, "did not know". Of the countries that regulated the procedure, 30 (49.2%) of 61 countries indicated it was accomplished with federal/national laws/statutes/ordinances alone; seven countries indicated that professional organisation standards/guidelines existed in addition to federal/national laws/statutes/ordinances; and four used agency regulations/oversight in addition to federal/national laws/statutes/ordinances. Four countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 4).

For the majority of countries either no storage limit applied, or storage limits were not addressed 42 (40.8%), and 28 (27.2%) of 103 countries, respectively. Thirteen countries were uncertain whether storage limits applied. Of the 20 (19.4%) countries where storage limits applied, nine employed a 10-year limit, eight had a five-year limit; and the remaining three countries had a 7-year, 15-year or 35-year limit (Table 5b).

Non-medical indications

Sixty-one (57.5%) of 106 countries reported that pre-implantation embryo cryopreservation for non-medical indications was allowed/permitted, and 22 (20.8%) reported it was commonly practiced/performed. The procedure was infrequently or never performed in 41 (38.7%) countries for non-medical indications, including 17 (16.0%) countries where it was permitted (Table 1c).

The procedure was regulated in 46 (43.4%) of 106 countries; unregulated in 43 (40.6%) countries and the status was unknown to the respondent in 17 (16.0%). Of the countries that regulated the procedure, 25 (54.3%) of 46 countries indicated that it was accomplished via federal/national laws/statutes/ordinances alone; six countries indicated that professional organisation standards/guidelines existed in addition to federal/national laws/statutes/ordinances; and three relied upon agency regulations/oversight in addition to federal/national laws/statutes/ordinances. Three countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 3).

For the majority of countries either no storage limit applied, or storage limits were not addressed 35 (34.3%), and 30 (29.4%) of 102 countries, respectively. Seventeen (16.7%) countries were uncertain whether storage limits applied. Of the 20 (19.6%) countries where storage limits did apply, 12 (11.8%) employed a 10-year limit, six had five-year limits; and the remaining two countries had either a 7-year or a 35-year limit (Table 5c).

Ovarian tissue cryopreservation

Medical indications

Ovarian tissue cryopreservation for medical indications was permitted in 59 (55.7%) of 106 countries, and 9 (8.5%) countries reported it was commonly practiced/performed for these indications. The procedure was infrequently or never performed in 59 (55.7%) countries, including 27 (25.5%) of countries that permitted the procedure for this reason (Table 1b).

The procedure was regulated in 48 (45.7%) of 105 countries; unregulated in 41 (39.0%) countries and 16 (15.2%) countries responded, "did not know". Of the countries that regulated the procedure, 24 (50%) of 48 indicated this was done through federal/national laws/statutes/ordinances alone; five countries indicated the same with the addition of professional organisation standards/guidelines, whereas another five indicated that only professional organisation standards/guidelines applied. A range of other regulatory combinations were reported by the other countries (Table 4).

For the majority of countries either no storage limit existed, or storage limits were not addressed with 40 (39.2%) of 102 countries choosing either response in each group. Fifteen countries were unsure whether storage limits applied. Of the seven countries where storage limits did apply, four employed a 10-year limit, two had a five-year limit; and one had a 20-year limit (Table 5c).

Non-medical indications

Forty-three (40.6%) of 106 countries reported that ovarian tissue cryopreservation for non-medical indications was allowed/permitted, and 3 (2.8%) reported it was commonly practiced/performed. The procedure was infrequently or never performed in 62 (58.4%) countries for non-medical indications, including 21 (19.8%) where it was permitted (Table 1c).

The procedure was regulated in 34 (32.4%) of 105 countries; unregulated in 46 (43.8%) countries and 25 (23.8%) responded "did not know". Of the countries that regulated the procedure,16 (47.1%) indicated it was accomplished through federal/national laws/statutes/ordinances alone; three countries indicated the same with the addition of professional organisation standards/guidelines, likewise another three with the addition of agency

regulations/oversight. Another three countries indicated that only professional organisation standards/guidelines applied. A range of other regulation combinations were reported by the other countries (Table 3).

For the majority of countries either no storage limit applied, or storage limits were not addressed, 29 (28.2%) and 44 (42.7%) of 103 countries, respectively). Twenty-one (20.3%) respondents were unsure whether storage limits applied. Of the nine countries where storage limits did apply, seven employed a 10-year limit, one had a five-year limit; and one had a 20-year limit (Table 5b).

Testicular tissue cryopreservation

Medical indications

Cryopreservation of testicular tissue for medical indications was permitted in 68 (63.6%) of 107 countries and 18 (16.8%) countries reported it was commonly practiced/performed for these indications. The procedure was infrequently or never performed in 45 countries, including 20 countries that permitted the procedure for this reason (Table 1b).

The procedure was regulated in 48 (45.3%) of 106 countries; unregulated in 43 (40.6%) countries and 15 (14.2%) national respondents answered: "did not know". Of those countries that regulated the procedure, 24 (50%) of 48 indicated this was done through federal/national laws/statutes/ordinances; seven (14.6%) countries indicated the same with the addition of professional organisation standards/guidelines. A range of other regulation arrangements were reported by the other countries (Table 4).

For the majority of countries either no storage limit existed, or storage limits were not addressed in 41(39.4%) of 104 countries and 36 (34.6%), respectively. Fifteen (14.4%) country responses were unsure whether storage limits applied. Of the ten (9.6%) countries where storage limits did apply, six employed a 10-year limit, two had a five-year limit; one had a two-year limit and one, a 20-year limit (Table 5c).

Non-medical indications

Forty-nine (45.8%) of 107 countries reported that cryopreservation of testicular tissue for non-medical reasons was allowed/permitted, and 7 (6.5%) reported it was commonly practiced/performed. The procedure was infrequently or never performed in 58 (54.2%) countries for non-medical indications, including 15 (14.0%) where it was permitted (Table 1c).

The procedure was regulated in 34 (32.7%) of 104 countries , unregulated in 44 (42.3%) countries and 26 (25%) countries replied, "did not know". Of the countries that regulated the procedure, 16 (47.1%) of 34) indicated it was done through federal/national laws/statutes/ordinances; four countries indicated the same with the addition of professional organisation standards/guidelines. A range of other regulation combinations were reported by the other countries (Table 3).

For the majority of countries either no storage limit existed, or storage limits were not addressed; 31 (29.8%) and 41 (39.4%) of 104 countries, respectively. Twenty-two country responses were unsure whether storage limits applied. Of the ten countries where storage limits did apply, six employed a 10-year limit, two had a five-year limit; one had a two-year limit and the other, a 20-year limit (Table 5b).

Discussion

Similar to previous Triennial Reports, evidence from the 2024 Report indicates that the majority of countries surveyed permit cryopreservation of sperm, oocytes, and pre-implantation embryos for fertility treatment (80.5%, 84.3% and 78.5%, respectively) and medical indications (80%, 78.7% and 73.8%, respectively). Fewer, although still a majority, permit cryopreservation of sperm, oocytes and pre-implantation embryos for non-medical indications (66.4%, 67% and 57.5%, respectively). This trend was also seen between cryopreservation of testicular and ovarian tissue for medical versus non-medical indications.

Most nations regulate the cryopreservation of sperm, oocytes, and pre-implantation embryos for fertility treatment and medical indications. However, less than half regulate the cryopreservation of the aforementioned when sought for non-medical indications (47.6%, 44.4% and 43.4%, respectively). Testicular tissue (medical: 45.3%; non-medical 32.7%) and ovarian tissue (medical: 45.7%; non-medical: 32.4%) cryopreservation are also less likely to be regulated.

While the inherently greater invasiveness and lower utilisation of testicular and ovarian tissue cryopreservation may account for the disparities between existing regulation and how permission is granted, when compared to sperm/oocyte/pre-implantation embryo cryopreservation, justification for the variance in the regulation of medical and non-medical fertility preservation is less obvious. Several scholars have argued that the distinction between medical and non-medical fertility preservation is indistinct[7,13,14]. This is exemplified through the variable definitions of a "medical indication". Some nations have adopted a narrow definition (e.g. Belgium, Germany[7,13]) and other countries have no clearly defined criteria, accepting indications that would be considered "non-medical" elsewhere[8]. In addition to controversy regarding the distinction between medical and non-medical indications, there is also the question of the justification for differential treatment based on patients' indications for fertility preservation. Some have argued that indication for fertility preservation is morally irrelevant since the potential loss experienced (i.e. fertility and the chance of genetic parenthood) is the same regardless of the cause[15]. These discussions have prompted some nations to reevaluate the regulatory role of the continued use of a distinction between medical and non-medical cryopreservation.

As previously noted, the majority of nations surveyed indicated that reproductive tissues are not subject to storage limits. When storage limits apply, they more commonly pertained to the storage of reproductive tissue frozen for fertility treatment than fertility preservation. This is an interesting finding but may be an instance where scientific and clinical progress has evolved more rapidly than regulatory policy, given the more pervasive utilization for fertility preservation[8]. While storage limits varied from 2 - 50 years, the most commonly reported limit was 10 years. The 10-year limit originates from regulatory guidelines proposed by the National Health and Medical Research Council (NHMRC) in Australia in 1982, which recommended a maximum duration of 10 years for storing frozen embryos[16]. It is remarkable that four decades later, this 10-year limit remains the standard across numerous jurisdictions around the world, despite significant advances in cryopreservation procedures and increasing demand. Some advocates of storage limits claim that they are essential tools in managing and preventing the accumulation of "abandoned" tissue[17]. The Spanish Fertility Society, estimates that 10% of stored embryos (approximately 60,000) have been abandoned, attesting to the scope of the problem[18]. However, opponents argue storage limits restrict reproductive choices, lack a scientific basis, and are discriminatory[19]. As utilization of cryopreservation is likely to expand, the justification for imposing storage limits,

including considerations of how they affect patients and what role they should play (if any) in managing the accumulation of stored tissue, will assume greater importance.

Summary

Despite the continued interest in and demand for cryopreservation over recent years, there have been limited updates to the governance of cryopreservation and the circumstances in which it is permitted. Of specific note is the continued use of a distinction between medical vs non-medical indications as they are considered in the regulatory environment. Fewer nations expressly permit or regulate non-medical fertility preservation. The majority of nations do not impose storage limits, but of those that do, the 10-year limit remains prevalent. This is despite recent calls that an arbitrary 10-year limit is no longer justifiable. As patient needs evolve, it will be incumbent on policy makers to continue to review the governance of cryopreservation to ensure that patient needs are met.

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CHAPTER 7: POSTHUMOUS REPRODUCTION

Introduction

Posthumous or post-mortem reproduction has been performed for over 60 years; however, it remains one of the most contentious and controversial topics in ART practice. There are many unresolved legal and ethical issues pertaining to the rights of the deceased person's survivors, including their parents and partners, in addition to those of future offspring that may be born subsequently.

Posthumous reproduction involves the use of cryopreserved gametes or embryos collected while an individual is alive or immediately following their death with the intent of using them later. Posthumous reproduction is the general term used to describe two unique sets of circumstances; immediate posthumous reproduction; and delayed posthumous conception by artificial insemination. Immediate posthumous reproduction involves the immediate harvesting of gametes from an individual who has suffered brain death but may remain on life support. Potentially viable gametes can also be extracted from an individual who has been declared dead within the previous 24 hours. Sperm retrieval beyond 24 hours after death was also described over 30 years ago[1]. By contrast, delayed posthumous conception using previously cryopreserved sperm has been practised since the 1950s[2].

There is considerable variation in the acceptance, legality, and utilisation of posthumous reproduction among countries worldwide. With the emergence of more effective cryopreservation techniques, the indications and applications for this practice have expanded. Some countries require the deceased to have explicitly granted prior permission for a procedure to be performed. Oncology patients often cryopreserve gametes and embryos for

Chapter 7. Table 1

Are there regulations that govern posthumous reproduction in your country for any of the following? How is it regulated?

Country	Immediate posthumous collection of sperm or oocytes	Posthumous sperm insemination	Posthumous inseminations of frozen ova	Posthumous implantation of frozen embryos
Albania	No Regulations	No Regulations	No Regulations	No Regulations
Algeria	No Regulations	No Regulations	No Regulations	No Regulations
Argentina				Federal/National Laws/ Status/Ordinances
Armenia	No Regulations	No Regulations	No Regulations	No Regulations
Australia	Federal/National Laws/ Status/Ordinances, State/Provincial/ Regional Laws/ Statutes/Ordinances	Federal/National Laws/ Status/Ordinances, State/Provincial/ Regional Laws/ Statutes/Ordinances	Federal/National Laws/ Status/Ordinances, State/Provincial/ Regional Laws/ Statutes/Ordinances	Federal/National Laws/ Status/Ordinances, State/Provincial/ Regional Laws/ Statutes/Ordinances
Austria	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Bangladesh	No Regulations	No Regulations	No Regulations	No Regulations
Barbados	No Regulations	No Regulations	No Regulations	No Regulations
Benin	No Regulations	No Regulations	No Regulations	No Regulations
Bolivia	No Regulations	No Regulations	No Regulations	No Regulations
Bosnia and Herzegovina	No Regulations	No Regulations	No Regulations	No Regulations
Brazil	No Regulations	No Regulations	No Regulations	No Regulations
Bulgaria				Federal/National Laws/ Statutes/Ordinances
Cambodia	No Regulations	No Regulations	No Regulations	No Regulations
Cameroon	No Regulations	No Regulations	No Regulations	No Regulations
Chile	No Regulations	No Regulations	No Regulations	No Regulations
China	No Regulations	No Regulations	No Regulations	No Regulations
Colombia	No Regulations	No Regulations	No Regulations	No Regulations
Costa Rica	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Côte d'Ivoire	No Regulations	No Regulations	No Regulations	No Regulations
Croatia	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Cyprus	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Czech Republic	No Regulations	No Regulations	No Regulations	No Regulations
Democratic Republic of the Congo	No Regulations	No Regulations	No Regulations	No Regulations
Denmark		Federal/National Laws/ Status/Ordinances	Federal/National Laws/ Status/Ordinances	Federal/National Laws/ Status/Ordinances
Dominican Republic	No Regulations	No Regulations	No Regulations	No Regulations
Ecuador	No Regulations	No Regulations	No Regulations	No Regulations
Egypt	Federal/National Laws/ Statutes/Ordinances, Professional Organization Standards/Guidelines, Cultural Practice, Religious Decree	Federal/National Laws/ Statutes/Ordinances, Professional Organization Standards/Guidelines, Cultural Practice, Religious Decree	Federal/National Laws/ Statutes/Ordinances, Professional Organization Standards/Guidelines, Cultural Practice, Religious Decree	Unknown
El Salvador	No Regulations	No Regulations	No Regulations	No Regulations
Equatorial Guinea		Federal/National Laws/ Statutes/Ordinances		Federal/National Laws/ Statutes/Ordinances
Estonia		Federal/National Laws/ Statutes/Ordinances		Federal/National Laws/ Statutes/Ordinances
Ethiopia	No Regulations	No Regulations	No Regulations	No Regulations
Finland	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Georgia	No Regulations	No Regulations	No Regulations	No Regulations
Germany			Federal/National Laws/	Professional

Chapter 7. Table 1

(*Continued*)

Country	Immediate posthumous collection of sperm or oocytes	Posthumous sperm insemination	Posthumous inseminations of frozen ova	Posthumous implantation of frozen embryos
			Status/Ordinances, Professional Organization Standards/Guidelines	Organization Standards/Guidelines
Ghana	No Regulations	No Regulations	No Regulations	No Regulations
Greece		Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Guatemala	No Regulations	No Regulations	No Regulations	No Regulations
Hong Kong	Federal/National Laws/ Statutes/Ordinances, State/Provincial/ Regional Laws/ Statutes/Ordinances, Agency Regulations/ Oversight	Federal/National Laws/ Statutes/Ordinances, State/Provincial/ Regional Laws/ Statutes/Ordinances, Agency Regulations/ Oversight	Federal/National Laws/ Statutes/Ordinances, State/Provincial/ Regional Laws/ Statutes/Ordinances, Agency Regulations/ Oversight	Federal/National Laws/ Statutes/Ordinances, State/Provincial/ Regional Laws/ Statutes/Ordinances, Agency Regulations/ Oversight
Hungary		Federal/National Laws/ Statutes/Ordinances		Federal/National Laws/ Statutes/Ordinances
Iceland		Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
India	Federal/National Laws/ Status/Ordinances			
Indonesia				Federal/National Laws/ Statutes/Ordinances, Professional Organization Standards/Guidelines
Iran	No Regulations	No Regulations	No Regulations	No Regulations
Iraq	No Regulations	No Regulations	No Regulations	No Regulations
Israel	Federal/National Laws/ Statutes/Ordinances, State/Provincial/ Regional Laws/ Statutes/Ordinances, Professional Organization Standards/Guidelines			
Japan	No Regulations	No Regulations	No Regulations	No Regulations
Jordan	No Regulations	No Regulations	No Regulations	No Regulations
Kazakhstan	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Kenya	No Regulations	No Regulations	No Regulations	No Regulations
Latvia	No Regulations	No Regulations	No Regulations	No Regulations
Lithuania	No Regulations	No Regulations	No Regulations	No Regulations
Malaysia	No Regulations	No Regulations	No Regulations	No Regulations
Mali	No Regulations	No Regulations	No Regulations	No Regulations
Mexico	No Regulations	No Regulations	No Regulations	No Regulations
Montenegro	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Morocco	No Regulations	No Regulations	No Regulations	No Regulations
Myanmar	No Regulations	No Regulations	No Regulations	No Regulations
Namibia	No Regulations	No Regulations	No Regulations	No Regulations
Nepal	No Regulations	No Regulations	No Regulations	No Regulations
New Zealand		Agency Regulations/ Oversight		
Nigeria	No Regulations	No Regulations	No Regulations	No Regulations
Norway		Federal/National Laws/ Statutes/Ordinances		Federal/National Laws/ Statutes/Ordinances
Panamá	No Regulations	No Regulations	No Regulations	No Regulations
Paraguay	No Regulations	No Regulations	No Regulations	No Regulations
Perú	No Regulations	No Regulations	No Regulations	No Regulations

Chapter 7. Table 1

(*Continued*)

Country	Immediate posthumous collection of sperm or oocytes	Posthumous sperm insemination	Posthumous inseminations of frozen ova	Posthumous implantation of frozen embryos
Philippines	No Regulations	No Regulations	No Regulations	No Regulations
Poland	No Regulations	No Regulations	No Regulations	No Regulations
Portugal		Federal/National Laws/ Statutes/Ordinances		Federal/National Laws/ Statutes/Ordinances
Republic of the Congo	No Regulations	No Regulations	No Regulations	No Regulations
Romania	No Regulations	No Regulations	No Regulations	No Regulations
Russia	No Regulations	No Regulations	No Regulations	No Regulations
Serbia	Federal/National Laws/ Status/Ordinances			
Singapore	Federal/National Laws/ Statutes/Ordinances, Agency Regulations/ Oversight, Professional Organization Standards/Guidelines	Agency Regulations/ Oversight, Professional Organization Standards/Guidelines, Federal/National Laws/Statutes/ Ordinances	Federal/National Laws/ Statutes/Ordinances, Agency Regulations/ Oversight, Professional Organization Standards/Guidelines	Federal/National Laws/ Statutes/Ordinances, Agency Regulations/ Oversight, Professional Organization Standards/Guidelines
Slovenia	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
South Africa	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
South Korea		Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Sudan	No Regulations	No Regulations	No Regulations	No Regulations
Sweden	Federal/National Laws/ Status/Ordinances	Federal/National Laws/ Status/Ordinances	Federal/National Laws/ Status/Ordinances	Federal/National Laws/ Status/Ordinances
Switzerland	Federal/National Laws/ Status/Ordinances	Federal/National Laws/ Status/Ordinances	Federal/National Laws/ Status/Ordinances	Federal/National Laws/ Status/Ordinances
Tajikistan	No Regulations	No Regulations	No Regulations	No Regulations
Tanzania	No Regulations	No Regulations	No Regulations	No Regulations
The Netherlands		Federal/National Laws/ Status/Ordinances, Professional Organization Standards/Guidelines	Federal/National Laws/ Status/Ordinances, Professional Organization Standards/Guidelines	Federal/National Laws/ Status/Ordinances, Professional Organization Standards/Guidelines
Trinidad & Tobago	No Regulations	No Regulations	No Regulations	No Regulations
Tunisia	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances
Turkey	No Regulations	No Regulations	No Regulations	No Regulations
Uganda	No Regulations	No Regulations	No Regulations	No Regulations
Ukraine		Federal/National Laws/ Statutes/Ordinances		
United States of America	State/Provincial/Regional Laws/Statutes/ Ordinances, Professional Organization Standards/Guidelines, Cultural Practice, Religious Decree	State/Provincial/ Regional Laws/ Statutes/Ordinances, Professional Organization Standards/Guidelines, Cultural Practice, Religious Decree	State/Provincial/Regional Laws/Statutes/ Ordinances, Professional Organization Standards/Guidelines, Cultural Practice, Religious Decree	State/Provincial/ Regional Laws/ Statutes/Ordinances, Professional Organization Standards/Guidelines, Cultural Practice, Religious Decree
Uruguay		Federal/National Laws/ Statutes/Ordinances	Federal/National Laws/ Statutes/Ordinances	
Uzbekistan	No Regulations	No Regulations	No Regulations	No Regulations
Venezuela	No Regulations	No Regulations	No Regulations	No Regulations
Vietnam	No Regulations	No Regulations	No Regulations	No Regulations
Zambia	No Regulations	No Regulations	No Regulations	No Regulations
Zimbabwe	No Regulations	No Regulations	No Regulations	No Regulations

Chapter 7. Table 2

What posthumous reproduction treatments are allowed/permitted or practised/performed in your country?

Country	Immediate posthumous collection of sperm or oocytes	Posthumous sperm insemination	Posthumous insemination of frozen ova	Posthumous transfer of frozen embryos
Albania	Unknown	Unknown	Unknown	Unknown
Argentina	Unknown	Unknown	Unknown	Allowed/Permitted
Armenia	Unknown	Unknown	Unknown	Unknown
Australia	Allowed/Permitted Practised/Performed	Allowed/Permitted Practised/Performed	Allowed/Permitted Practised/Performed	Allowed/Permitted Practised/Performed
Bangladesh	Unknown	Unknown	Unknown	Unknown
Benin	Unknown	Unknown	Unknown	Unknown
Bolivia	Unknown	Unknown	Unknown	Unknown
Bosnia and Herzegovina	Unknown	Unknown	Unknown	Unknown
Brazil	Unknown	Unknown	Unknown	Unknown
Bulgaria				Allowed/Permitted
Cambodia	Unknown	Unknown	Unknown	Unknown
Cameroon	Unknown	Unknown	Unknown	Unknown
Chile	Unknown	Unknown	Unknown	Unknown
China	Unknown	Unknown	Unknown	Unknown
Colombia	Unknown	Allowed/Permitted Practised/Performed	Allowed/Permitted Practised/Performed	Allowed/Permitted Practised/Performed
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown
Cyprus				Allowed/Permitted
Czech Republic	Unknown	Unknown	Unknown	Unknown
Democratic Republic of the Congo	Unknown	Unknown	Unknown	Unknown
Denmark	Unknown	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Dominican Republic	Unknown	Unknown	Unknown	Unknown
Ecuador	Unknown	Unknown	Unknown	Unknown
Egypt	Unknown	Unknown	Unknown	Unknown
El Salvador	Unknown	Unknown	Unknown	Unknown
Equatorial Guinea		Allowed/Permitted	Unknown	Allowed/Permitted
Estonia	Unknown	Allowed/Permitted	Unknown	Allowed/Permitted
Ethiopia	Unknown	Unknown	Unknown	Unknown
France	Practised/Performed	Practised/Performed	Practised/Performed	Practised/Performed
Georgia	Unknown	Unknown	Unknown	Unknown
Germany	Unknown	Unknown	Unknown	Unknown
Ghana	Unknown	Unknown	Unknown	Unknown
Greece	Unknown	Allowed/Permitted Practised/Performed	Allowed/Permitted Practised/Performed	Allowed/Permitted Practised/Performed
Guatemala	Unknown	Unknown	Unknown	Unknown
Hungary	Unknown	Allowed/Permitted	Unknown	Allowed/Permitted
Iceland		Allowed/Permitted	Unknown	Allowed/Permitted
India	Allowed/Permitted	Unknown	Unknown	Unknown
Indonesia	Unknown	Unknown	Unknown	Unknown
Iran	Unknown	Unknown	Unknown	Unknown
Iraq	Unknown	Unknown	Unknown	Unknown
Israel	Allowed/Permitted	Unknown	Unknown	Unknown
Japan	Unknown	Unknown	Unknown	Unknown
Kazakhstan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Kenya	Unknown	Unknown	Unknown	Unknown
Latvia	Unknown	Unknown	Unknown	Unknown
Malaysia	Unknown	Unknown	Unknown	Unknown
Mali	Unknown	Unknown	Unknown	Unknown
Mexico	Unknown	Unknown	Unknown	Unknown
Moldova	Unknown	Unknown	Unknown	Unknown
Morocco	Unknown	Unknown	Unknown	Unknown
Myanmar	Unknown	Unknown	Unknown	Unknown
Namibia	Unknown	Unknown	Unknown	Unknown
Nepal	Unknown	Unknown	Unknown	Unknown

Chapter 7. Table 2

(*Continued*)

Country	Immediate posthumous collection of sperm or oocytes	Posthumous sperm insemination	Posthumous insemination of frozen ova	Posthumous transfer of frozen embryos
New Zealand		Allowed/Permitted Practised/ Performed	Allowed/Permitted	Allowed/Permitted Practised/Performed
Norway		Allowed/Permitted Practised/ Performed		Allowed/Permitted Practised/Performed
Panamá	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Paraguay	Unknown	Unknown	Unknown	Unknown
Perú	Unknown	Unknown	Unknown	Practised/Performed
Philippines	Unknown	Unknown	Unknown	Unknown
Poland	Unknown	Unknown	Unknown	Unknown
Portugal		Allowed/Permitted		Allowed/Permitted
Republic of the Congo	Unknown	Unknown	Unknown	Unknown
Romania	Unknown	Unknown	Unknown	Unknown
Russia	Unknown	Unknown	Unknown	Unknown
Serbia	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Unknown
Singapore	Unknown	Unknown	Unknown	Unknown
South Africa	Practised/Performed	Practised/Performed	Practised/Performed	Practised/Performed
South Korea				Unknown
Sudan	Unknown	Unknown	Unknown	Unknown
Tanzania	Unknown	Unknown	Unknown	Unknown
The Netherlands	Unknown	Allowed/Permitted Practised/ Performed	Allowed/Permitted	Allowed/Permitted Practised/Performed
Trinidad & Tobago	Practised/Performed	Unknown	Unknown	Unknown
Turkey	Unknown	Unknown	Unknown	Unknown
Ukraine		Allowed/Permitted		Allowed/Permitted
United Arab Emirates	Unknown	Unknown	Unknown	Unknown
United States of America	Allowed/Permitted Practised/Performed	Allowed/Permitted Practised/ Performed	Allowed/Permitted Practised/Performed	Allowed/Permitted Practised/Performed
Uruguay	Unknown	Practised/Performed	Practised/Performed	Practised/Performed
Uzbekistan	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted	Allowed/Permitted
Vietnam	Unknown	Unknown	Unknown	Unknown
Zambia	Unknown	Unknown	Unknown	Unknown

fertility preservation prior to fertility damaging therapy with the expectation of undergoing embryo transfer later. However, one's ability to utilise cryopreserved reproductive tissue for post-mortem purposes depends on local legislation governing this practice, prior written legal agreements, and documentation of the deceased's intent and consent.

Most ART programmes now require consent from the deceased and concerned parties with wording that specifically addresses the disposition of gametes and embryos after death. When immediate posthumous reproduction is being considered, family input is often the only source of information on the intent and wishes of the deceased. In some countries, gametes are considered a form of individual property such that subsequent ownership must be documented in a valid will. Otherwise, the burden of determining whether an individual may have truly wished to procreate after death is often left to the courts.

Analysis of Survey

The 2024 online survey included the following questions:

(1) Are there regulations that govern posthumous reproduction in your country and is posthumous reproduction regulated? How is posthumous reproduction regulated?
(2) What posthumous reproduction treatments are allowed/permitted or practised/performed in your country?

In 2024, representatives from 95 countries responded to the first question. This compares to representatives from 69 countries in 2021 that responded to these questions; 82 countries in 2018, and 63 in 2016. In 2024, 58 (61.1%) representatives answered that there were no regulations governing posthumous reproduction in their countries. Fifteen (15.8%) respondents reported that regulation of immediate posthumous collection of sperm or oocytes, posthumous sperm insemination, posthumous inseminations of frozen ova, and posthumous transfer of frozen embryos existed. Five reported regulations concerning posthumous sperm insemination, posthumous inseminations of frozen ova, and posthumous implantation of frozen embryos. Five reported regulations of posthumous sperm insemination, and posthumous implantation of frozen embryos. Three respondents reported regulation of immediate posthumous collection of sperm or oocytes. Another three reported regulation of posthumous implantation of frozen embryos. Two respondents reported

regulation of posthumous sperm insemination. The remaining four respondents each singly reported regulations concerning:

- immediate posthumous collection of sperm or oocytes, posthumous inseminations of frozen ova, posthumous sperm insemination, posthumous implantation of frozen embryos
- posthumous inseminations of frozen ova, posthumous implantation of frozen embryos
- posthumous sperm insemination, posthumous inseminations of frozen ova
- immediate posthumous collection of sperm or oocytes, posthumous sperm insemination, posthumous inseminations of frozen ova, posthumous implantation of frozen embryos.

In countries in which regulations existed, most reported regulations in the form of Federal/National Laws/Statutes/Ordinances. The remaining respondents reported regulations in the form of a variety of combinations of Federal/National Laws/Statutes/Ordinances, state, regional, provincial, or municipal laws, agency oversight, standards and guidelines from professional organizations, cultural practice, and religious decree (Table 1).

What posthumous reproduction treatments are allowed/permitted or practised/performed in your country?

Seventy respondents answered this question in relation to the *immediate posthumous collection of sperm or oocytes*. Of these responses, six reported that it was allowed; two reported it was both allowed and practised; three reported that it was practised; and 59 (84.2%) answered "unknown".

Seventy-six respondents answered the question regarding *posthumous sperm insemination*. Of these, 11 (14.5%) reported it was allowed; seven reported it was both allowed and practised; three that it was practised; and 55 (72.4%) answered "unknown".

Seventy-three respondents answered the question regarding the *posthumous insemination of frozen ova*. Seven reported that it was allowed; four reported that it was allowed and practised; three reported that it was practised; and 59 (80.1%) replied "did not know".

Seventy-nine respondents answered the question regarding *posthumous transfer of frozen embryos*. Twelve (15.1%) respondents reported that posthumous transfer of frozen embryos was allowed; seven reported that it was allowed and practised; one reported that it was allowed; and 55 (69.6%) answered "unknown" (Table 2).

Discussion

The process of updating relevant legislation remains an ongoing endeavour for many jurisdictions. Data addressing posthumous reproduction practices were first presented in the 2004 edition of *Triennial Report*. Reports from 2007 through 2013 included findings that addressed the permissibility and utilisation of posthumous insemination only. In 2019, the *Triennial Report* was expanded to include questions that addressed posthumous reproduction practices involving insemination with frozen sperm and frozen oocytes from deceased individuals, as well as transferring their frozen embryos.

The 2024 online survey on posthumous reproduction revealed significant global variations in the regulation and practice of this controversial therapy. Representatives from 95 countries submitted responses, reflecting greater engagement compared to previous surveys. The report noted that 58 (61.1%) countries lack regulations governing posthumous reproduction, while others have varying degrees of regulation. These regulations often address immediate posthumous collection of gametes, posthumous insemination of sperm or ova, and implantation of frozen embryos. The regulatory frameworks differ, with some countries relying on federal or national laws, while others use a combination of local laws, agency oversight, and guidelines from professional organizations. The survey also noted that many respondents were uncertain about which specific practices were allowed in their countries.

Summary

Although recent scientific and medical advances have facilitated the retrieval and use of gametes and embryos from individuals who are deceased, complex moral, ethical, and legal issues remain unresolved in most countries. Foremost, it is uncertain which agencies will provide oversight for the retrieval and disposition of these reproductive tissues, and under what circumstances.

The 2019 *Triennial Report* data highlighted the need to address these controversial and complex legal and ethical issues and to provide more comprehensive guidance and legislation. In 2022, despite ongoing and more frequent use, only about a quarter of the respondents reported the existence of government t regulations and legislation focused on posthumous reproduction

The 2025 report confirms the ongoing complexity and variability of posthumous reproduction regulation worldwide. While some countries have established comprehensive legal frameworks, others lack clear guidelines. This has led to ethical and legal dilemmas with resulting uncertainty. The findings highlight the need for ongoing legislative efforts and international dialogue to address the legal and ethical challenges associated with posthumous reproduction.

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CHAPTER 8: GAMETE AND EMBRYO DONATION AND ANONYMITY OF DONORS

Introduction

Third-party reproduction may be accomplished with the use of assisted reproductive techniques (ART) or other medically assisted reproductive (MAR) techniques to create a pregnancy. It may involve the use of donated gametes (sperm or oocytes), embryo donation from a previous IVF cycle, de novo generation of embryos for donation purposes, cytoplasmic transfer, ovarian tissue donation, and testicular tissue donation. The last two options are almost exclusively employed for self-use, not donation to another individual.

Gamete and embryo donations are well-established ART services that have been utilized more extensively in recent years due to increased demand and the expanded scope of medical and non-medical indications for their use. These encompass services that are provided to infertile patients and couples, carriers of genetic conditions, and human immunodeficiency virus (HIV) sero-discordant couples. They are also provided for "nonmedical" indications, including single

Chapter 8. Table 1

Is third party reproduction practised/performed or allowed/permitted in your country?

Country	Practised/performed	Allowed/permitted
Albania	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Argentina	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	
Armenia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Australia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
	Cytoplasmic donation	Cytoplasmic donation
		Ovarian tissue donation
		Testicular tissue donation
Austria	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Belarus	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Benin	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	
	Testicular tissue donation	
Bolivia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Brazil	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Bulgaria	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Ovarian tissue donation	Ovarian tissue donation
Burkina Faso	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Cambodia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Cameroun	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Chile	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
China	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Colombia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Costa Rica	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Côte d'Ivoire	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Croatia		Sperm donation
		Oocyte donation

Chapter 8. Table 1

(*Continued*)

Country	Practised/performed	Allowed/permitted
		Embryo donation from a previous IVF cycle
Cyprus	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Czech Republic	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Democratic Republic of the Congo	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	
Denmark	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	
Dominican Republic	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
		Cytoplasmic donation
		Ovarian tissue donation
		Testicular tissue donation
Ecuador	Sperm donation	
	Oocyte donation	
	Embryo donation from a previous IVF cycle	
	Testicular tissue donation	
El Salvador	Sperm donation	
	Oocyte donation	
Equatorial Guinea	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Estonia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Finland	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
France	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Georgia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Germany	Sperm donation	Sperm donation
	Embryo donation from a previous IVF cycle	
Ghana	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Greece	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Guatemala	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Hong Kong	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle

Chapter 8. Table 1

(*Continued*)

Country	Practised/performed	Allowed/permitted
Hungary	Oocyte donation	Sperm donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	Cytoplasmic donation	
Iceland	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
India	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Iran	Oocyte donation	Oocyte donation
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Ireland		Sperm donation
		Oocyte donation
		Embryo donation from a previous IVF cycle
Israel	Oocyte donation	Oocyte donation
Italy	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Japan	Sperm donation	Sperm donation
Kazakhstan	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
	Cytoplasmic donation	Cytoplasmic donation
	Ovarian tissue donation	Ovarian tissue donation
	Testicular tissue donation	Testicular tissue donation
Kenya	Sperm donation	
	Oocyte donation	
	Embryo donation from a previous IVF cycle	
	Testicular tissue donation	
Latvia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Lithuania	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Malaysia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Mali	Sperm donation	
	Oocyte donation	
	Embryo donation from a previous IVF cycle	
Malta	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Mexico	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Montenegro	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Nepal	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	Cytoplasmic donation	Cytoplasmic donation
New Zealand	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Nigeria	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	De novo generation of embryos for donation

Chapter 8. Table 1

(*Continued*)

Country	Practised/performed	Allowed/permitted
	De novo generation of embryos for donation purposes	purposes Embryo donation from a previous IVF cycle
Norway	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Panamá	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Paraguay	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Perú	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	
	De novo generation of embryos for donation purposes	
Portugal	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Romania	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Russia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Serbia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Singapore	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Slovenia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
South Africa	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
South Korea	Sperm donation	Oocyte donation
	Oocyte donation	
Sweden	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	De novo generation of embryos for donation purposes	Embryo donation from a previous IVF cycle De novo generation of embryos for donation purposes
Tajikistan	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
Tanzania	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
The Netherlands	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Trinidad & Tobago	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	De novo generation of embryos for donation purposes	De novo generation of embryos for donation purposes
Uganda	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Ukraine	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
	Cytoplasmic donation	Cytoplasmic donation

Chapter 8. Table 1

(*Continued*)

Country	Practised/performed	Allowed/permitted
United Kingdom	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
United States of America	Embryo donation from a previous IVF cycle	Sperm donation
	De novo generation of embryos for donation purposes	Oocyte donation
	Ovarian tissue donation	Embryo donation from a previous IVF cycle
	Testicular tissue donation	De novo generation of embryos for donation purposes
	Sperm donation	Ovarian tissue donation
	Oocyte donation	Testicular tissue donation
Uruguay	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Venezuela	Sperm donation	Embryo donation from a previous IVF cycle
	Oocyte donation	De novo generation of embryos for donation purposes
	Embryo donation from a previous IVF cycle	Sperm donation
	De novo generation of embryos for donation purposes	Oocyte donation
Vietnam	Sperm donation	Oocyte donation
	Oocyte donation	Embryo donation from a previous IVF cycle
	Embryo donation from a previous IVF cycle	Sperm donation
Zambia	Sperm donation	Sperm donation
	Oocyte donation	Oocyte donation
	Embryo donation from a previous IVF cycle	Embryo donation from a previous IVF cycle
Zimbabwe	Sperm donation	
	Oocyte donation	

women and men, same-sex couples, and transgender subjects seeking to become parents. Historically, sperm donation was used mainly to overcome severe male factor infertility as well as for other significant andrological disorders or genetic conditions in the male. Sperm donation is increasingly offered to single women and female same-sex couples in many countries. Oocyte donation entails obtaining oocytes from a donor for reproductive or research purposes. Oocyte donation has undergone expanded use in recent years, as many societies have seen a marked trend toward delayed childbearing with a resultant shift from the optimal "reproductive window" to an age at which ovarian follicular depletion may impair female fertility potential. Oocyte and sperm donation may also be used in surrogacy arrangements. Additionally, some couples or individuals elect to use embryos previously created by IVF that are donated by others. Other recipients include those who choose to transfer an embryo created from both egg and sperm donation, termed "de-novo" generation of an embryo.

Cytoplasmic transfer is the donation of healthy cytoplasm from fertile donors to patient's oocytes. This intricate technology may benefit older patients whose oocytes have impaired function as well as younger patients with unexplained infertility and recurrent implantation failure. The aim is to improve fertilization, embryo quality and implantation rates.

Ovarian tissue cryopreservation is considered a crucial option for fertility preservation, for patients that are undergoing chemotherapy, radiotherapy and other individuals with genetic conditions that are likely to lose ovarian function prematurely. Transplantation of cryopreserved ovarian tissue while more costly and invasive has restored ovarian function in a limited group of patients with premature ovarian insufficiency. Similarly, cryopreservation of testicular tissue and/or cells prior to gonadotoxic treatment is now more commonly used for fertility preservation in prepubertal boys. Transplantation of testicular tissue or cells into the patient after treatment represents an important potential approach for fertility restoration, although is still considered experimental. While transplantation of tissue is most often employed for the person from whom it was originally removed, there is also the potential for third-party applications.

A variety of such therapeutic alternatives are currently offered at different locations around the world for third-party reproduction. However, access to these different technologies differs widely between countries, even among those with similar ethnic, cultural, political, and religious traditions.

Analysis of Survey

The following questions pertaining to gamete and embryo donation and donor anonymity were posed:

(1) Is third party reproduction practiced/performed in your country?
(2) Is third party reproduction allowed/permitted in your country?
(3) Are there regulations that govern third party reproduction in your country?
(4) How is donation regulated?
(5) How often is third-party reproduction performed in programs within your country?
(6) Are the qualifications to be a donor based upon medical, mental health and/or any lifestyle (age and occupational) criteria?
(7) Are donors compensated?

Chapter 8. Table 2

Are there regulations that govern third party reproduction in your country?

Country	Sperm	Oocyte	Embryo	De novo embryo	Testicular tissue	Ovarian tissue	Cytoplasm	Agencies
Albania	Yes	Yes						
Argentina	Yes	Yes						
Armenia	Yes	Yes	Yes	Yes				
Australia	Yes	Yes			Yes	Yes	Yes	Yes
Austria	Yes	Yes						
Belarus	Yes	Yes						
Benin	Yes	Yes						
Bosnia and Herzegovina	Yes	Yes						
Brazil	Yes	Yes						
Bulgaria	Yes	Yes				Yes		
Cambodia	Yes	Yes	Yes					
Cameroun	Yes	Yes						
China	Yes	Yes						
Colombia	Yes	Yes						
Costa Rica	Yes	Yes	Yes					
Croatia	Yes	Yes	Yes					
Cyprus	Yes	Yes	Yes					
Czech Republic	Yes	Yes	Yes					
Denmark	Yes	Yes	Yes					
Equatorial Guinea	Yes	Yes	Yes	Yes				
Estonia	Yes	Yes	Yes					
Finland	Yes	Yes	Yes					
France	Yes	Yes	Yes	Yes				
Georgia	Yes	Yes						Yes
Germany	Yes							
Ghana	Yes	Yes	Yes					
Greece	Yes	Yes	Yes					
Hong Kong	Yes	Yes	Yes					
Hungary	Yes		Yes					
Iceland	Yes	Yes						
India	Yes	Yes		Yes				
Iran				Yes				
Ireland	Yes	Yes	Yes					
Italy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Japan	Yes							
Kazakhstan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Latvia	Yes	Yes	Yes	Yes				
Lithuania	Yes	Yes	Yes					
Malta	Yes	Yes	Yes					
Mexico	Yes	Yes	Yes					Yes
Montenegro	Yes	Yes	Yes					
New Zealand	Yes	Yes						
Norway	Yes	Yes						
Portugal	Yes	Yes	Yes					
Romania	Yes		Yes					
Russia	Yes	Yes	Yes					
Serbia	Yes	Yes						
Singapore	Yes	Yes	Yes					
Slovenia	Yes	Yes						
South Africa	Yes	Yes	Yes					Yes
South Korea		Yes						
Sweden	Yes	Yes	Yes	Yes				
The Netherlands	Yes	Yes	Yes					
Tunisia	Yes	Yes	Yes	Yes	Yes		Yes	
Ukraine	Yes	Yes	Yes					
United Kingdom	Yes	Yes	Yes					
United States of America	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Uruguay	Yes	Yes	Yes					
Vietnam	Yes	Yes	Yes					
Zambia	Yes	Yes	Yes					

Chapter 8. Table 3

How is third party reproduction regulated?

Country	Sperm	Oocyte	Embryo	De novo embryo	Ovarian	Testicular	Cytoplasm	Agencies
Albania	Professional	Professional						
Argentina	Federal/National Professional	Federal/National Professional						
Armenia	Federal/National Professional	Federal/National Professional	Federal/National Professional	Federal/National Professional				
Australia	State/Provincial Professional	State/Provincial Professional	Professional	State/Provincial Professional	Federal/ National	State/ Provincial Professional	State/ Provincial Professional	State/ Provincial Professional
Austria	Federal/National	Federal/National						
Belarus	Federal/National Professional	Federal/National Professional						
Benin	Federal/National	Federal/National						
Bosnia and Herzegovina	Federal/National	Federal/National						
Brazil	Agency Professional	Agency Professional						
Bulgaria	Federal/National	Federal/National				Federal/ National		
Cambodia	Federal/National	Federal/National	Federal/National					
Cameroun	Federal/National	Federal/National						
China	Federal/National	Federal/National						
Colombia	Federal/National Agency	Federal/National Agency						
Costa Rica	Professional	Professional	Federal/National					
Croatia	Federal/National	Federal/National	Federal/National					
Cyprus	Federal/National/	Federal/National	Federal/National					
Czech Republic	Federal/National	Federal/National	Federal/National					
Denmark	Federal/National	Federal/National	Federal/National					
Equatorial Guinea	Federal/National	Federal/National	Federal/National	Federal/National				
Estonia	Federal/National	Federal/National	Federal/National					
Finland	Federal/National	Federal/National	Federal/National					
France	Federal/National	Federal/National	Federal/National	Federal/National				
Georgia	Federal/National Cultural Religious	Federal/National Cultural Religious						Federal/ National Cultural Religious
Germany	Federal/National							
Ghana	Federal/National Professional	Federal/National Professional	Professional	Professional				
Greece	Federal/National/	Federal/National	Federal/National					
Hong Kong	Federal/National State/Provincial Agency	Federal/National State/Provincial Agency	Federal/National State/Provincial Agency					
Hungary	Federal/National		Federal/National					
Iceland	Federal/National	Federal/National						
India	Federal/National	Federal/National		Federal/National				
Iran				Federal/National				
Ireland	Federal/National	Federal/National	Federal/National					
Italy	Federal/National	Federal/National	Federal/National	Federal/National	Federal/ National	Federal/ National	Federal/ National	Federal/ National
Japan	Professional Organization							
Kazakhstan	Federal/National	Federal/National	Federal/National	Federal/National	Federal/ National	Federal/ National	Federal/ National	Federal/ National
Latvia	Federal/National Agency	Federal/National Agency	Federal/National Agency	Federal/National Agency				
Lithuania	Federal/National	Federal/National	Federal/National					
Malta	Federal/National	Federal/National	Federal/National					
Mexico	Professional Organization	Professional Organization Standards/Guidelines	Unknown					Unknown
Montenegro	Federal/National	Federal/National	Federal/National					
New Zealand	Federal/National	Federal/National						

Chapter 8. Table 3

(*Continued*)

Country	Sperm	Oocyte	Embryo	De novo embryo	Ovarian	Testicular	Cytoplasm	Agencies
	Agency	Agency						
Norway	Federal/National	Federal/National						
Portugal	Agency	Federal/National Agency	Agency					
Romania	Federal/National Professional		Federal/National Professional					
Russia	Federal/National	Federal/National	Federal/National					
Serbia	Federal/National	Federal/National						
Singapore	Federal/National Agency Professional	Federal/National Agency Professional	Federal/National Agency Professional					
Slovenia	Federal/National	Federal/National						
South Africa	Federal/National	Federal/National	Federal/National					Agency
South Korea		Federal/National						
Sweden	Federal/National Professional	Federal/National Professional	Federal/National Professional	Federal/National Professional				
The Netherlands	Federal/National Professional	Federal/National Professional	Federal/National Professional					
Tunisia	Federal/National	Federal/National	Federal/National	Federal/National	Federal/ National	Federal/ National		
Ukraine	Federal/National Professional	Federal/National Professional	Federal/National Professional					
United Kingdom	Federal/National	Federal/National	Federal/National					
United States of America	Federal/National State/ Provincial Agency Professional	Federal/National State/ Provincial Agency Professional	Federal/National State/Provincial Agency Professional	Federal/National State/ Provincial Agency Professional	Federal/ National Agency Professional	Federal/ National State/ Provincial Agency Professional	Federal/ National State/ Provincial Agency Professional	
Uruguay	Federal/National	Federal/National	Federal/National					
Vietnam	Federal/National	Federal/National	Federal/National					
Zambia	Federal/National Agency	Federal/National Agency	Federal/National Agency					

(8) Are there practices or regulations that address anonymity in your country? If yes, who are they regulated by?
(9) Have there been any modifications to legislation or guidelines on anonymity of donors since 2021b
(10) If not anonymous, what type of information is allowed/ permitted to be provided about the donor to the offspring, and about the offspring to the donor?
(11) If not anonymous, what information is customary to provide?

The following provides summary information about the responses, as well as tabulated data.

Is third party reproduction practiced/performed in your country?

Eighty (69.6%) of the 115 countries that participated in this section of the survey responded to the question regarding whether third party reproduction was practiced/performed in their country. Of these 80 countries, 34 (42.5%) countries responded that "sperm donation, oocyte donation, and embryo donation from previous IVF cycles" were practiced. Noting there were 50 more countries that responded to this question than in 2021, this was 19 more countries that reported these three practices than in the previous report. Fourteen (17.5%) country respondents reported that they practiced these three types of donations (sperm, oocyte, embryo from previous IVF cycle) plus de novo generated embryo for donation purposes.

Eighteen (22.5%) country respondents reported they only practised sperm and oocyte donation. This compared to eight countries in the 2021 report. It is likely that such results are attributable to a greater number of respondents and an expansion of certain donation practices.

Various combinations of donations were reported by the remaining 14 country respondents. Three country respondents reported the performance of sperm, oocyte, embryo donation from a previous IVF cycle and testicular tissue donation (Benin, Ecuador, Kenya), and two country respondents, from Nepal and Ukraine, reported the practise of sperm, oocyte, embryo from a previous IVF cycle, and cytoplasmic donation. The remaining nine country respondents each reported a different combination of donation practices unique to their country. Kazakhstan continued to be the only responding country that reported practising all types of donations. The United States respondent reported that sperm, oocyte, embryo donation from a previous IVF cycle, de novo generation of embryos for donation purposes, ovarian tissue donation, and testicular tissue donation, but not cytoplasmic donation were practised. The Australian respondent reported all types of donations except for ovarian and testicular tissue. The respondent from India reported sperm and oocyte donation, and de novo generation of embryos for donation purposes. Bulgaria reported sperm, oocyte, and ovarian tissue donation. The Hungarian respondent reported sperm donation, embryo donation from a previous IVF cycle, and cytoplasmic donation. The respondent from Germany reported sperm donation and embryo donation from a previous IVF cycle. The respondents from Japan

Chapter 8. Table 4

Are the qualifications to be a donor based upon medical, mental health and/or any lifestyle (age and occupational) criteria?

Country	Sperm	Oocyte	Embryo	Ovarian tissue	Testicular tissue	Cytoplasm
Albania	Yes	Yes	Not addressed			
Argentina	Yes	Yes				
Armenia	Yes	Yes	Yes			
Australia	Yes	Yes	Yes	Not addressed	Not addressed	Yes
Austria	Yes	Yes				
Belarus	Yes	Yes				
Benin	Yes	Yes				
Bolivia	Yes	Yes	Yes			
Brazil	Yes	Yes	Yes			
Bulgaria	Yes	Yes		Yes		
Burkina Faso	Yes	Yes				
Cambodia	Yes	Yes	Yes			
Cameroon	Yes	Yes	Yes			
Chile	Yes	Yes	Yes			
China	Yes	Yes				
Colombia	Yes	Yes	Yes			
Costa Rica	Yes	Yes	No			
Côte d'Ivoire	Unknown	Unknown	Unknown			
Croatia	Yes	Yes	Yes			
Cyprus	Yes	Yes	Unknown			
Czech Republic	Yes	Yes	Yes			
Democratic Republic of the Congo	Yes	Yes				
Denmark	Yes	Yes				
Dominican Republic	Yes	Yes	Unknown	Unknown	Unknown	Unknown
Estonia	Yes	Yes	Yes			
Finland	Yes	Yes	Yes			
France	Yes	Yes	Yes			
Georgia	Yes	Yes				
Germany	Yes					
Ghana	Yes	Yes	Yes			
Greece	Yes	Yes	Yes			
Guatemala	Yes	Yes	No			
Hong Kong	Yes	Yes	Yes			
Hungary	Yes		No			
Iceland	Yes	Yes				
India	Yes	Yes				
Iran		Yes				
Ireland	Unknown	Unknown	Unknown			
Israel		Yes				
Italy	Yes	Yes				
Japan	Not addressed					
Kazakhstan	Yes	Yes	Not addressed	Not addressed	Not addressed	Not addressed
Latvia	Yes	Yes	Yes			
Lithuania	Yes	Yes	Not addressed			
Malaysia	Yes	Yes				
Malta	Yes	Yes	Yes			
Mexico	Yes	Yes	Not addressed			
Montenegro	Yes	Yes	Yes			
Nepal	Not addressed	Not addressed	Not addressed			Not addressed
New Zealand	Yes	Yes	Yes			
Nigeria	Yes	Yes	Not addressed			
Norway	Yes	Yes				
Panamá	Unknown	Yes	Yes			
Paraguay		Yes	Not addressed			
Perú	Yes	Yes				
Portugal	Yes		No			
Romania	No	No				
Russia	Yes	Yes	No			
Serbia	Yes	Yes				
Singapore	Yes	Yes	Yes			
Slovenia	Yes	Yes				
South Africa	Yes	Yes	Yes			
South Korea		Yes				
Sweden	Yes	Yes	Unknown			
Tajikistan	Not addressed	Not addressed				
Tanzania	Yes	Yes				
The Netherlands	Yes	Yes	Yes			
Trinidad & Tobago	Yes	Yes	Yes			
Uganda	Yes	Yes	Yes			
Ukraine	Yes	Yes	Not addressed			Yes
United Kingdom	Yes	Yes	No			
United States of America	Yes	Yes	Yes	Yes	Yes	
Uruguay	Yes	Yes	Yes			
Venezuela	Yes	Yes	Yes			
Vietnam	Yes	Yes	Not addressed			
Zambia	Not addressed	Not addressed	Not addressed			

Chapter 8. Table 5a

Are donors compensated?

Country	Sperm	Min/Max amount	Oocyte	Min/Max amount	Embryo	Min/Max amount
Albania	Reimbursement for time and expenses		Reimbursement for time and expenses		Unknown	
Argentina	Reimbursement for time and expenses		Reimbursement for time and expenses			
Armenia	Compensated Beyond Reimbursement	No min/max	Compensated Beyond Reimbursement	No min/max	No	
Australia	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
Austria	Reimbursement for time and expenses		Reimbursement for time and expenses			
Belarus	Reimbursement for time and expenses		Reimbursement for time and expenses			
Benin	Reimbursement for time and expenses		Reimbursement for time and expenses			
Bolivia	Compensated Beyond Reimbursement	No min/max	Compensated Beyond Reimbursement	No min/max	Compensated Beyond Reimbursement	No min/max
Brazil	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
Bulgaria	Reimbursement for time and expenses		Reimbursement for time and expenses			
Burkina Faso	Reimbursement for time and expenses		Reimbursement for time and expenses			
Cambodia	No		No		No	
Cameroon	Reimbursement for time and expenses		Reimbursement for time and expenses		Reimbursement for time and expenses	
Chile	Compensated Beyond Reimbursement	Unknown	Compensated Beyond Reimbursement	0/3	No	
China	Reimbursement for time and expenses		Reimbursement for time and expenses			
Colombia	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
Costa Rica	No		No		No	
Côte d'Ivoire	Unknown		Unknown		Unknown	
Croatia	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
Cyprus	Reimbursement for time and expenses		Reimbursement for time and expenses		Unknown	
Czech Republic	Reimbursement for time and expenses		Reimbursement for time and expenses		Reimbursement for time and expenses	
Democratic Republic of the Congo	Unknown		Reimbursement for time and expenses			
Denmark	Reimbursement for time and expenses		Reimbursement for time and expenses			
Dominican Republic	Reimbursement for time and expenses		Reimbursement for time and expenses		Unknown	
Equatorial Guinea	Reimbursement for time and expenses		Reimbursement for time and expenses			
Estonia	Compensated Beyond Reimbursement	No min/max	Compensated Beyond Reimbursement	No min/max	Unknown	
Finland	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
France	No		No		No	
Georgia	Compensated Beyond Reimbursement	500/1000	Compensated Beyond Reimbursement	1000/2500		
Germany	Compensated Beyond Reimbursement	Unknown				
Ghana	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
Greece	Reimbursement for time and expenses		Compensated Beyond Reimbursement	-/1900	No	
Guatemala	Compensated Beyond Reimbursement	Not addressed	Compensated Beyond Reimbursement	Not addressed	No	
Hong Kong	Reimbursement for time and expenses		Reimbursement for time and expenses		Reimbursement for time and expenses	
Hungary	Reimbursement for time and expenses				No	
Iceland	Reimbursement for time and expenses		Reimbursement for time and expenses			
India	Reimbursement for time and expenses		Reimbursement for time and expenses			
Iran			Reimbursement for time and expenses			
Ireland	Unknown		Unknown		Unknown	
Israel			Reimbursement for time and expenses			
Italy	No		No			
Japan	Reimbursement for time and expenses					
Kazakhstan	No		No		No	
Latvia	Reimbursement for time		Reimbursement for time		No	

Chapter 8. Table 5a

(Continued)

Country	Sperm	Min/Max amount	Oocyte	Min/Max amount	Embryo	Min/Max amount
	and expenses		and expenses			
Lithuania	No		No		No	
Malaysia	Compensated Beyond Reimbursement	Unknown	Reimbursement for time and expenses			
Malta	No		No		No	
Mexico	Reimbursement for time and expenses		Compensated Beyond Reimbursement	No min/max	Unknown	
Montenegro	Reimbursement for time and expenses		Reimbursement for time and expenses		Reimbursement for time and expenses	
Nepal	Compensated Beyond Reimbursement	Not addressed	Compensated Beyond Reimbursement	Not addressed	Unknown	
New Zealand	Reimbursement for time and expenses		Reimbursement for time and expenses		Reimbursement for time and expenses	
Nigeria	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
Norway	Reimbursement for time and expenses		Reimbursement for time and expenses			
Panamá	Reimbursement for time and expenses		Reimbursement for time and expenses		Unknown	
Paraguay	Compensated Beyond Reimbursement	No min/max	Compensated Beyond Reimbursement	No min/max	No	
Perú	Reimbursement for time and expenses		Reimbursement for time and expenses			
Portugal	Reimbursement for time and expenses		Compensated Beyond Reimbursement	0/900	No	
Romania	No		No			
Russia	Compensated Beyond Reimbursement	5000/15000	Compensated Beyond Reimbursement	50000/500000	No	
Serbia	No		No			
Singapore	Reimbursement for time and expenses		Reimbursement for time and expenses		Unknown	
Slovenia	Reimbursement for time and expenses		Reimbursement for time and expenses			
South Africa	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
South Korea			Reimbursement for time and expenses			
Sweden	Reimbursement for time and expenses		Reimbursement for time and expenses		Unknown	
Tajikistan	Unknown		Unknown			
Tanzania	Unknown		Compensated Beyond Reimbursement	No min/max		
The Netherlands	Reimbursement for time and expenses		Reimbursement for time and expenses		Reimbursement for time and expenses	
Trinidad & Tobago	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
Uganda	Compensated Beyond Reimbursement	No min/max	Compensated Beyond Reimbursement	No min/max	Compensated Beyond Reimbursement	No min/max
Ukraine	Unknown		Reimbursement for time and expenses		Unknown	
United Kingdom	Reimbursement for time and expenses		Reimbursement for time and expenses		Reimbursement for time and expenses	
United States of America	Compensated Beyond Reimbursement	No min/max	Compensated Beyond Reimbursement	No min/max	No	
Uruguay	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
Venezuela	Reimbursement for time and expenses		Reimbursement for time and expenses		No	
Vietnam	No		No		No	
Zambia	Reimbursement for time and expenses		Reimbursement for time and expenses		Unknown	

Chapter 8. Table 5b

Are donors compensated?

Country	Ovarian tissue	Min/Max amount	Testicular tissue	Min/Max amount	Cytoplasm	Min/Max amount
Australia	No		No		No	
Bulgaria	Unknown					
Democratic Republic of the Congo	Unknown		Unknown		Unknown	
Kazakhstan	No		No		Unknown	
Nepal					Unknown	
Ukraine					Reimbursement for time and expenses	
United States of America	Unknown		Unknown			

Chapter 8. Table 6

Are there practices or regulations that address anonymity in your country and who are they regulated by?

		Regulated by?						
Country	**Practices or regulations**	**Federal/ National**	**State/Provincial/ Regional**	**Municipal**	**Agency**	**Professional**	**Cultural practice**	**Religious decree**
Albania	Yes	Yes						
Algeria	Unknown							
Argentina	Yes	Yes				Yes		
Armenia	Yes	Yes						
Australia	Yes	No	Yes	No		No	Unknown	Unknown
Austria	Yes	Yes	No	No	No	No	No	No
Bangladesh	Unknown							
Barbados	Unknown							
Belarus	Yes	Yes	No	No		Yes	No	No
Bolivia	No							
Bosnia and Herzegovina	Yes	Yes						
Brazil	Yes	Yes	No	No	Yes	Yes	No	No
Bulgaria	Yes	Yes						
Burkina Faso	No							
Cambodia	Unknown							
Cameroun	Yes	Yes						
Chile	Yes	No	No	No	No	Yes	No	No
China	Yes	Yes	Yes					
Colombia	Yes	Yes				Yes		
Costa Rica	Yes	Yes						
Côte d'Ivoire	Unknown							
Croatia	Yes	Yes						
Cyprus	Yes	Yes	No	No	No	No	No	No
Czech Republic	Yes	Yes	No	No	No	No	No	No
Democratic Republic of the Congo	No							
Denmark	Yes	Yes						
Dominican Republic	No							
Ecuador	No							
Egypt	No							
El Salvador	No							
Equatorial Guinea	Yes	Yes	No	No	No	No	No	No
Estonia	Yes	Yes	No	No	No	No	No	No
Ethiopia	Unknown							
Finland	Yes	Yes						
France	Yes	Yes	No	No	No	No	No	No
Georgia	No							
Germany	Yes	Yes						
Ghana	No							
Greece	Yes	Yes						
Guatemala	No							
Hong Kong	Yes	Yes			Yes			
Hungary	Yes	Yes						
Iceland	Yes	Yes	No	No	No	No	No	No
India	Yes	Yes						
Iran	Yes	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Iraq	No							
Italy	Yes	Yes						
Japan	No							
Jordan	No							
Kazakhstan	Yes	Yes						
Kenya	No							
Latvia	Yes	Yes	No	No	Yes	No	No	No
Lithuania	Yes	Yes	No	No	No	No	Unknown	No
Malaysia	No							
Mali	No							
Malta	Yes	Yes						
Mexico	No							
Moldova	No							
Montenegro	Yes	Yes						

Chapter 8. Table 6

(*Continued*)

Country	Practices or regulations	Regulated by?						
		Federal/ National	State/Provincial/ Regional	Municipal	Agency	Professional	Cultural practice	Religious decree
Morocco	Unknown							
Myanmar	Unknown							
Namibia	Unknown							
Nepal	Unknown							
New Zealand	Yes	Yes						
Nigeria	Yes					Yes		
Norway	No							
Panamá	No							
Paraguay	No							
Perú	Yes	No	No	No	No	Yes	No	No
Portugal	Yes	Yes						
Republic of the Congo	No							
Romania	No							
Russia	Yes	Yes						
Serbia	Yes	Yes	No	No	No	No	No	No
Singapore	Unknown							
Slovenia	Yes	Yes						
South Africa	Yes	Yes	No	No	No	No	No	No
South Korea	Yes	Yes						
Sudan	No							
Sweden	Yes	Yes	No	No	No	No	No	No
Switzerland	Yes	Yes						
Tajikistan	No							
Tanzania	Unknown							
The Netherlands	Yes	Yes	No	No	No	Yes	No	No
Trinidad & Tobago	No							
Tunisia	Unknown							
Uganda	Yes	No	No	No	No	Yes	Yes	No
Ukraine	Yes	Yes				Yes		
United Kingdom	Yes	Yes	No	No	No	No	No	No
United States of America	Yes	No	No	No	No	Yes	Yes	No
Uruguay	Yes	Yes	No	No	No	No	No	No
Uzbekistan	No							
Venezuela	No							
Vietnam	Yes	Yes	No	No	No	No	No	No
Zambia	Yes	Yes	No	No	Yes	Yes	No	No
Zimbabwe	Unknown							

reported only sperm donation and Israel only oocyte donation (Table 1).

Is third party reproduction allowed/permitted in your country?

Seventy-seven respondents addressed the question concerning whether donation practises are permitted/allowed in the respondents' country. There were some variations in country responses to queries about whether third party reproduction was practised vs permitted. Croatia and Ireland representatives addressed this question but not the previous one, and Ecuador, El Salvador, Kenya, Mali, and Zimbabwe representatives answered the previous question about practise, but not permission. Sixty-six (85.7%) of the 77 respondents noted that the practise was both permitted and practised. The remaining country respondents reported differences between practise and permission. In some countries, Australia, Dominican Republic, Iran, and Sweden what is permitted is not practiced. In other instances, Argentina, Benin, Democratic Republic of Congo, Denmark, Germany, Hungary, and Peru, what was practiced was not reported as permitted. The latter was interpreted to mean that some practises are carried out, although not *explicitly* permitted or prohibited (unregulated), or they could be explicitly prohibited but practised anyway. The survey did not provide the opportunity for further distinction (Table 1).

Are there regulations that govern third party reproduction in your country?

The survey also asked respondents whether there are *regulations* that govern third party reproduction. Sixty respondents answered this question but nineteen respondents that answered the previous question regarding whether donation was permitted/allowed did not answer this question. In 2021, 51% of the respondents did not answer this question.

Consistent with the 2021 data, 23 (38.3%) of the 60 respondents reported that regulation of sperm, oocyte and embryo donation from a previous IVF cycle existed, and 14 (23.3%) respondents reported that sperm and oocyte donation are regulated. Six (10%) of the respondents reported regulation of sperm

Chapter 8. Table7

Have there been any modifications to legislation or guidelines on anonymity of donors since 2021?

Country	Modifications
Albania	Restrict information given to donor
Armenia	Restrict information given to donor
Australia	Increase information given to offspring
Bangladesh	Unknown
Barbados	Unknown
Belarus	Unknown
Bolivia	Unknown
Bosnia and Herzegovina	Unknown
Brazil	Unknown
Bulgaria	Unknown
Burkina Faso	Unknown
Cambodia	Unknown
Cameroon	Increase information given to donor
Chile	Unknown
China	Unknown
Costa Rica	Unknown
Côte d'Ivoire	Unknown
Cyprus	Increase information given to offspring
Democratic Republic of the Congo	Unknown
Dominican Republic	Unknown
Ecuador	Unknown
Egypt	Unknown
El Salvador	Unknown
Estonia	Unknown
Ethiopia	Unknown
France	Increase information given to offspring
Georgia	Increase information given to donor
Germany	Increase information given to offspring
Ghana	Restrict information given to offspring
Greece	Increase information given to offspring
Iceland	Unknown
India	Restrict information given to offspring
Iran	Restrict information given to donor
Iraq	Unknown
Israel	Restrict information given to offspring
Japan	Unknown
Kazakhstan	Increase information given to offspring
Kenya	Unknown
Latvia	Unknown
Malaysia	Unknown
Mali	Unknown
Malta	Increase information given to offspring
Mexico	Unknown
Moldova	Unknown
Montenegro	Restrict information given to offspring
Morocco	Unknown
Myanmar	Unknown
Namibia	Unknown
Nepal	Unknown
Nigeria	Unknown
Norway	Unknown
Panamá	Unknown
Paraguay	Unknown
Perú	Restrict information given to donor
Republic of the Congo	Unknown
Romania	Unknown
Russia	Unknown
Serbia	Increase information given to donor
Singapore	Increase information given to offspring
Slovenia	Unknown
South Korea	Unknown
Sudan	Unknown
Sweden	Increase information given to offspring
Switzerland	Increase information given to offspring
Tanzania	Unknown
The Netherlands	Unknown
Trinidad & Tobago	Unknown
Ukraine	Unknown
United Kingdom	Unknown
United States of America	Increase information given to offspring
Uruguay	Increase information given to offspring
Uzbekistan	Unknown
Vietnam	Unknown
Zambia	Unknown
Zimbabwe	Unknown

donation, oocyte donation, embryo donation from a previous IVF cycle, and de novo generation of embryos for donation purposes. Three (5%) of the respondents reported regulation of all types of donations in addition to agencies. Two respondents reported regulation of only sperm donation; two of sperm donation and embryo donation from a previous cycle, and two of sperm donation, oocyte donation, embryo donation from a previous IVF cycle, and agencies. The remaining eight respondents reported varying regulations that were specific to the respondent's country (Table 2).

In total, six country respondents for Australia, Georgia, Italy, Kazakhstan, Mexico, and South Africa reported regulations for agencies that recruit and match egg donors and recipients as well as surrogates and gestational carriers.

Of note, 42 (70%) of the respondents reported that regulations existed regarding donation, and they also reported donation to be both permitted and practised. Other respondents reported variations between what is practised, permitted and regulated.

How is donation regulated?

In relation to each of the types of donations most respondents reported that regulation typically existed as Federal/National Laws/Statutes/Ordinances. This was the case for sperm donation (35 (60.3%) of 58 country respondents); oocyte donation, 34 (61.8%) of 55 respondents; embryo donation from a previous IVF cycle, 24 (63.2%) of 38 respondents; de novo embryo donation, 7 of 13 respondents; cytoplasmic donation, 2 of 4 respondents; ovarian tissue donation, 4 of 5 respondents; testicular donation, 4 of 6 respondents; and, agency regulation, 2 of 6 respondents.

The next most common response was both Federal/National Laws/Statutes/Ordinances, and Professional Organization Standards/Guidelines. This was the case for sperm donation; 8 (13.8%) of 58 country respondents; oocyte donation, 8 (14.5%) of 55 respondents; embryo donation from a previous IVF cycle 5 (13.2%) of 38 respondents; and, de novo embryo donation, 2 (15.4%) of 13 respondents.

The remaining respondents reported either one or more different combinations of Federal/National Laws/Statutes/Ordinances, State/Provincial/Regional Laws/Statutes/Ordinances, Agency Regulations/Oversight, and/or Professional Organization Standards/Guidelines, respectively for each type of donation (Table 3).

How often is third-party reproduction performed in programs within your country?

Chapter 8. Table 8

If not anonymous, what type of information can be allowed/permitted to be provided to the offspring?

Country	Non-identifying about the donor to the offspring	Identifying about the donor to the offspring	Non-identifying about the offspring to the donor	Identifying about the offspring to the donor
Armenia	Yes			
Australia	Yes	Yes	Yes	No
Austria	No	Yes	No	No
Bangladesh	Unknown	Unknown	Unknown	Unknown
Barbados	Unknown	Unknown	Unknown	Unknown
Belarus	Yes	Unknown	Unknown	Unknown
Bosnia and Herzegovina	Unknown	Unknown	Unknown	Unknown
Brazil	Yes	No	No	No
Bulgaria	Yes	No	Yes	No
Burkina Faso	No	No	No	No
Cambodia	Unknown	Unknown	Unknown	Unknown
Cameroun	Yes		Yes	
Chile	Yes	No	Yes	No
China	No	No	No	No
Colombia				
Costa Rica	No	Yes	No	Yes
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown
Croatia	No	Yes	Yes	No
Cyprus		Yes	Yes	
Czech Republic	Unknown	Unknown	Unknown	Unknown
Democratic Republic of the Congo	Unknown	Unknown	Unknown	Unknown
Denmark	Yes	Yes	No	No
Dominican Republic	Unknown	Unknown	Unknown	Unknown
Ecuador	Yes	No	Yes	No
Egypt	Unknown	Unknown	Unknown	Unknown
Ethiopia	Unknown	Unknown	Unknown	Unknown
Finland	No	Yes	No	No
France	Yes	Yes	No	No
Georgia		Yes		Yes
Germany		Yes	No	
Ghana	No	No	No	No
Greece	Unknown	Yes	Unknown	Unknown
Guatemala	Yes	No	No	No
Hong Kong	Yes	No	No	No
Hungary	Yes	No	Yes	No
Iceland	No	Yes	Yes	No
Iran	Unknown	Unknown	Unknown	Unknown
Iraq	Unknown	Unknown	Unknown	Unknown
Israel	Yes	No	Yes	No
Japan	Unknown	Unknown	Unknown	Unknown
Kazakhstan	Yes	Yes	Yes	Yes
Kenya	Unknown	Unknown		Unknown
Latvia	Yes	No	No	No
Lithuania	No	No	No	No
Malaysia	Unknown	Unknown	Unknown	Unknown
Mali	Yes		Yes	
Malta		Yes		
Mexico	Yes	No	No	No
Moldova	Unknown	Unknown	Unknown	Unknown
Myanmar	Unknown	Unknown	Unknown	Unknown
Namibia	Unknown	Unknown	Unknown	Unknown
Nepal	Unknown	Unknown	Unknown	Unknown
Norway	No	Yes	No	No
Panamá	Unknown	Unknown	Unknown	Unknown
Republic of the Congo	Unknown	Unknown	Unknown	Unknown
Romania	Unknown	Unknown	Unknown	Unknown
Russia	Yes	No	Yes	No
Singapore	Unknown	Unknown	Unknown	Unknown
South Africa	Yes	No	Yes	No
South Korea	Unknown	Unknown	Unknown	Unknown

Chapter 8. Table 8

(*Continued*)

Country	Non-identifying about the donor to the offspring	Identifying about the donor to the offspring	Non-identifying about the offspring to the donor	Identifying about the offspring to the donor
Sweden	Yes	Yes	No	No
Switzerland		Yes		
Tanzania	No	No	No	No
The Netherlands	Yes	No	No	No
Tunisia	Unknown	Unknown	Unknown	Unknown
United Kingdom	Yes	Yes	Unknown	No
United States of America	Yes	Yes	Yes	Yes
Uruguay	Yes	No	Yes	No
Uzbekistan	Unknown	Unknown	Unknown	Unknown
Venezuela	Yes	No	No	No
Vietnam	No	No	No	No
Zambia	Unknown	Unknown	Unknown	Unknown

Several additional countries replied to the question regarding how often third-party reproduction was performed within the respective respondent's country (Chart 1).

Sperm donation and oocyte donation were reported as commonly used by 63 (64.9%) of 97 respondents. This is consistent with the 2022 *Triennial Report*. Fourteen (14.4%) of 97 respondents reported that sperm donation was infrequently used, as did 13 (13.4%) of 97 respondents regarding oocyte donation. Seventeen (17.5%) of 97 respondents reported that sperm donation was never performed as did 18 (18.6%) of 97 of respondents regarding oocyte donation. Three respondents for sperm and oocyte donation answered, "did not know".

Embryo donation (both from previous IVF cycle and de novo) was reported more often as infrequently used; 32 (34.4%) of 93 respondents or never performed, 31 (33.3%) of 93 respondents Twenty-two (23.7%) of 93 respondents reported that each type of embryo donation was commonly used. Eight respondents responded, "did not know".

Most often reported as "never performed" were cytoplasmic donation, 66 (75%) of 88 respondents; ovarian tissue donation, 62 (70.5%) of 88; and testicular tissue donation, 60 (69%) of 87. There were minimal responses that reported cytoplasmic, ovarian or testicular tissue donation as either "commonly" or "infrequently" used. "Did not know" was the response for 18 (20.5%) respondents pertaining to cytoplasmic donation, 22 (25%) respondents for ovarian tissue donation, and 22 (25%) respondents for testicular tissue donation.

Are the qualifications to be a donor based upon medical, mental health and/or any lifestyle (age and occupational) criteria?

This question required respondents to broadly report whether medical, mental health, and/or lifestyle (age and occupational) criteria, were required to be a donor. The specific criteria were not reported. Disclosing medical, mental health, and lifestyle criteria is reported to be a requirement by 65 (90.2%) of 72 respondents regarding sperm donation and 67 (93.1%) of 72 of respondents regarding oocyte donation. Consistent with the 2022 *Triennial Report*, these requirements were reportedly less stringent when applied to embryo donation with 29 (58%) of 50 respondents citing their existence in 2024, compared to 29 (48%) of 61 in the previous report. Few responded to this question regarding cytoplasmic (5 respondents), ovarian (5 respondents), or testicular tissue (4 respondents) donation. Two respondents reported that each of cytoplasmic and ovarian tissue donation requirements must be met, and one respondent reported the same for testicular tissue donation (Table 4).

Are donors compensated?

Compensation (USD) for some forms of donation was more commonplace than for others, and reimbursement for time and expenses was the most common form of compensation (Table 5a-b, Chart 2). Compensation beyond expenses was less frequent, and some country respondents reported no compensation at all. This varied depending on the type of donation also.

Reimbursement for time and expenses was the most common form of recompense reported for sperm donation, with 45 (60.8%) of 74 respondents, and oocyte donation with 46 (62.2%) of 74 respondents affirming. Compensation beyond reimbursement was reported for sperm donation by an additional 13 (17.6%) respondents, and oocyte donation by 15 (20.3%) of respondents. No compensation for sperm or oocyte donation was reported by 10 (13.5%) of respondents. Six and 3 respondents replied "did not know" regarding compensation for sperm and oocyte donation, respectively. In countries where compensation beyond reimbursement was reported for sperm and oocyte donation, Armenia, Bolivia, Estonia, Paraguay, Uganda, and the United States reported that there were no minimum or maximum limits. Some respondents from other countries reported varying amounts of compensation beyond reimbursement, including Georgia ($500/1000 for sperm and $1000/2500 for oocyte donation); Greece ($1900 for oocyte donation); Portugal ($900 for oocyte donation); and, Russia ($ 5000/15000 for sperm donation and 50000/500000 for egg donation). These sums reflected the knowledge of the national respondents and may not accurately indicate the true range of payments made in their respective countries.

Reimbursement for embryo donation was reported to be much less common. Twenty-eight (56%) of 50 respondents reported that no compensation occurs. Only 7 (14%) respondents reported reimbursement for time and expenses, and two respondents reported compensation beyond reimbursement. Thirteen (26%) of 50 respondents answered, "did not know".

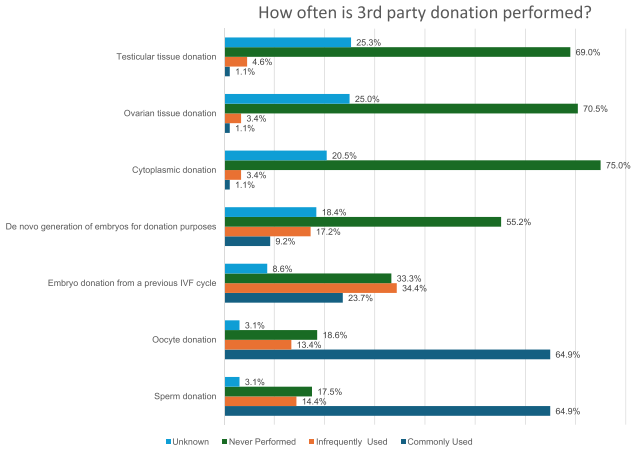
Few country respondents reported on compensation regarding cytoplasmic, ovarian or testicular tissue, donation. Of 5 respondents addressing donation for cytoplasmic and ovarian tissue donation, one respondent noted that reimbursement for time and

Chapter 8. Table 9

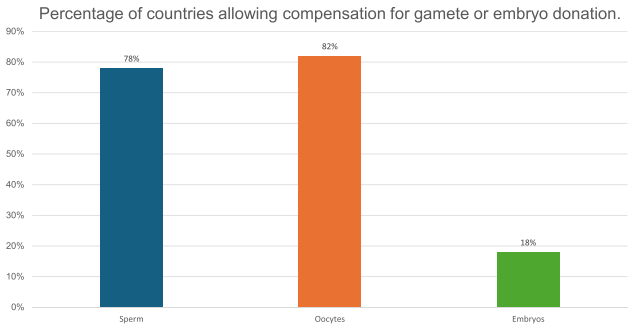
If not anonymous, what type of information is customary to be provided to the offspring?

Country	Non-identifying about the donor to the offspring	Identifying about the donor to the offspring	Non-identifying about the offspring to the donor	Identifying about the offspring to the donor
Armenia	Unknown	Unknown	Unknown	Unknown
Australia	Varies	Varies	Varies	Varies
Austria	Not customary	Customary	Not customary	Not customary
Bangladesh	Unknown	Unknown	Unknown	Unknown
Barbados	Unknown	Unknown	Unknown	Unknown
Belarus	Customary	Unknown	Unknown	Unknown
Bosnia and Herzegovina	Unknown	Unknown	Unknown	Unknown
Brazil	Varies	Not customary	Not customary	Not customary
Bulgaria	Customary	Customary	Customary	Customary
Burkina Faso	Unknown	Unknown	Unknown	Unknown
Cambodia	Unknown	Unknown	Unknown	Unknown
Cameroun	Not customary	Not customary	Not customary	Not customary
Chile	Customary	Not customary	Customary	Not customary
China	Not customary	Not customary	Not customary	Not customary
Costa Rica	Varies	Customary	Varies	Varies
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown
Croatia	Not customary	Customary	Customary	Not customary
Cyprus		Customary	Customary	
Czech Republic	Unknown	Unknown	Unknown	Unknown
Democratic Republic of the Congo	Unknown	Unknown	Unknown	Unknown
Denmark	Customary	Customary	Not customary	Not customary
Dominican Republic	Not customary	Not customary	Customary	Not customary
Egypt	Unknown	Unknown	Unknown	Unknown
Ethiopia	Unknown	Unknown	Unknown	Unknown
Finland	Not customary	Customary	Not customary	Not customary
France	Customary	Customary	Not customary	Not customary
Georgia	Customary	Customary	Customary	Customary
Germany		Customary		
Ghana	Not customary	Not customary	Not customary	Not customary
Greece	Customary	Varies	Not customary	Not customary
Guatemala	Customary	Not customary	Not customary	Not customary
Hong Kong	Not customary			
Hungary	Customary	Not customary	Customary	Not customary
Iceland	Unknown	Unknown	Unknown	Unknown
Iran	Unknown	Unknown	Unknown	Unknown
Iraq	Unknown	Unknown	Unknown	Unknown
Israel	Customary	Not customary	Customary	Not customary
Japan	Unknown	Unknown	Unknown	Unknown
Kazakhstan	Not customary	Not customary	Not customary	Not customary
Kenya	Unknown	Unknown	Unknown	Unknown
Latvia	Customary	Unknown	Unknown	Unknown
Malaysia	Unknown	Unknown	Unknown	Unknown
Mali	Unknown	Unknown	Unknown	Unknown
Malta		Customary		
Mexico	Not customary	Not customary	Not customary	Not customary
Moldova	Unknown	Unknown	Unknown	Unknown
Morocco	Unknown	Unknown	Unknown	
Myanmar	Unknown	Unknown	Unknown	Unknown
Namibia	Customary	Not customary	Customary	Not customary
Nepal	Unknown	Unknown	Unknown	Unknown
New Zealand	Customary	Customary	Not customary	Not customary
Norway	Unknown	Customary	Unknown	Unknown
Panamá	Unknown	Unknown	Unknown	Unknown
Republic of the Congo	Unknown	Unknown	Unknown	Unknown
Romania	Not customary	Not customary	Not customary	Not customary
Russia	Customary	Not customary	Customary	Not customary
Singapore	Unknown	Unknown	Unknown	Unknown
South Africa	Customary	Not customary	Customary	Not customary
South Korea	Unknown	Unknown	Unknown	Unknown
Sweden	Customary	Customary	Not customary	Not customary
Tanzania	Varies	Varies	Varies	Varies
The Netherlands	Customary	Not customary	Not customary	Not customary
United Kingdom	Varies	Varies	Varies	Not customary
United States of America	Varies	Varies	Varies	Varies
Uruguay	Unknown	Unknown	Unknown	Unknown
Uzbekistan	Unknown	Unknown	Unknown	Unknown
Venezuela	Not customary	Not customary	Not customary	Not customary
Vietnam	Not customary	Not customary	Not customary	Not customary
Zambia	Unknown	Unknown	Unknown	Unknown

Chapter 8. Chart 1



Chapter 8. Chart 2



expenses was possible, one respondent that no compensation was payable, and three respondents responded "unknown". Four respondents addressed testicular tissue donation. Two reported that no compensation was feasible, and two replied, "unknown".

Are there practices or regulations that address anonymity in your country; and if yes, who are they regulated by?

Of the 96 country respondents that answered this query, 54 (56.3%) said that there were "practices" that addressed anonymity in their country; 28 (29.2%) answered negatively; and 14 (14.6%) responded "unknown" (Table 6).

Forty-eight country respondents reported the existence of Federal/National regulations; 2 respondents reported the presence of State/Provincial/Regional regulations; and none reported having Municipal regulations. Four reported "Agency" regulations, 12 (12.5%) reported Professional regulations, and 2 reported "cultural" influences. No respondents reported religion as a form of regulation. The queries did not permit determination of specific regulations in each respondent's country.

Have there been any modifications to legislation or guidelines on anonymity of donors since 2021b

Seventy-five country respondents reported on whether there had been modifications to legislation or guidelines since 2021. However, most 52 (69.3%) responded, "did not know". Specific changes reported included, increased information being given to donor offspring by 12 (16%) respondents and to donors by 3 respondents. Four respondents reported that information being given to offspring had been restricted in the interim; and four reported that information given to donors had been restricted. When compared to data from the 2022 report, this still indicates a slight trend towards increasing information available to offspring, while restrictions by some few countries also continues to occur. The large proportion of "unknown" responses limits drawing conclusions about these data (Table 7).

If not anonymous, what type of information is allowed/permitted to be provided about the donor to the offspring, and about the offspring to the donor?

Sixty-nine respondents provided answers regarding the provision of *identifying information* about the donor to the offspring. Of these, twenty (29.0%) countries reported that this was permitted/allowed, twenty-one (30.4%) countries reported that it was not, and twenty-eight (40.6%) countries answered "unknown". Of sixty-six respondents reporting on whether *non-identifying information* about the donor is allowed to be provided to the offspring, 26 (39.4%) responded in the positive, 12 (18.2%) countries answered negatively, and 28 (42.4%) answered "unknown".

Regarding the type of information about the offspring that may be provided to the donor, among 64 respondents only four answered that *identifying information* about the offspring is allowed to be provided to the donor, 31 (48.4%) answered that it is not permitted, and 29 (45.3%) replied "unknown". Sixty-five respondents provided information about *non-identifying information* and 15 (23%) reported that it is allowed, 21 (31.8%) said that it was not permitted; and 29 (43.9%) answered "unknown" (Table 8).

If not anonymous, what information is customary to provide?

This question differs from the previous question in that it specified what information is actually customarily released to offspring and donors, rather than the information that is permitted. These responses cannot be reliably compared since some respondent countries only answered one of the questions and the number of respondents to each question varied.

Regarding *identifying information being provided about the donor to the offspring*, 70 countries responded, 16 (22.9%) respondents reported that it was customary, 18 (25.7%) reported that it was not customary, 31 (44.3%) answered "unknown", and 5 indicated that it varies. In relation to *non-identifying information about the donor being provided to the offspring*, of 66 respondents, 17 (25.8%) reported that it was customarily provided; 13 (19.7%) said it was not customary; and 30 (45%) responded "unknown". Six respondents reported that it "varies".

The provision of information about the offspring to the donor appears to be less customarily provided. Only 11 (16.7%) of 66 respondents reported that *non-identifying information about the offspring was provided to the donor*; 18 (27.3%) reported that it was not customary; and 5 reported that it varies. However, 32 (48.5%), almost half, responded "unknown".

Regarding whether *identifying information about the offspring* was customarily provided to the donor, 2 of 65 (3%) respondents reported that it occurred. Twenty-seven (42%) respondents reported that it was not customary; 5 (7%) said that it varies, and 31 respondents (48%) replied "did not know" (Table 9).

Discussion

Evaluating these practice trends between 2021 and 2024, the evidence suggests an expansion in the practice of sperm, oocyte, and embryo donation. However, while sperm and oocyte

donation appear to be more consistently performed and regulated, there are significant differences in the type (e.g. embryo donation from a previous IVF cycle, and de novo generation of embryos for donation purposes) and frequency of embryo donation procedures permitted and performed and the extent of their regulation and enforcement. There were few responses that reported cytoplasmic, ovarian or testicular tissue donation as either "commonly" or "infrequently" used.

Where third-party reproduction was practised, it was usually reported that such practise was allowed and regulated. However, in some cases, some practices were reported as not allowed but not regulated. This may indicate that they are neither explicitly prohibited nor provided for within legislation, rather than practitioners acting contrary to prohibitions. Further investigation regarding this would be useful. It is also noted that not all types of donations that were regulated were practised in some countries, even when they were permitted

Criteria required to be a donor (such as health, mental health, or lifestyle factors (age or occupational) were reported by most respondents as applicable for sperm and oocyte donation, but were less stringent for embryo donation, and not enumerated for cytoplasmic donation. This is consistent with the previous *Triennial Report* data, but there were more respondents for the 2024 survey.

Reimbursement for expenses continues to be the primary form of compensation for sperm and oocyte donation, while compensation above expenses is offered in some countries but less frequently. The amounts of compensation offered in some countries reflects the individual respondent's knowledge, and compensation beyond reimbursement is known to be highly variable in countries that allow such payments. Likewise, reimbursement for time and expenses may also vary.

Disclosure of information about donors to offspring, and offspring to donors, continues to receive scrutiny as cultural and societal perceptions have increased awareness of identity rights and issues. Advances in genetics and the prevalence of widely available genomic identity platforms have expanded access to previously considered confidential identifying information, often without the involvement of medical personnel. In several countries, especially in Europe, the United States, and Australia, a trend toward increasing the amount of information offered to offspring, recipients, and donors, including disclosures of medical and non-medical information, continues. This type of information is reported to be provided in fewer than half of the countries surveyed and is more frequently accessible to offspring than donors. Almost half of the respondents from the countries surveyed were not aware of the type of information that was required by regulations or customarily provided to offspring and/or donors. This may be because the individual practitioner is removed from the information release process after a child is born, or the particular processes that occur when the offspring reach the age that permits access to the information. In some circumstances, the information is provided to the offspring as a matter of course and in some countries the information may only be released upon application (for example, to a donor conception register) or with a court order.

Summary

The practice of third-party reproduction continues to increase throughout the world. Regulation exists in many countries, primarily via federal regulations, but also by regional laws, local laws, and guidance from professional organizations, and correlation between practise, what is permitted and regulation, exists in most cases. Sperm and oocyte donation are practises performed far more frequently than embryo donation, while cytoplasmic, ovarian tissue and testicular tissue donation is practised infrequently. Compensation for such practices is more common with sperm and oocyte donation and is most often restricted to reimbursement for time and expenses. Compensation is less frequent for embryo donation. When compensation beyond reimbursement of expenses is offered the amount varies widely. The secrecy and anonymity once emphasized in donor conception, continues to undergo reappraisal. Change in relevant regulations and guidelines is continuing, with most supporting the expansion of the amount of information offered to both offspring and donors.

CHAPTER 9: LABORATORY TECHNIQUES AND ARTIFICIAL INTELLIGENCE

Introduction

In vitro laboratory techniques in assisted reproduction technology (ART) have continued to advance, integrating both established and investigational approaches. Key techniques essential to ART practice include micromanipulation procedures such as intracytoplasmic sperm injection (ICSI), various stages of embryo biopsy, including polar body (PB), cleavage stage, blastomere, and trophectoderm (TE), and assisted hatching (AH)[1]. Investigational techniques, such as cytoplasmic transfer and mitochondrial transfer, remain under evaluation due to concerns about safety and efficacy, and their clinical applications are still limited[2-5].

The introduction of ICSI in 1991 marked a transformative milestone in ART enabling many men with severe infertility to achieve biological fatherhood. Over time, the criteria for ICSI use have broadened, and this technique is now an established tool in ART laboratories worldwide[6]. However, reports of increased chromosomal abnormalities in children conceived via ICSI raise questions about potential genetic impacts. The evidence thus far has been unable to discern the underlying genetic risk associated with male factor infertility from the potential additional risk conferred with ICSI. These findings underscore the need for large, unbiased studies with comprehensive genetic testing to clarify these risks[7]. The overuse of ICSI in IVF has sparked debate, with critics highlighting its excessive application beyond male infertility indications, leading to increased costs, potential risks, and diminished natural sperm selection mechanisms, while proponents argue for its precautionary benefits in minimizing fertilization failure despite limited evidence supporting improved live birth outcomes in non-male factor cases[8-9].

Preimplantation genetic testing (PGT) now includes strategies such as PGT for aneuploidy (PGT-A), monogenic disorders (PGT-M), and chromosome structural rearrangements (PGT-SR) (See Chapter 12)[10]. Early PGT-A methods, using fluorescence in situ hybridization (FISH), proved to have limited success in improving outcomes. The second generation of PGT-A, which uses TE biopsy and technologies like single nucleotide polymorphisms array (SNP) and Next-Generation Sequencing (NGS), has led to improved implantation rates but brings new challenges in interpreting mosaicism and managing inconclusive results[11]. PGT for polygenic traits (PGT-P) is an emerging technology that enables the screening of embryos for multiple genetic markers associated with complex, polygenic traits, providing prospective parents with additional information about potential health and

Chapter 9. Table 1

Are these techniques allowed/permitted or practiced/performed in your country?

	ICSI			Assisted hatching		Oocyte maturation	
Country	Allowed/ Permitted	With ejaculated sperm Practised/Performed	With surgically retrieved sperm Practised/Performed	Allowed/ Permitted	Practised/Performed	Allowed/ Permitted	Practised/Performed
Albania	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Algeria	Yes	Commonly Used	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used
Argentina	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Unknown	Infrequently Used
Armenia	Yes	Commonly Used	Infrequently Used	Yes	Infrequently Used	Yes	Never Performed
Australia	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Commonly Used
Austria	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Bangladesh	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Barbados	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	No	
Belarus	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	No	Never Performed
Benin	Yes	Commonly Used	Commonly Used	Yes	Commonly Used		Unknown
Bolivia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Bosnia and Herzegovina	Yes	Commonly Used	Commonly Used	Yes		Yes	Commonly Used
Brazil	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Bulgaria	Yes	Commonly Used	Infrequently Used	Yes	Commonly Used	Yes	Infrequently Used
Burkina Faso	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Cambodia	Unknown	Commonly Used	Infrequently Used	Unknown	Infrequently Used	Unknown	Never Performed
Cameroun	Yes	Commonly Used	Commonly Used	Unknown	Never Performed	Unknown	Never Performed
Chile	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
China	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Colombia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Costa Rica	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Côte d'Ivoire	Yes	Commonly Used	Infrequently Used	Yes	Commonly Used	Yes	Commonly Used
Croatia	Yes	Commonly Used	Commonly Used	Yes	Never Performed	Yes	Never Performed
Cyprus	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Czech republic	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Democratic Republic of the Congo	Yes	Commonly Used	Infrequently Used	Unknown	Never Performed	No	Never Performed
Denmark	Yes	Commonly Used	Commonly Used	Unknown	Unknown	Yes	
Dominican Republic	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Commonly Used
Ecuador	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Never Performed
Egypt	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
El Salvador	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Equatorial Guinea	Yes	Commonly Used	Infrequently Used	Yes	Commonly Used	Yes	Never Performed
Estonia	Yes	Commonly Used	Infrequently Used	Yes	Infrequently Used	Unknown	Never Performed
Ethiopia	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Finland	Yes	Commonly Used	Infrequently Used	Yes	Never Performed	Yes	Never Performed
France	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Gambia	Yes	Commonly Used	Infrequently Used	Yes	Never Performed	Yes	Commonly Used
Georgia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Germany	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Ghana	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Greece	Yes	Commonly Used	Infrequently Used	Yes	Commonly Used	Yes	Infrequently Used
Guatemala	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Hong Kong	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Hungary	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Iceland	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Unknown	Never Performed
India	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Indonesia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Iran	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Jamaica	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Never Performed
Japan	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Jordan	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Kazakhstan	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Kenya	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Commonly Used
Kuwait	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Latvia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Libya	Yes	Commonly Used	Commonly Used	Yes	Unknown	Yes	Unknown
Lithuania	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Never Performed
Malaysia	Yes	Commonly Used	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used
Mali	Yes	Commonly Used	Commonly Used	Unknown	Never Performed	Unknown	Never Performed
Malta	Yes	Commonly Used	Commonly Used	No	Never Performed	Yes	Never Performed
Mexico	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Moldova	No	Unknown	Unknown	No	Unknown	Unknown	Unknown
Montenegro	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Morocco	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Myanmar	Yes	Commonly Used	Unknown	Yes	Commonly Used	No	Never Performed
Namibia	Yes	Commonly Used	Commonly Used	Yes	Unknown	Yes	Infrequently Used
Nepal	Yes	Commonly Used	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used
New Zealand	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Nicaragua	Yes	Commonly Used	Infrequently Used	Yes	Infrequently Used	No	Never Performed
Nigeria	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Norway	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	No	Never Performed
Oman	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used

Chapter 9. Table 1

(*Continued*)

	ICSI			Assisted hatching		Oocyte maturation	
Country	Allowed/ Permitted	With ejaculated sperm Practised/Performed	With surgically retrieved sperm Practised/Performed	Allowed/ Permitted	Practised/Performed	Allowed/ Permitted	Practised/Performed
Pakistan	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Panamá	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Unknown	Infrequently Used
Paraguay	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	No	Never Performed
Perú	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Philippines	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Portugal	Yes	Commonly Used	Commonly Used	No	Never Performed	Yes	Infrequently Used
Qatar	Yes			Yes		Yes	
Republic of the Congo	Yes	Commonly Used	Never Performed	Yes	Infrequently Used	Yes	Commonly Used
Romania	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Unknown	Unknown
Russia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Serbia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Singapore	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Slovenia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
South Africa	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
South Korea	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Spain	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Sudan	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Sweden	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Switzerland	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Infrequently Used
Tajikistan	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	No	Never Performed
Tanzania	Yes	Infrequently Used	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used
The Netherlands	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Yes	Never Performed
Trinidad & Tobago	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Tunisia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Turkey	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Uganda	Yes	Commonly Used	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used
Ukraine	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
United Arab Emirates	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
United States of America	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Uruguay	Yes	Commonly Used	Commonly Used	Yes	Infrequently Used	Unknown	Never Performed
Uzbekistan	No	Commonly Used	Commonly Used	No	Commonly Used	No	Never Performed
Venezuela	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Infrequently Used
Vietnam	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Zambia	Yes	Commonly Used	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Zimbabwe	Yes	Commonly Used	Infrequently Used				

disease risks in their offspring. However, the PGT-P predictive models have not been validated, and it remains controversial due to the complexities of accurately predicting polygenic risk. There are also practical and ethical considerations associated with embryo selection based on polygenic traits[12].

In vitro maturation (IVM), introduced in the 1990s, presents another avenue for improving oocyte yield in cases where ovarian stimulation is challenging. However, its clinical adoption remains limited due to concerns about efficacy and the requisite resource intensity.[16] While IVM could offer alternatives for patients unable to undergo traditional stimulation, ongoing research is needed to assess its impact on offspring health and refine protocols to enhance success rates[13].

Artificial Intelligence (AI) technologies are increasingly utilized in ART, particularly for embryo selection. AI algorithms analyze embryo images, often with time lapse programs, with the intent to predict implantation potential and improve pregnancy rates by enhancing selection accuracy. AI applications have expanded to other areas, such as sperm and oocyte selection and ultrasound monitoring, providing objective assessments that complement embryologists' expertise. However, broad AI adoption in ART requires further validation to confirm its safety and reliability in clinical settings[14].

Analysis of the Survey

The 2024 survey results highlight how ART laboratories are increasingly blending traditional micromanipulation techniques with advanced genetic testing and AI to enhance reproductive outcomes and depth of activity in related research. As these tools continue to evolve, they raise new questions in genetic counseling, regulatory requirements, and patient-centered care, emphasizing the importance of individualized treatment approaches in ART.

The following questions were submitted to the respondents:

(1) Are these laboratory techniques permitted in your country? For: ICSI? AH? Cytoplasmic transfer? PB biopsy? Blastomere biopsy? TE biopsy? Oocyte maturation? Mitochondrial transfer? clustered regularly interspaced short palindromic repeats (CRISPR-Cas9)?
(2) Are there regulations that govern laboratory techniques in your country? For: ICSI? AH? Cytoplasmic transfer? PB biopsy? Blastomere biopsy? TE biopsy? Oocyte maturation? Mitochondrial transfer? CRISPR-Cas9?
(3) How are the above-mentioned techniques regulated?
(4) Which laboratory techniques are performed in your country? For: ICSI with ejaculated sperm? ICSI with surgically retrieved sperm? AH? Cytoplasmic transfer? PB biopsy? Blastomere biopsy? TE biopsy? Oocyte maturation? Mitochondrial transfer? CRISPR-Cas9?
(5) Is AI being used in your country?

Respondents from 110 countries submitted data pertaining to laboratory techniques for the 2024 *Triennial Report* questionnaire. These included responses regarding the performance (Table 1-3) and legal status of micromanipulation procedures and the utilization of AI in the laboratory (Table 4). Micromanipulation

Chapter 9. Table 2

Are these techniques allowed/permitted or practiced/performed in your country?

	Polar body biopsy		Blastomere biopsy		Trophectoderm biopsy	
Country	**Allowed/ Permitted**	**Practised/Performed**	**Allowed/ Permitted**	**Practised/Performed**	**Allowed/ Permitted**	**Practised/Performed**
Albania	Yes	Unknown	Yes	Infrequently Used	Unknown	Unknown
Algeria	Yes	Never Performed	Yes	Never Performed	Yes	Infrequently Used
Argentina	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Armenia	Yes	Never Performed	Yes	Infrequently Used	Yes	Commonly Used
Australia	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Austria	Yes	Infrequently Used	Yes	Never Performed	Yes	Commonly Used
Bangladesh	Yes	Unknown	Yes	Unknown	Yes	Unknown
Barbados	No		No	Unknown	No	Unknown
Belarus	No	Never Performed	Yes	Infrequently Used	Yes	Commonly Used
Benin				Never Performed		Never Performed
Bolivia	Yes	Never Performed	Yes	Never Performed	Yes	Commonly Used
Bosnia and Herzegovina	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used
Brazil	Yes	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Bulgaria	Yes	Unknown	Yes	Infrequently Used	Yes	Commonly Used
Burkina Faso	Yes	Never Performed	Yes	Never Performed	Yes	Never Performed
Cambodia	Unknown	Never Performed	Unknown	Infrequently Used	Unknown	Commonly Used
Cameroun	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Chile	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
China	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Colombia	Yes	Unknown	Yes	Infrequently Used	Yes	Commonly Used
Costa Rica	No	Never Performed	No	Never Performed	No	Never Performed
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Yes	Never Performed	Yes	Never Performed	Yes	Never Performed
Cyprus	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Czech Republic	Yes	Infrequently Used	Yes	Commonly Used	Yes	Commonly Used
Democratic Republic of the Congo	No	Never Performed	No	Never Performed	No	Never Performed
Denmark	Yes	Unknown	Yes		Yes	
Dominican Republic	Unknown	Unknown	Yes	Infrequently Used	Yes	Infrequently Used
Ecuador	No	Never Performed	Yes	Infrequently Used	Yes	Commonly Used
Egypt	Yes	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
El Salvador	Unknown		Yes		Yes	Commonly Used
Equatorial Guinea	Yes	Never Performed	Yes	Infrequently Used	Yes	Commonly Used
Estonia	Yes	Never Performed	Yes	Unknown	Yes	Commonly Used
Ethiopia	Yes	Never Performed	Yes	Never Performed	Yes	Never Performed
Finland	Yes	Never Performed	Yes	Commonly Used	Yes	Commonly Used
France	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used
Gambia	Yes	Unknown	Yes	Never Performed	Unknown	Never Performed
Georgia	No	Unknown	No	Unknown	Yes	Commonly Used
Germany	Yes	Commonly Used	No	Never Performed	Yes	Infrequently Used
Ghana	No	Never Performed	No	Never Performed	Yes	Commonly Used
Greece	Yes	Unknown	Yes	Commonly Used	Yes	Commonly Used
Guatemala	Yes	Never Performed	Yes	Infrequently Used	Yes	Commonly Used
Hong Kong	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Hungary	Yes	Unknown	Yes	Commonly Used	Yes	Commonly Used
Iceland	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
India	Unknown	Unknown	Yes	Infrequently Used	Yes	Commonly Used
Indonesia	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Iran	No	Never Performed	Yes	Commonly Used	Yes	Commonly Used
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	No	Never Performed	Yes	Commonly Used	Yes	Commonly Used
Jamaica	Yes	Never Performed	Yes	Never Performed	Yes	Infrequently Used
Japan	Unknown	Infrequently Used	Unknown	Infrequently Used	Yes	Commonly Used
Jordan	Unknown	Never Performed	Yes	Infrequently Used	Yes	Infrequently Used
Kazakhstan	Yes	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Kenya	Unknown	Never Performed	Yes	Commonly Used	Yes	Commonly Used
Kuwait	Yes	Infrequently Used	Yes	Commonly Used	Yes	Commonly Used
Latvia	Yes	Never Performed	Yes	Infrequently Used	Yes	Commonly Used
Libya	Yes	Unknown	Yes	Unknown	Yes	Unknown
Lithuania	Yes	Never Performed	Yes	Commonly Used	Yes	Commonly Used
Malaysia	No	Never Performed	Yes	Infrequently Used	Yes	Commonly Used

Chapter 9. Table 2

(*Continued*)

	Polar body biopsy		Blastomere biopsy		Trophectoderm biopsy	
Country	**Allowed/ Permitted**	**Practised/Performed**	**Allowed/ Permitted**	**Practised/Performed**	**Allowed/ Permitted**	**Practised/Performed**
Mali	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Malta	Yes	Commonly Used	Yes	Commonly Used	Yes	Commonly Used
Mexico	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Moldova	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Montenegro	Yes	Never Performed	Yes	Infrequently Used	Yes	Infrequently Used
Morocco	Yes	Infrequently Used	Yes	Commonly Used	Yes	Commonly Used
Myanmar	No	Never Performed	No	Never Performed	No	Never Performed
Namibia	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Nepal	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Unknown
New Zealand	Yes	Never Performed	Yes	Commonly Used	Yes	Commonly Used
Nicaragua	No	Never Performed		Never Performed	Yes	Infrequently Used
Nigeria	No	Never Performed	Yes	Commonly Used	Yes	Commonly Used
Norway	No	Never Performed	No	Never Performed	Yes	Commonly Used
Oman	Unknown	Unknown	Yes	Infrequently Used	Yes	Commonly Used
Pakistan	Yes	Infrequently Used	Yes	Commonly Used	Yes	Commonly Used
Panamá	Unknown	Unknown	Unknown	Infrequently Used	Unknown	Commonly Used
Paraguay	No	Never Performed	Unknown	Unknown	Yes	Commonly Used
Perú	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Philippines	No	Never Performed	No	Never Performed	Yes	Commonly Used
Portugal	Yes	Never Performed	Yes	Infrequently Used	Yes	Infrequently Used
Qatar	Yes		Yes		Yes	
Romania	Yes	Unknown	Yes	Commonly Used	Yes	Commonly Used
Russia	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Serbia	No	Infrequently Used	No	Infrequently Used	No	Infrequently Used
Singapore	No	Never Performed	Yes	Commonly Used	Yes	Commonly Used
Slovenia	Yes	Unknown	Yes	Commonly Used	Yes	Commonly Used
South Africa	Yes	Never Performed	Yes	Infrequently Used	Yes	Commonly Used
South Korea	Yes	Infrequently Used	Yes	Commonly Used	Yes	Commonly Used
Spain	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Sudan	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Sweden	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used
Switzerland	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Tajikistan	No	Never Performed	No	Never Performed	Yes	Never Performed
Tanzania	Unknown	Unknown	Yes	Infrequently Used	Yes	Infrequently Used
The Netherlands	Unknown	Unknown	Unknown	Unknown	Yes	Unknown
Trinidad & Tobago	Yes	Never Performed	Yes	Infrequently Used	Yes	Never Performed
Tunisia	Yes	Infrequently Used	Yes	Commonly Used	Yes	Commonly Used
Turkey	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Uganda	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used
Ukraine	Yes	Infrequently Used	Yes	Commonly Used	Yes	Commonly Used
United Arab Emirates	Unknown	Unknown	Yes	Infrequently Used	Yes	Commonly Used
United States of America	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Commonly Used
Uruguay	Yes	Infrequently Used	Yes	Commonly Used	Yes	Commonly Used
Uzbekistan	No	Never Performed	No	Never Performed	No	Commonly Used
Venezuela	Yes	Never Performed	Yes	Infrequently Used	Yes	Infrequently Used
Vietnam	Unknown	Never Performed	Yes	Commonly Used	Yes	Commonly Used
Zambia	Yes	Infrequently Used	Yes	Infrequently Used	Yes	Infrequently Used

techniques addressed in the survey included ICSI with ejaculated and surgically obtained sperm, PGT with PB, blastomere, and TE biopsy; AH; cytoplasmic transfer, mitochondrial transfer and the use of CRISPR-Cas9 technology; and AI.

ICSI is permitted in 105 (96%) of the 109 countries that responded to the survey. Moldova and Uzbekistan responded that ICSI was not permitted, and Iraq and Cambodia responded "unknown". A total of 108 countries reported on ICSI utilization, with 105 (97%) indicating that the technique is commonly used with ejaculated sperm, and 87 (83%) with surgically retrieved sperm. Tanzania reported that ICSI was infrequently utilized, and Moldova and Iraq reported ICSI utilization as "unknown". In 2021, all 74 responding countries reported that ICSI was permitted, and a common procedure used with ejaculated sperm. In 2021, 62 (85%) of the 73 reporting countries responded that ICSI with surgically retrieved sperm was commonly used.

ICSI is closely regulated with multiple layers of oversight to ensure safety, efficacy, and ethical adherence in most of the countries that offer it. Of the 57 countries reporting on the regulation of laboratory techniques, 44 (77%) countries reported that ICSI was regulated. Forty-one (72%) countries reported the type of regulatory governance. The most prominent regulatory

Chapter 9. Table 3

Are these techniques allowed/permitted or practiced/performed in your country?

	Cytoplasmic transfer		Mitochondrial transfer		CRISPR	
Country	**Allowed/ Permitted**	**Practised/Performed**	**Allowed/ Permitted**	**Practised/Performed**	**Allowed/ Permitted**	**Practised/Performed**
Albania	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Algeria	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Argentina	Unknown	Infrequently Used	Unknown	Unknown	No	Unknown
Armenia	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Australia	No	Never Performed	Yes	Infrequently Used	No	Never Performed
Austria	No	Never Performed	No	Never Performed	No	Never Performed
Bangladesh	Yes	Commonly Used	Yes	Unknown	Yes	Unknown
Barbados	No		No		No	
Belarus	No	Never Performed	No	Never Performed	No	Never Performed
Benin	Yes					
Bolivia	Yes	Never Performed	Yes	Never Performed	Yes	Never Performed
Bosnia and Herzegovina	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Brazil	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Bulgaria	No	Never Performed	No	Never Performed	No	Never Performed
Burkina Faso	Yes	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Cambodia	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Cameroun	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Chile	No	Never Performed	No	Never Performed	No	Never Performed
China	Yes	Never Performed	Yes	Never Performed	No	Never Performed
Colombia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Costa Rica	No	Never Performed	No	Never Performed	Unknown	Unknown
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Cyprus	Unknown	Never Performed	Unknown	Never Performed	No	Never Performed
Czech Republic	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Democratic Republic of the Congo	No	Never Performed	No	Never Performed	No	Never Performed
Denmark	Unknown	Never Performed	Unknown	Never Performed	No	Never Performed
Dominican Republic	Unknown	Unknown	Yes	Unknown	Unknown	Unknown
Ecuador	No	Never Performed	No	Never Performed	No	Never Performed
Egypt	Yes	Infrequently Used	Yes	Infrequently Used	No	Never Performed
El Salvador	Unknown		Unknown		Unknown	
Equatorial Guinea	Unknown	Never Performed	Unknown	Never Performed	Yes	Never Performed
Estonia	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Ethiopia	Unknown	Never Performed	Unknown	Never Performed	No	Never Performed
Finland	No	Never Performed	No	Never Performed	No	Never Performed
France	No	Never Performed	No	Never Performed	No	Never Performed
Gambia	Yes	Commonly Used	Unknown	Unknown	Unknown	Unknown
Georgia	No	Unknown	No	Unknown	Unknown	Unknown
Germany	No	Never Performed	No	Never Performed	No	Never Performed
Ghana	No	Never Performed	No	Never Performed	No	Never Performed
Greece	No	Never Performed	No	Never Performed	No	Never Performed
Guatemala	Yes	Never Performed	Yes	Never Performed	Yes	Never Performed
Hong Kong	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Hungary	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Iceland	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
India	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Indonesia		Never Performed			Yes	Infrequently Used
Iran	No	Never Performed	No	Never Performed	No	Never Performed
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	No	Never Performed	No	Never Performed	No	Never Performed
Jamaica	Yes	Never Performed	Yes	Never Performed	Yes	Never Performed
Japan	No	Never Performed	No	Infrequently Used	No	Never Performed
Jordan	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Kazakhstan	Yes	Commonly Used	Yes	Never Performed	Yes	Never Performed
Kenya	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Kuwait	No	Never Performed	No	Never Performed	No	Never Performed
Latvia	Unknown	Never Performed	Unknown	Never Performed	No	Never Performed
Libya	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Lithuania	No	Never Performed	No	Never Performed	No	Never Performed
Malaysia	No	Never Performed	No	Never Performed	No	Never Performed

Chapter 9. Table 3

(Continued)

	Cytoplasmic transfer		Mitochondrial transfer		CRISPR	
Country	**Allowed/ Permitted**	**Practised/Performed**	**Allowed/ Permitted**	**Practised/Performed**	**Allowed/ Permitted**	**Practised/Performed**
Mali	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Malta	No	Never Performed	No	Never Performed	No	Never Performed
Mexico	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Moldova	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Montenegro	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Morocco	Unknown	Never Performed	No	Never Performed	No	Never Performed
Myanmar	No	Never Performed	No	Never Performed	No	Never Performed
Namibia	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Nepal	Yes	Infrequently Used	Unknown	Unknown	Unknown	Unknown
New Zealand	No	Never Performed	No	Never Performed	No	Never Performed
Nicaragua	No	Never Performed	No	Never Performed	No	Never Performed
Nigeria	No	Never Performed	No	Never Performed	Unknown	Unknown
Norway	No	Never Performed	Yes	Never Performed	No	Never Performed
Oman	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Pakistan	No	Never Performed	No	Never Performed	Unknown	Never Performed
Panamá	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Paraguay	No	Never Performed	No	Never Performed	No	Never Performed
Perú	Yes	Never Performed	Unknown	Never Performed	No	Never Performed
Philippines	No	Never Performed	No	Never Performed	No	Never Performed
Portugal	Yes	Never Performed	No	Never Performed	No	Never Performed
Qatar	No		No		Unknown	
Romania	No	Unknown	Unknown	Unknown	Unknown	Unknown
Russia	No	Never Performed	No	Never Performed	No	Never Performed
Serbia	No	Infrequently Used	No	Infrequently Used	No	Infrequently Used
Singapore	No	Never Performed	No	Never Performed	No	Never Performed
Slovenia	No	Never Performed	No	Never Performed	No	Never Performed
South Africa	No	Never Performed	No	Never Performed	No	Never Performed
South Korea	No	Never Performed	No	Never Performed	Yes	Commonly Used
Spain	No	Never Performed	No	Never Performed	No	Never Performed
Sudan	Unknown	Unknown	No	Never Performed	No	Unknown
Sweden	Yes	Infrequently Used	Yes	Infrequently Used	No	Never Performed
Switzerland	No	Never Performed	No	Never Performed	Unknown	Unknown
Tajikistan	No	Never Performed	No	Never Performed	No	Never Performed
Tanzania	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
The Netherlands	Unknown	Never Performed	Unknown	Never Performed	No	Never Performed
Trinidad & Tobago	Yes	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Tunisia	Unknown	Unknown	No	Never Performed	No	Never Performed
Turkey	No	Never Performed	No	Never Performed	No	Never Performed
Uganda	No	Never Performed	No	Never Performed	No	Never Performed
Ukraine	Yes	Infrequently Used	Yes	Infrequently Used	Unknown	Unknown
United Arab Emirates	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
United States of America	No	Unknown	No	Unknown	No	Unknown
Uruguay	Yes	Infrequently Used	Unknown	Unknown	Unknown	Unknown
Uzbekistan	No	Never Performed	No	Never Performed	Unknown	Never Performed
Venezuela	No	Never Performed	No	Never Performed	No	Never Performed
Vietnam	Unknown	Never Performed	Unknown	Never Performed	Unknown	Never Performed
Zambia	Yes	Commonly Used	Unknown	Commonly Used	Unknown	Unknown

influence reported by 16 countries (39%) was Federal/National Laws, Statutes and Ordinances. Professional Organization Standards and/or Guidelines was reported by 8 countries (20%). Oversight from Agency Regulations was reported by 1 country. The remaining countries reported a combination of regulations including Federal/National Laws, Statutes and Ordinances overlapping with Professional Organization Standards and/or Guidelines (17%) and Federal/National Laws, Statutes and Ordinances overlapping with Agency Regulations Oversight (5%). Additionally, intersecting factors like cultural practices and religious decrees sometimes influence accessibility and acceptability and demonstrated how ICSI is governed within a multifaceted regulatory environment.

AH is permitted in 98 (91%) of 108 countries that responded to the survey, compared to 68 (92%) of 74 countries in 2021. AH is not permitted in four countries, including Malta, Moldova, Portugal and Uzbekistan and six countries replied "unknown". Sixty-two (58%) countries reported that AH was commonly used. In 2021; 43 (59%) of 72 countries commonly used AH. Eight (8%) countries reported that AH was never performed, 31 (29%) countries reported infrequent utilization of AH, and 5 (5%) countries reported "unknown" utilization of AH. In 2021,

Chapter 9. Table 4

Is Artificial Intelligence (AI) being used in your country?

Country	Utilized?	Sperm Selection	Oocyte Selection	Embryo Selection	Ultrasound Monitoring	Ovarian Stimulation Algorithms
Albania	Unknown					
Algeria	Unknown					
Argentina	Yes					
Armenia	Unknown					
Australia	Yes					
Austria	Yes			x		
Bangladesh	Yes	x	x	x		
Barbados	Unknown					
Belarus	Unknown					
Bolivia	Yes	x	x	x	x	
Bosnia and Herzegovina	Unknown					
Bulgaria	Yes	x		x		
Burkina Faso	Unknown					
Cambodia	Unknown					
Cameroun	Unknown					
Chile	Yes			x		
China	Yes					
Colombia	Yes		x	x		
Costa Rica	No					
Côte d'Ivoire	Yes	x	x	x	x	x
Croatia	No					
Cyprus	No					
Czech Republic	Yes			x		
Democratic Republic of the Congo	No					
Dominican Republic	Yes	x	x	x		
Ecuador	Unknown					
Egypt	No					
El Salvador	Yes	x		x		
Equatorial Guinea	No					
Ethiopia	No					
Finland	Unknown					
Gambia	No					
Georgia	Unknown					
Ghana	No					
Greece	Yes	x		x		x
Guatemala	Unknown					
Hong Kong	Unknown					
Hungary	Yes			x		
Iceland	No					
Indonesia	Yes			x		
Iran	Yes			x		
Iraq	Unknown					
Ireland	Yes			x	x	
Israel	Yes	x	x	x		
Jordan	Unknown					
Kazakhstan	Yes			x		
Kenya	Yes			x	x	
Kuwait	Yes	x		x		
Latvia	Yes			x		
Libya	No					
Lithuania	No					
Malaysia	Unknown					
Mali	No					
Malta	No					
Mexico	Yes			x		
Moldova	Unknown					
Montenegro	Unknown					
Morocco	No					
Myanmar	Unknown					
Nepal	Unknown					
Nicaragua	Unknown					

Chapter 9. Table 4

(*Continued*)

Country	Utilized?	Sperm Selection	Oocyte Selection	Embryo Selection	Ultrasound Monitoring	Ovarian Stimulation Algorithms
Nigeria	Yes	x				
Norway	Yes	x		x		
Oman	Unknown					
Panamá	Yes			x		x
Paraguay	Yes			x		
Perú	Yes		x	x		
Portugal	No					
Qatar	Yes	x		x		
Republic of the Congo	Yes	x	x	x	x	x
Romania	Unknown					
Singapore	Yes			x		
Slovenia	Yes			x		
South Africa	Yes	x		x		
South Korea	Yes			x		
Spain	Yes					
Sudan	Unknown					
Tajikistan	Unknown					
Tanzania	Unknown					
Trinidad & Tobago	Yes			x		
Tunisia	Unknown					
Uganda	No					
Ukraine	Unknown					
United Arab Emirates	Unknown					
Uruguay	Unknown					
Uzbekistan	Yes	x		x		
Venezuela	Yes		x			
Vietnam	No					
Zambia	Unknown					
Zimbabwe	Yes					x

AH was reported to be used infrequently in 19 (26%), never performed in 9 (12%) and two countries replied "unknown".

Of the 57 countries reporting on the regulation of laboratory techniques, 28 (49%) countries reported that AH was regulated. In 2021, AH was regulated in 17 (46%) of 37 countries. In 2024, twenty-five countries reported the type of regulatory governance. The most prominent regulatory influence was reported by 6 countries (24%) as Federal/National Laws, Statutes and Ordinances. Professional Organization Standards and/or Guidelines. Kazakhstan reported Cultural practice only and Tajikistan reported Agency Regulations Oversight only. The remaining countries reported a combination of regulations such as Federal/National Laws, Statutes and Ordinances overlapping with Professional Organization Standards and/or Guidelines (20%), Federal/National Laws, Statutes and Ordinances overlapping with Agency Regulations Oversight (8%), Federal/National Laws, Statutes and Ordinances overlapping with both State/Provincial/Regional Laws, Statutes and Ordinances, Agency Regulations/Oversight and Professional Organization Standards and Guidelines (8%) and Professional Organization Standards and Guidelines overlapping with Cultural practice and Religious decree (8%).

The 2024 survey included responses from 107 countries that provided data regarding the practice of IVM. IVM is permitted in 87 (81%) of responding countries versus 63 (85%) of 74 responding countries in 2021. In 2024, 9 (8%) countries indicated that IVM was not permitted. This differs from 2021, when only four, Cameroon, Egypt, Mali, and Romania, reported that IVM was not permitted. An additional 11 (10%) countries responded "unknown" in 2024. A total of 105 countries reported on IVM utilization and 25 (24%) countries reported that IVM was commonly used. In 2021, no countries reported that CRISPR-Cas9 technology was commonly used. In 2024, twenty-three (22%) countries reported that IVM was never performed, 52 (50%) countries reported infrequent utilization of IVM, and 5 (5%) countries reported "unknown" for utilization of IVM. In 2021, IVM was commonly used in 16 (23%) countries, infrequently used in 38 (55%) and never performed in 11 (16%).

Of the 57 countries reporting on the regulation of laboratory techniques, 17 (30%) countries reported that IVM was regulated. In 2021, 13 (35%) of 37 responding countries reported the existence of regulations governing IVM. In 2024, 16 countries reported the type of regulatory governance. The most prominent regulatory influence was reported by 5 (31%) countries as Federal/National Laws, Statutes and Ordinances. Professional Organization Standards and/or Guidelines was reported by 3 (19%) countries. The remaining countries reported a combination of regulations such as Federal/National Laws, Statutes and Ordinances overlapping with Agency Regulations Oversight (13%), and Federal/National Laws, Statutes and Ordinances overlapping with Professional Organization Standards and/or Guidelines (13%). The remaining 24% of countries reported a combination of regulations.

One hundred and six (106) countries reported their experiences with PB biopsies. The technique of PB biopsies were permitted in 65 (61%) of the countries, not permitted in 20 (19%) countries and 21 (20%) countries replied "unknown". Five (5%)

countries including Brazil, Egypt, Germany, Kazakhstan, and Malta reported that PB biopsy was commonly used with similar data reported in 2021, 7% of countries including Germany, Italy, Kazakhstan, Morocco, and Nigeria commonly using this method. Forty-four (43%) countries reported that PB biopsy was never performed, 31 (30%) countries reported infrequent utilization of PB biopsy, and 23 (22%) countries replied "unknown" regarding the utilization of this biopsy technique.

Of the 57 countries reporting on the regulation of laboratory techniques, 25 (44%) countries reported that PB biopsy was regulated. Twenty-two countries reported the type of regulatory governance. The most prominent regulatory influence was reported by 8 (36%) countries as Federal/National Laws, Statutes and Ordinances. Professional Organization Standards and/or Guidelines was reported by 4 countries (18%). Cultural practice was reported by Egypt, Kazakhstan and Pakistan (14%). The remaining countries reported a combination of regulations such as Federal/National Laws, Statutes and Ordinances overlapping with Agency Regulations Oversight (14%), Federal/National Laws, Statutes and Ordinances overlapping with Professional Organization Standards and/or Guidelines (9%), Federal/National Laws, Statutes and Ordinances overlapping with both State/Provincial/Regional Laws, Statutes and Ordinances, Agency Regulations/Oversight and Professional Organization Standards and Guidelines (9%) and Professional Organization Standards and Guidelines overlapping with Cultural practice and Religious decree (9%).

Oversight of blastomere biopsy was addressed in responses from 105 countries. Blastomere biopsy is permitted in 80 (76%) of the responding countries, not permitted in 12 (11%) and 13 (12%) countries responded "unknown". In comparison to 2021 data, 59 (81%) of 73 reporting countries responded then that cleavage stage blastomere biopsy was permitted, it was not permitted in seven (10%), and seven (10%) replied "unknown". In 2024, twenty-five (25%) countries reported that blastomere biopsy was commonly used; in 2021, 26 (36%) of 72 countries reported that blastomere biopsy was commonly used. Twenty-three (22%) countries reported that blastomere biopsy was never performed, 45 (43%) countries reported infrequent utilization of blastomere biopsy, and 11 (11%) countries reported "unknown" utilization of this biopsy technique. In 2021, 17 (24%) countries reported that blastomere biopsy was never performed and infrequently used in 27 (38%) countries.

Of the 57 countries reporting on the regulation of laboratory techniques, 31 (54%) countries reported that blastomere biopsy was regulated. In 2021, blastomere biopsy was similarly regulated in 21 (57%) of the 37 responding countries. In 2024, twenty-eight countries reported the type of regulatory governance. The most prominent regulatory influence was reported by 12 countries (43%) as Federal/National Laws, Statutes and Ordinances. Professional Organization Standards and/or Guidelines was reported by 6 countries (21%). Cultural practice was reported as the sole regulation by Kazakhstan. The remaining countries reported a combination of regulations such as Federal/National Laws, Statutes and Ordinances overlapping with Agency Regulations Oversight (11%), Federal/National Laws, Statutes and Ordinances overlapping with Professional Organization Standards and/or Guidelines (11%), Federal/National Laws, Statutes and Ordinances overlapping with State/Provincial/Regional Laws, Statutes and Ordinances, Agency Regulations/Oversight and Professional Organization Standards and Guidelines (4%) and Professional Organization Standards and Guidelines overlapping with Cultural practice and Religious decree (7%).

Oversight of TE biopsy was addressed in responses from 106 countries. TE biopsy is permitted in 88 (83%) of the responding countries, not permitted in 6 (6%) countries and 12 (11%) countries responded "unknown". In comparison with 2021 data, 64 (86%) of 74 reporting countries responded that TE biopsy was permitted, not permitted in four, and six replied "unknown". Sixty-five (62%) countries reported that TE biopsy was commonly used; in comparison to 2021 43 (59%) of 73 countries reported that TE biopsy was commonly used. In 2024, 14 (13%) countries reported that TE biopsy was never performed, 16 (15%) countries reported infrequent utilization of TE biopsy, and 10 (10%) countries replied "unknown" regarding the utilization of this biopsy technique. In 2021, responding countries reported that TE biopsy was never performed in twelve (16%) countries and 15 (21%) countries reported infrequent usage.

Of the 57 countries reporting on the regulation of laboratory techniques, 38 (67%) countries reported that TE biopsy was regulated. In 2021, TE biopsy was regulated in 23 (62%) countries. Thirty-five countries reported the type of regulatory governance. The most prominent regulatory influence was reported by 15 countries (43%) as Federal/National Laws, Statutes and Ordinances. Professional Organization Standards and/or Guidelines was reported by 6 (17%) countries. Kazakhstan reported regulation by cultural practice only. The remaining countries reported a combination of regulations such as Federal/National Laws, Statutes and Ordinances overlapping with Professional Organization Standards and/or Guidelines (17%), Federal/National Laws, Statutes and Ordinances overlapping with Agency Regulations Oversight (9%), Federal/National Laws, Statutes and Ordinances overlapping with both State/Provincial/Regional Laws, Statutes and Ordinances, Agency Regulations/Oversight and Professional Organization Standards and Guidelines (6%), Federal/National Laws, Statutes and Ordinances overlapping with Agency Regulations and Oversight and Professional Organization Standards and Guidelines (3%) and Professional Organization Standards and Guidelines overlapping with Cultural practice and Religious decree (3%).

Cytoplasmic transfer was permitted in 18 (17%) of 106 countries that responded, expressly prohibited in 46 (43%) and forty-two (40%) of the responding countries replied "unknown". In 2021, cytoplasmic transfer was permitted in 15 (21%) of 72 responding countries. A total of 103 countries reported on cytoplasmic transfer utilization, four (4%) countries including Bangladesh, Gambia, Kazakhstan and Zambia reported that cytoplasmic transfer was commonly used. In 2021, only Bolivia reported that cytoplasmic transfer was commonly used. In 2024, seventy (68%) countries reported that cytoplasmic transfer was never performed, 7 (7%) countries reported infrequent utilization of cytoplasmic transfer, and 22 (21%) countries reported "unknown" regarding utilization of cytoplasmic transfer. In 2021, 71 responding countries reported that cytoplasmic transfer was never performed in 52 (73%) countries, infrequently used in five (7%) and 13 (18%) replied "unknown".

Of the 57 countries reporting on the regulation of laboratory techniques, 15 (26%) countries reported that cytoplasmic transfer was regulated. In 2021, cytoplasmic transfer was regulated in four countries (Bulgaria, Canada, Montenegro, and the United States). Fourteen countries reported the type of regulatory governance. The

most prominent regulatory influence was reported by 4 countries (29%) as Federal/National Laws, Statutes and Ordinances. Professional Organization Standards and/or Guidelines was reported by 2 (14%) countries. Kazakhstan reported that it relied on Cultural practice only. The remaining countries reported a combination of regulations such as Federal/National Laws, Statutes and Ordinances overlapping with Agency Regulations Oversight (14%) and 35% with multiple combinations.

Mitochondrial transfer was permitted in 12 (11%) of the 105 countries that responded to the 2024 survey. It was expressly prohibited in 47 (45%) of countries, while 46 (44%) reported "unknown." In comparison, the 2021 survey indicated that mitochondrial transfer was permitted in ten (14%) of 72 responding countries, expressly prohibited in 32 (44%), and reported as "unknown" by 30 (42%). A total of 102 countries reported on mitochondrial transfer utilization, only Zambia reported that mitochondrial transfer was commonly used. In 2021, no countries reported that mitochondrial transfer was commonly used. Seventy (69%) countries reported that mitochondrial transfer was never performed, 6 (6%) countries reported infrequent utilization of mitochondrial transfer, and 25 (25%) countries reported "unknown" utilization of mitochondrial transfer. In 2021, responding countries reported utilization of mitochondrial transfer with 54 (76%) of 71 countries reporting that it was never performed, three countries (Chile, Serbia, and Sweden) reported that it was used infrequently and 14 (20%) replied "unknown".

Of the 57 countries reporting on the regulation of laboratory techniques, 11 (19%) countries reported that mitochondrial transfer was regulated. In 2021, five including Australia, Bulgaria, Canada, China, and the United States, reported the existence of regulations governing mitochondrial transfer. Ten countries reported the type of regulatory governance. The most common regulatory influence was reported by 7 countries (70%) as Federal/National Laws, Statutes and Ordinances. The remaining three (30%) countries reported a combination of regulations overlapping with Federal/National Laws, Statutes and Ordinances.

CRISPR-Cas9 technology was permitted in 8 (8%) of 106 countries that responded including Bangladesh, Bolivia, Equatorial Guinea, Guatemala, Indonesia, Jamaica, South Korea and Kazakhstan. In 2021, seven (10%) of 72 countries including Bangladesh, Bolivia, Brazil, Guatemala, Kazakhstan, Paraguay, and Zimbabwe permitted it. In 2024, the procedure was not permitted in 51 (48%) of the countries that responded to the survey and 47 (44%) countries replied "unknown". In 2021, the procedure was not permitted in 35 (49%) of the countries that responded to the survey and 30 (42%) replied "unknown". A total of 103 countries reported on CRISPR-Cas9 technology utilization, only South Korea reported that CRISPR-Cas9 technology was commonly used. In 2021, no countries reported that CRISPR-Cas9 technology was commonly used. Sixty-nine (67%) countries reported that CRISPR-Cas9 technology was never performed, 2 (2%) countries reported infrequent utilization of CRISPR-Cas9 technology, and 31 (30%) countries reported "unknown" utilization of CRISPR-Cas9 technology. In 2021, 71 responding countries reported CRISPR-Cas9 technology was never performed in 54 (76%) countries, infrequently used in two countries (Brazil and Serbia) and 15 (21%) replied "unknown".

Of the 57 countries reporting on the regulation of laboratory techniques, 9 (16%) countries reported that CRISPR-Cas9 technology was regulated. In 2021, five countries reported the existence of regulations governing CRISPR-Cas9. Nine countries reported the type of regulatory governance. The most prominent regulatory influence was reported by 7 (78%) countries as Federal/National Laws, Statutes and Ordinances. The two (22%) remaining countries reported a combination of regulations overlapping with Federal/National Laws, Statutes and Ordinances.

The 2024 survey analyzed responses from 90 countries regarding the integration of AI into ART. Among the respondents, 40 (44%) countries reported the use of AI in ART, 18 (20%) countries indicated that it was not utilized, and 32 (36%) countries responded "unknown". Specific applications of AI within ART varied: 4 (10%) countries reported AI use for ovarian stimulation, 6 (15%) countries for ultrasound monitoring, 16 (40%) countries for sperm selection, 9 (22%) countries for oocyte selection, and 33 (82%) countries for embryo selection. These findings underscore the growing adoption of AI in critical areas of ART practice (Table 4).

Discussion

Most of the progress in the efficacy and safety of ART since its inception almost 50 years ago can be attributed to advances in laboratory techniques. Micromanipulation procedures performed on gametes and embryos remain essential components of ART, enhancing its success and expanding its scope globally. It is difficult to discern clear trends from the 2024 questionnaire since many of the responses in this section had up to 50% more participants than in the 2021 survey. The data presented may represent more complete capture of national utilization practices rather than evolving trends over the triennium.

Techniques such as ICSI are universally available, with 96% of responding countries permitting its use in 2024. This figure aligns with 2021, though some variations in utilization and regulatory oversight are evident. In 2024, 105 (97%) countries commonly performed ICSI with ejaculated sperm and 87 (83%) with surgically retrieved sperm. In 2021, all 74 countries reporting described ICSI as commonly performed with ejaculated sperm and 62 (85%) of 73 countries with surgically retrieved sperm. ICSI continues to operate under robust regulatory frameworks, with 44 (77%) of reporting countries in 2024 confirming regulation, primarily through federal laws, compared to a similarly high regulatory engagement in 2021.

PGT techniques including PB, blastomere, and TE biopsies show varying levels of adoption. PB biopsy was permitted in 65 (61%) countries in 2024, with only five (5%) reporting common use, mirroring low utilization rates from 2021. With 33 more countries responding in 2024, little change was noted in common blastomere biopsy usage, with 26 (36%) countries noting it in 2021 and 25 (25%) in 2024. TE biopsy is more widely accepted, with 88 (83%) of 106 countries permitting its use in 2024, compared to 64 (86%) of 74 respondents in 2021. Its common utilization increased from 43 (59%) countries to 65 (62%) countries over the same interval. AH was permitted in 98 (91%) of 108 responding countries in 2024, compared to 68 (92%) of 74 countries in 2021. Its common usage increased to include 62 (58%) countries identified in 2024 from 43 (59%) countries in 2021.

Emerging technologies, including cytoplasmic transfer, mitochondrial transfer, and CRISPR-Cas9, continue to face significant restrictions in most countries despite recent advances in treating some heritable diseases attributed to mitochondrial dysfunction with mitochondrial transfer (15). Cytoplasmic

transfer is permitted in 18 (17%) countries in 2024, compared to 15 (21%) in 2021, with common use reported in only four (4%) countries. No significant change was noted in the permissibility of mitochondrial transfer with 33 additional countries responding in 2024, 10 (14%) countries allowed it in 2021 and 12 (11%) countries in 2024. Widespread usage was not revealed in either survey. Similarly, CRISPR-Cas9 was permitted in eight (8%) countries and commonly used in one in 2024. In 2021 it was permitted in seven (10%) but was not commonly used in any.

More countries were found to permit and utilize IVM, with 87 (81%) countries allowing it in 2024 compared to 63 (85%) in 2021; and 25 (24%) countries citing common usage in 2024 compared to 16 (23%) countries in 2021. The integration of AI into ART practices gained traction, with 40 (44%) responding countries using AI in 2024. This topic was not queried in 2021. AI applications were most prominent in embryo selection in 33 (82%) countries, followed by sperm selection in 16 (40%) countries and oocyte selection in nine (22%).

Summary

Overall, 2024 data reflect steady advancement and regulatory evolution of ART techniques over the previous three years. ICSI is almost universally permitted and practiced. TE biopsy for various types of PGT and AH are widely allowed, and their utilization have increased among more countries over the past three years. Notable new findings include the observation that significantly more countries are allowing and using IVM. New to the 2024 survey, queries regarding AI revealed that 40 countries are using it for at least one application, most often for embryo selection. Other investigational methods, including mitochondrial transfer continue to grow cautiously, driven by emerging evidence and varying regulatory landscapes.

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CHAPTER 10: WELFARE OF THE CHILD

Introduction

Concern for the welfare of the child has been an issue of paramount importance since the advent of effective infertility therapy, most notably since ART became widely available. Follow-up studies assessing the health, development, and general well-being of the offspring of infertile couples have been underway since these treatments became routinely available. Overall, these studies were intended to address concerns regarding potential increases in obstetric and neonatal morbidity as well as congenital, chromosomal, or structural anomalies inherited through maternal or paternal pathways because of ART[1–4].

More recently, these concerns have been extended to include the potential impact of preimplantation genetic testing (PGT) and the associations of this procedure with low birth weight and obstetric complications including hypertensive disorders and preterm birth[5]. Parental factors that may contribute to poor outcomes include background and specific female or male infertility conditions. A great deal of attention has also been focused on potential iatrogenic factors, including outcomes associated with ovarian stimulation, endometrial preparation, early manipulation of the embryo, and obstetric care. For these reasons, close monitoring of the outcomes of ART is highly relevant and is essential for assessment and counselling of individuals and couples undergoing infertility treatment[6].

Many countries have committed resources to the pre- and post-natal assessment of the environment that will be provided by the intended family to complement the extensive technical literature addressing the laboratory and clinical contributions to outcomes. This may include a formal assessment of social factors related to the intended parents' ability to provide an appropriate family environment, prior to initiating treatment. The United Kingdom Human Fertilization and Embryology Authority (HFEA) Code of

Chapter 10. Table 1

Are there practices or regulations that address the welfare of the child in your country?

Country	Practices or regulations	Federal/ National	State/Provincial/ Regional	Municipal	Agency	Professional organization	Cultural practice	Religious decree
Albania	No							
Algeria	No							
Argentina	No							
Armenia	Unknown							
Australia	Yes	No	Yes	No	No	Yes	Unknown	Unknown
Austria	Yes	Yes	Yes	No	Yes	No	No	No
Bangladesh	Yes	Yes	Yes	Yes				
Barbados	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Belarus	Yes	Yes	No	No	No	Yes	No	No
Benin	Yes	Yes						
Bolivia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bosnia and Herzegovina	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Brazil	No							
Bulgaria	Yes	Yes						
Burkina Faso	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cambodia	Yes	Yes	No	No	No	No	Yes	No
Cameroun	Unknown							
Chile	No							
China	No							
Colombia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Costa Rica	No							
Côte d'Ivoire	Yes	Yes	Unknown	Unknown	Yes	Unknown	Unknown	Unknown
Croatia	Yes	Yes						
Cyprus	Yes	Yes	No	No	No	No	No	No
Czech Republic	Yes	Yes	No	No	Yes	Yes	Yes	No
Democratic Republic of the Congo	No							
Denmark	Yes	Yes						
Dominican Republic	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Unknown
Ecuador	No							
El Salvador	Yes	Yes						
Equatorial Guinea	Yes	Yes	Unknown	Unknown	Unknown	Unknown	Yes	Unknown
Estonia	Unknown							
Ethiopia	Yes	Yes	Yes	Yes	Yes	Unknown	Unknown	Unknown
Finland	Yes	Yes	Yes	Yes		Yes	Yes	Yes
France	No							
Georgia	Unknown							
Germany	Yes	Yes						
Ghana	Yes	Yes	No	No	No	Yes	Yes	Yes
Greece	Yes	Yes						
Guatemala	No							
Hong Kong	Yes				Yes			
Hungary	Yes	Yes	No	No	No	No	No	No
Iceland	Yes	Yes	No	No	Yes	No	No	No
India	Yes	Yes						
Indonesia	Yes	Yes	Yes					
Iran	No							
Iraq	Unknown							
Ireland	Yes	Yes						
Israel	Yes	Yes	No	No	No	Yes	No	No
Italy	Yes	Yes	Yes	Unknown	Unknown	Unknown	Unknown	Unknown
Jamaica	No							
Japan	Yes	No	No	No	No	Yes	No	No
Jordan	No							
Kazakhstan	Yes	Yes						
Kenya	Yes				Yes	Yes		
Kuwait	Unknown							
Latvia	Yes	Yes	No	No	Yes	Yes	No	No
Libya	Unknown							
Lithuania	Yes	Yes	No	No	Yes	No	No	No
Malaysia	Yes	Yes	No	No	No	No	No	No

Chapter 10. Table 1

(*Continued*)

Country	Practices or regulations	Federal/ National	State/Provincial/ Regional	Municipal	Agency	Professional organization	Cultural practice	Religious decree
Mali	Yes					Yes	Yes	
Malta	Yes	Yes						
Mexico	No							
Moldova	Unknown							
Montenegro	Yes	Yes	No	No	No	Yes	Yes	No
Morocco	Yes	Yes	No	No	Yes	No	No	Yes
Myanmar	Yes	Yes	Yes			Yes	Yes	Yes
Namibia	Yes	Yes	Yes	Unknown	Unknown	Yes	Yes	Yes
Nepal	Yes	Yes	Yes	Unknown	Unknown	Unknown	Yes	Yes
New Zealand	Yes	Yes				Yes		
Nigeria	No							
Norway	Yes	Yes						
Oman	Unknown							
Pakistan	No							
Panamá	No							
Paraguay	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Perú	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Philippines	No							
Portugal	No							
Qatar	Unknown							
Republic of the Congo	Yes	Yes	Yes					
Romania	No							
Russia	Yes	Yes	Yes	Yes		Yes		
Serbia	Yes	Yes	No	No	No	No	No	No
Singapore	Yes	Yes						
Slovenia	Yes					Yes		
South Africa	Yes	Yes	Yes					
South Korea	Yes	Yes						
Sudan	Yes	No	No	No	No	Yes	No	Unknown
Sweden	Yes	Yes	Yes	Yes	Unknown	Yes	Unknown	Unknown
Switzerland	Yes	Yes						
Tajikistan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tanzania	Unknown							
The Netherlands	No							
Trinidad & Tobago	No							
Tunisia	Yes	Yes	Yes					
Uganda	No							
Ukraine	Unknown							
United Arab Emirates	Unknown							
United Kingdom	Yes	Yes	No	No	Yes	No	No	No
United States of America	Yes	No	Yes	No	No	Yes	Yes	No
Uruguay	Yes	Yes	No	No	No	No	No	No
Uzbekistan	Yes	Yes						
Venezuela	Yes	Yes				Yes	Yes	
Vietnam	Unknown							
Zambia	Yes	Yes	Unknown	Unknown	Yes	Yes	Unknown	Unknown
Zimbabwe	Yes	Yes					Yes	

practice[7] provides guidance parameters for assessing, obtaining additional information, and refusing treatment. Assessment pursuant to this guidance includes consideration of prior convictions related to harm of children; child protection measures previously taken in relation to existing children; a history of serious violence or discord within the family; existing mental and physical conditions, a history of drug or alcohol abuse that may impact ability to care for any child that may be born; and, the risk of serious medical conditions to any child born. This chapter examines the status of the environmental assessment process.

Analysis of the Survey

The following five questions that addressed the welfare of the child were included in the 2024 survey:

(1) Are there practices or regulations that address the welfare of the child in your country?
(2) If yes, who oversees those regulations?
(3) Is a formal assessment of the welfare of the child an obligatory part of the fertility clinic evaluation of prospective parents?
(4) Can fertility care be declined if there are concerns regarding the welfare of any potential future child?

Chapter 10. Table 2

Is a formal assessment of the welfare of the child an obligatory part of the fertility clinic evaluation of prospective parents and can fertility care be declined if there are concerns regarding the welfare of any potential future child?

Country	Formal assessment	Fertility care declined
Albania	Unknown	Yes
Algeria	Unknown	No
Argentina	No	Unknown
Armenia	No	Yes
Australia	No	Yes
Austria	No	Yes
Bangladesh	Unknown	Unknown
Barbados	Unknown	Unknown
Belarus	Unknown	Unknown
Benin	Unknown	Unknown
Bolivia	Yes	Yes
Bosnia and Herzegovina	No	Yes
Brazil	No	Yes
Bulgaria	No	Yes
Burkina Faso	No	Unknown
Cambodia	Unknown	Unknown
Cameroun	Unknown	Yes
Chile	No	Yes
China	Yes	Unknown
Colombia	No	Yes
Costa Rica	Yes	Yes
Côte d'Ivoire	Unknown	Unknown
Croatia	No	Yes
Cyprus	No	Unknown
Czech Republic	Yes	Yes
Democratic Republic of the Congo	No	Unknown
Denmark	Yes	Yes
Dominican Republic	No	No
Ecuador	Yes	Yes
El Salvador	Unknown	Unknown
Equatorial Guinea	No	Unknown
Estonia	No	Yes
Ethiopia	No	Unknown
Finland	Yes	Yes
France	Yes	Yes
Georgia	Unknown	Unknown
Germany	No	Yes
Ghana	Yes	Yes
Greece	No	Yes
Guatemala	No	No
Hong Kong	Yes	Yes
Hungary	No	Yes
Iceland	Yes	Yes
India	No	Yes
Indonesia	No	Yes
Iran	No	No
Iraq	Unknown	Yes
Israel	Yes	No
Italy	No	Yes
Jamaica	Yes	Yes
Japan	No	Unknown
Jordan	No	Yes
Kazakhstan	Yes	Yes
Kenya	No	Unknown
Kuwait	Unknown	Unknown
Latvia	No	Yes
Libya	No	No
Lithuania	No	Yes
Malaysia	No	Yes

Chapter 10. Table 2

(Continued)

Country	Formal assessment	Fertility care declined
Mali	Unknown	Yes
Malta	Yes	Unknown
Mexico		No
Moldova	Unknown	Unknown
Montenegro	No	Yes
Morocco	No	Unknown
Myanmar	Unknown	Yes
Namibia	No	Yes
Nepal	No	Unknown
New Zealand	No	Yes
Nigeria	No	Yes
Norway	Yes	Yes
Oman	No	Unknown
Pakistan	No	Yes
Panamá	No	Unknown
Paraguay	No	No
Perú	No	No
Philippines	No	Unknown
Portugal	No	Yes
Qatar	Unknown	Unknown
Republic of the Congo	No	No
Romania	No	No
Russia	No	Yes
Serbia	Yes	No
Singapore	No	Yes
Slovenia	No	Unknown
South Africa	No	Yes
South Korea	No	Unknown
Sudan	Yes	Unknown
Sweden	Yes	Yes
Switzerland	Yes	Yes
Tajikistan	No	No
Tanzania	Unknown	Yes
The Netherlands	No	Yes
Trinidad & Tobago	Yes	Yes
Tunisia	No	No
Turkey	No	
Uganda	No	Yes
Ukraine	No	Unknown
United Arab Emirates	No	Unknown
United Kingdom	Yes	Yes
United States of America	No	Yes
Uruguay	Unknown	Yes
Uzbekistan	Yes	Yes
Venezuela	No	Yes
Vietnam	No	Unknown
Zambia	Unknown	Unknown
Zimbabwe	Yes	Yes

(5) Are prospective parents asked about previous convictions, contact with social services, a history of violence or serious discord within the family, drug or alcohol abuse, the existence of a serious mental or physical condition that might impair their ability to care for a child and risk to the child of a serious medical condition?

Respondents representing 107 countries provided data for the 2024 survey on measures taken to address child welfare.

Are there practices or regulations that address the welfare of the child in your country; and if yes, who oversees those regulations.

The existence of regulations that address the welfare of the child was reported by 69 (64%) of 107 respondents. Twenty-six

Chapter 10. Table 3

Are prospective parents asked about the following information?

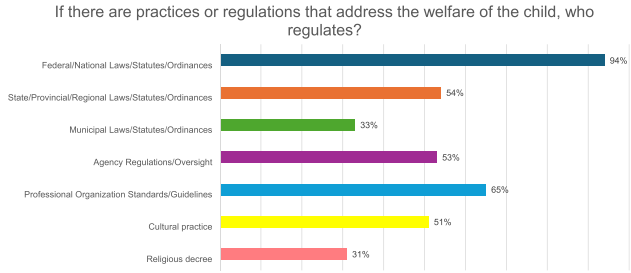
Country	Previous convictions related to harming a child	Contact with social services regarding care of other children	A history of violence or serious discord within the family	Drug or alcohol abuse	The existence of serious mental or physical conditions that might impair their ability to care for a child	Risk to the child of a serious medical condition
Albania	Yes	Unknown	Unknown	Yes	Yes	Yes
Algeria	No	No	No	No	No	Yes
Argentina	No	No	No	Yes	Yes	No
Armenia	No	No	No	Yes	Yes	Unknown
Australia	No	No	No	No	Yes	Yes
Austria	No	No	No	Yes	No	No
Bangladesh	Yes	Yes	Yes	Yes		
Barbados	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	Yes	Unknown	Unknown	Yes	Yes	Yes
Benin	No	No	Yes	Yes	Yes	Unknown
Bolivia	Yes	Yes	Yes	Yes	Yes	Yes
Bosnia and Herzegovina	Unknown	Unknown	Unknown	Yes	Yes	Yes
Brazil	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Bulgaria	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Burkina Faso	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroun	Unknown	Unknown	Yes	Yes	Yes	Unknown
Chile	No	No	No	Yes	Yes	Yes
China	No	No	No	No	No	No
Colombia	Yes	Unknown	Yes		Yes	Yes
Costa Rica	Yes	Yes	Yes	Yes	Yes	Yes
Côte d'Ivoire	Unknown	Unknown	Yes	Yes	Yes	Yes
Croatia	No	No	No	Yes	Yes	Yes
Cyprus	Unknown	Unknown	Unknown	Yes	Yes	Yes
Czech Republic	Unknown	Unknown	Unknown	Yes	Yes	Yes
Democratic Republic of the Congo	Unknown	No	Yes	Yes	Yes	Yes
Denmark	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Dominican Republic	Unknown	Unknown	Unknown	Yes	Yes	Yes
Ecuador	No	No	Yes	Yes	Yes	Yes
El Salvador	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Equatorial Guinea	No	No	No	No	No	Yes
Estonia	No	No	No	Yes	Yes	No
Ethiopia	No	No	No	Yes	Yes	Yes
Finland	Yes	Yes	Yes	Yes	Yes	Yes
France	Unknown	Unknown	Unknown	Yes	Yes	Yes
Georgia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Germany	No	No	No	Yes	Yes	Yes
Ghana	Yes	No	Yes	Yes	Yes	Yes
Greece	No	No	No	No	No	No
Hong Kong	Yes		Yes	Yes	Yes	Yes
Hungary	No	No	No	Yes	Yes	Yes
Iceland	Unknown	Unknown	Unknown	Yes	Yes	Yes
India	No	No	No	Yes	Yes	Yes
Indonesia	Yes	Yes	Unknown	Unknown	Yes	Yes
Iran	No	No	No	No	No	No
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	Yes	Yes	No	Yes	Yes	Yes
Italy	No	No	No	No	No	No
Jamaica	No	No	Yes	Yes	Yes	Yes
Japan	No	No	No	No	No	No
Jordan	No	No	No	No	Yes	Yes
Kazakhstan	Yes	Yes	Yes	Yes	Yes	Yes
Kenya	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Kuwait	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

Chapter 10. Table 3

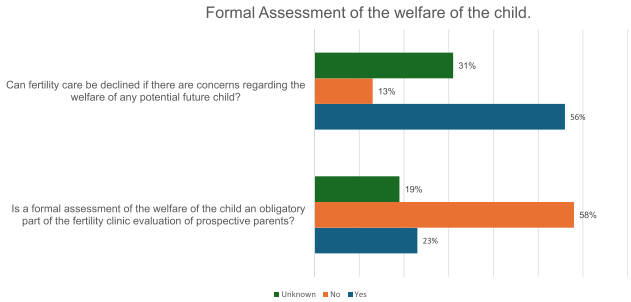
(*Continued*)

Country	Previous convictions related to harming a child	Contact with social services regarding care of other children	A history of violence or serious discord within the family	Drug or alcohol abuse	The existence of serious mental or physical conditions that might impair their ability to care for a child	Risk to the child of a serious medical condition
Latvia	No	No	No	Yes	Yes	Yes
Libya	No	No	No	No	Unknown	No
Lithuania	No	No	No	Yes	Yes	Yes
Malaysia	Yes	Yes	Yes	Yes	Yes	Yes
Mali	No	No	No	No	No	No
Malta	No	No			No	
Mexico	No	No	No	Yes	Yes	Yes
Moldova	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Montenegro	No	No	No	Yes	Yes	Yes
Morocco	No	No	No	Yes	Yes	Yes
Myanmar	Yes	Yes	Yes	Yes	Yes	Yes
Namibia	No	No	No	Yes	Yes	Yes
Nepal	Unknown	Yes	Unknown	Yes	Unknown	Unknown
New Zealand	No	No	No	Yes	Yes	Yes
Nigeria	No	No	No	Yes	Yes	No
Norway	Yes	Yes	Yes	Yes	Yes	Yes
Oman	No	No	No	Yes	No	Yes
Pakistan	Yes	Yes	No	Yes	Yes	Yes
Panamá	No	No	No	No	No	No
Paraguay	No	No	No	No	No	No
Perú	No	No	No	Yes	No	No
Philippines	No	No	No	No	No	No
Portugal	Yes	Yes	Yes	Yes	Yes	Yes
Qatar	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Republic of the Congo	No	Yes		Yes		Yes
Romania	No	No	Yes	Yes	Yes	Yes
Russia	No	No	No	No	Yes	Yes
Serbia	Yes	Yes	Yes	Yes	Yes	Yes
Singapore	Yes	Yes	Yes	Yes	Yes	Yes
Slovenia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
South Africa	No	No	No	No	Yes	Yes
South Korea	No	No	No	No	No	No
Sudan	No	No	No	No	No	No
Sweden	No	No	No	Yes	Yes	Unknown
Switzerland	No	No	No	No	No	Yes
Tajikistan	No	No	No	No	Yes	Yes
Tanzania	Yes	Yes	Yes	Yes	Yes	Yes
The Netherlands	Yes	Yes	Yes	Yes	Yes	Yes
Trinidad & Tobago	Yes	Yes	Yes	Yes	Yes	Yes
Tunisia	No	No	No	Yes	Yes	No
Uganda	Yes	Yes	Yes	Yes	Yes	Yes
Ukraine	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
United Arab Emirates	No	No	Yes	Yes	Yes	Yes
United Kingdom	Yes	No	Yes	Yes	Yes	Unknown
United States of America	No	No	Yes	Yes	Yes	Yes
Uruguay	Yes	Unknown	Unknown	Yes	Yes	Yes
Uzbekistan	No	No	No	Yes	Yes	Yes
Venezuela	Yes	No	Yes	Yes	Yes	Yes
Vietnam	Unknown	Unknown	Unknown	Yes	Yes	Yes
Zambia	Yes	Yes	Unknown	Yes	Yes	Yes
Zimbabwe	Yes	No	Yes	Yes	Yes	Yes

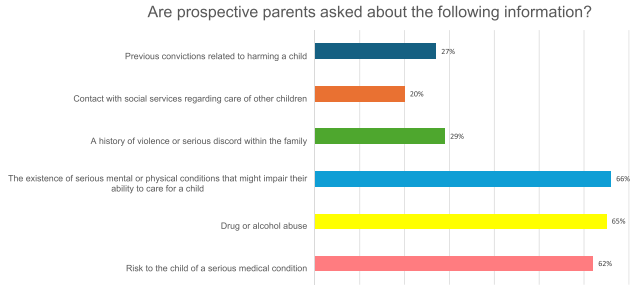
Chapter 10. Chart 1



Chapter 10. Chart 2



Chapter 10. Chart 3



(38%) of 69 respondents were from Europe, 16 (23%) were from Africa, 16 (23%) were from the Americas and 10 (15%) were from Asia or Australia/New Zealand (Table 1, Chart 1).

Sixty-one (94%) of 69 respondents from these countries reported the existence of federal/national laws or statutes that addressed these issues; 25(36.2%) reported the existence of provincial/state laws and municipal/ local regulation, and 13 (18.8%) reported having municipal laws/statutes/ordinances in place. Twenty-one (52.5%) of 40 respondents reported oversight by governmental agencies and 30 (65.2%) of 46 respondents reported that professional organization guidelines were in place.

Respondents from 22 (51.2%) of 43 countries, (Barbados, Bolivia, Bosnia Herzegovina, Burkina Faso, Cambodia, Colombia Czech Republic , Dominican Republic, Equatorial Guinea Finland, Ghana, Mali, Montenegro Myanmar Burma, Namibia, Paraguay, Peru, Tajikistan United States of America Venezuela and Zimbabwe) reported that child welfare was monitored by cultural practice and 12 (30.8%) of 39 countries accomplished this by religious decree (Barbados, Bolivia, Bosnia & Herzegovina, Finland, Morrocco, Namibia, Nepal, Paraguay, Peru, Tajikistan). Many countries rely on a combination of regulatory approaches (Table 1).

Formal assessment of the welfare of the child as an obligatory part of the fertility clinic evaluation of prospective parents; and whether denial of treatment may occur.

When asked whether a formal assessment of the welfare of the child was an obligatory component of the evaluation of prospective parents by the fertility clinic, 24 (23%) of 106 respondents responded that it was and 62 (58%) responded negatively. Twenty (18.9%) replied "unknown" (Table 2, Chart 2).

Of the group of responders, 59 (56%) noted that fertility treatments could be denied if concerns about the welfare of any potential future child were identified and 33 (31%) were uncertain whether treatments could be denied. Only 14 (13.2%) respondents answered that treatment could not be denied in these circumstances (Table 2, Chart 2).

Matters that might impair their ability to care for a child and risk to the child of incurring a serious medical condition.

The survey further asked whether prospective parents are asked about factors that might impair their ability to care for a child and risk to the child of incurring a serious medical condition (Table 3, Chart 3).

Twenty-eight (27%) of 105 respondents reported the existence of systems to address inquiries into convictions related to child abuse, 21 (20%) of 104 respondents for inquiries into whether there had been contact with social services regarding childcare, and 30 (29.1%) of 103 for inquiries about a history of domestic violence. By contrast, 67 (65%) of 103 countries reported a system for investigations into histories of drug or alcohol abuse by prospective parents, and 64 (62%) assessed the potential for serious mental or physical disorders that would impair their ability to care for a child and the risks to the child presented by a significant parental medical condition.

Discussion

The 2024 survey contains almost 50% more responses than previous questionnaires with 107 respondents answering at least one of the questions in this section, compared to 74 in 2022, 78 in 2019 and 68 in 2016. Between 2021 and 2024 existence of some form of oversight increased from 33 (45%) of 74 countries to 69 (64%) of 107 countries, suggesting a significant trend of increased concern for children's well-being reflected in legislation, guidelines, cultural practice, and religious decrees. Many countries employ a combination of approaches to oversight.

However, a majority of countries, 62 (58.4%) of 106, report the absence of a formal assessment mechanism for the welfare of the child as an obligatory part of the fertility evaluation of prospective parents. A minority, 24 (22.6%) have such an assessment process. In 2021, 21 (28.4%) of 74 countries reported having an official process. The majority of the affirmative responses then and in 2024 came from European countries that already had established regulatory agencies in place for oversight.

Despite the absence of a formal assessment process, a majority, 59 (55.7%) of 106 countries reported having the option to deny treatment if they deemed that child welfare was at risk. This indicates that practitioners may act to deny treatment when concerns about child welfare have been uncovered regardless of whether formal requirements for assessment are present.

Summary

The larger number of participants in the current survey offers a more complete picture of how countries address the assessment of

child welfare prior to initiation of fertility care. A significant majority, 69 (64%) of 107 countries, now have some requirements for the assessment of the welfare of the child but a much smaller proportion, 24 (22.6%) of 107 countries have enumerated a formal process for doing so. As in the past , assessment is accomplished by a variety of options including legislation, guidelines, cultural practice, and religious decrees . Most countries, 59 (55.7%) of 106, report that they may deny infertility treatment to patients when relevant concerns have been identified, regardless of whether a formal assessment process exists.

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Chapter 11. Table 1

Are sex selection and sex-selective fetal reduction (SFR) practised/performed or allowed/permitted in your country? If so, are there regulations?

			Regulated?	
Country	**Practised/Performed**	**Allowed/Permitted**	**Sperm sorting**	**SFR for sex selection**
Argentina	Sperm sorting	Sperm sorting	Yes Professional Organization	
Bangladesh	Sperm sorting			
Cameroon	Sperm sorting SFR for sex selection	Sperm sorting SFR for sex selection	No	No
Colombia		Sperm sorting	No	
Côte d'Ivoire	Sperm sorting	Sperm sorting	Unknown	
Dominican Republic		Sperm sorting	No	
Ghana	SFR for sex selection			
Guatemala	Sperm sorting	Sperm sorting	No	
Hong Kong	SFR for sex selection	SFR for sex selection		Yes Federal/National State/Provincial/Regional Agency
Hungary	SFR for sex selection	SFR for sex selection		Yes Federal/National Professional Organization
Indonesia	Sperm sorting	Sperm sorting	No	
Iran	SFR for sex selection	SFR for sex selection		No
Jamaica		Sperm sorting	No	
Jordan	Sperm sorting	Sperm sorting	No	
Kazakhstan	Sperm sorting	Sperm sorting	Yes Cultural practice	
Kuwait	Sperm sorting			
Nepal	Sperm sorting	Sperm sorting	No	
Nigeria	Sperm sorting	Sperm sorting	No	
Panamá	Sperm sorting	Sperm sorting	No	
Paraguay		Sperm sorting	No	
Perú	Sperm sorting	Sperm sorting	No	
Philippines	Sperm sorting	Sperm sorting	No	
Serbia	Sperm sorting			
South Africa		Sperm sorting SFR for sex selection	No	No
Trinidad & Tobago	Sperm sorting			
Turkey	Sperm sorting			
United States of America	Sperm sorting SFR for sex selection	Sperm sorting SFR for sex selection	No	No
Uzbekistan	Sperm sorting	Sperm sorting	Yes Agency	
Venezuela		Sperm sorting	No	
Zambia	Sperm sorting	Sperm sorting	Unknown	

Chapter 11. Table 2

Are there specific ART/IVF centers or institutions where Sperm sorting or Selective fetal reduction (SFR) are only allowed/permitted to be performed?

Country	Sole Practitioner clinic	Small Private physician clinic <5 physician	Large, Private physician clinic 5 or > physicians	Hospital-based clinic	University-based clinic	Public Hospital-based	Unknown
Albania		SFR	SFR		SFR	SFR	
Argentina	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	SFR
Bangladesh	Sperm sorting		Sperm sorting	Sperm sorting	Sperm sorting SFR	Sperm sorting	
Belarus							Sperm sorting SFR
Bolivia							Sperm sorting SFR
Brazil							Sperm sorting SFR
Cambodia							Sperm sorting SFR
Cameroon	SFR						Sperm sorting
China	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting SFR	Sperm sorting SFR	
Colombia	Sperm sorting SFR	Sperm sorting SFR	Sperm sorting SFR	Sperm sorting SFR	Sperm sorting SFR	Sperm sorting SFR	
Côte d'Ivoire							Sperm sorting SFR
Croatia				SFR	SFR	SFR	
Democratic Republic of the Congo							Sperm sorting SFR
Denmark							Sperm sorting SFR
Dominican Republic							Sperm sorting
Egypt	SFR			SFR	SFR	SFR	
France	SFR	SFR	SFR	SFR	Sperm sorting SFR	SFR	SFR
Greece	SFR	SFR	SFR	SFR	SFR	SFR	
Hong Kong	SFR	SFR	SFR	SFR	SFR	SFR	
Hungary				SFR	SFR	SFR	
India							Sperm sorting SFR
Indonesia				Sperm sorting		Sperm sorting	
Iran	SFR			SFR	SFR	SFR	SFR
Israel	SFR					Selective fetal reduction	
Jordan				Sperm sorting SFR	Sperm sorting SFR	Sperm sorting SFR	
Kazakhstan	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	SFR
Kenya							Sperm sorting SFR
Kuwait	Sperm sorting		Sperm sorting	Sperm sorting			
Malaysia							Sperm sorting SFR
Mali							Sperm sorting SFR
Nepal	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	
Nigeria	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting		
Panamá	Sperm sorting	Sperm sorting					
Perú	Sperm sorting	Sperm sorting	Sperm sorting				
Russia							Sperm sorting SFR
Slovenia					SFR		
South Africa	Sperm sorting SFR	Sperm sorting SFR	Sperm sorting SFR	Sperm sorting SFR	Sperm sorting SFR	Sperm sorting SFR	
Spain	SFR	SFR	SFR			SFR	
Sudan							Sperm sorting SFR
Sweden					SFR		
The Netherlands					SFR		
Turkey	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	SFR	SFR	
Uganda		SFR					
United States of America	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting	SFR
Uruguay	Sperm sorting	Sperm sorting	Sperm sorting				
Uzbekistan		Sperm sorting	Sperm sorting	Sperm sorting		SFR	
Zambia	Sperm sorting	Sperm sorting	Sperm sorting	Sperm sorting			

Chapter 11. Table 3

Are these techniques considered experimental or part of established medical practice?

Country	Sperm sorting	Selective fetal reduction for sex selection
Albania	Not addressed	Not addressed
Argentina	Established medical practice	Unknown
Armenia	Unknown	Unknown
Australia	Not addressed	Not addressed
Austria	Not addressed	Not addressed
Bangladesh	Established medical practice	Established medical practice
Belarus	Unknown	Unknown
Bolivia	Not addressed	Not addressed
Bosnia and Herzegovina	Not addressed	Not addressed
Brazil	Unknown	Unknown
Bulgaria	Not addressed	Not addressed
Burkina Faso	Not addressed	Not addressed
Cambodia	Unknown	Unknown
Cameroun	Experimental	Not addressed
Chile	Not addressed	Not addressed
China	Established medical practice	Unknown
Colombia	Not addressed	Not addressed
Côte d'Ivoire	Unknown	Unknown
Croatia	Not addressed	Established medical practice
Cyprus	Not addressed	Not addressed
Czech Republic	Not addressed	Not addressed
Democratic Republic of the Congo	Not addressed	Not addressed
Denmark	Unknown	Unknown
Dominican Republic	Unknown	Unknown
Ecuador	Not addressed	Not addressed
Egypt	Unknown	Established medical practice
Equatorial Guinea	Not addressed	Not addressed
Ethiopia	Not addressed	
Finland	Not addressed	Not addressed
France	Not addressed	Not addressed
Georgia	Not addressed	Not addressed
Germany	Not addressed	Not addressed
Ghana	Not addressed	Not addressed
Greece	Unknown	Not addressed
Hong Kong		Established medical practice
Hungary	Unknown	Established medical practice
Iceland	Unknown	Unknown
India	Unknown	Unknown
Indonesia	Established medical practice	
Iran	Not addressed	Established medical practice
Iraq	Not addressed	Not addressed
Israel	Not addressed	Not addressed
Jamaica	Not addressed	Not addressed
Japan	Not addressed	Not addressed
Jordan	Experimental	Not addressed
Kazakhstan	Not addressed	
Kenya	Unknown	Unknown
Kuwait	Established medical practice	Not addressed
Latvia	Not addressed	Not addressed
Libya	Unknown	Unknown
Lithuania	Not addressed	Not addressed
Malaysia	Not addressed	Unknown
Mali	Not addressed	Not addressed
Mexico	Not addressed	Not addressed
Moldova	Unknown	Unknown
Montenegro	Not addressed	Not addressed
Morocco	Experimental	Not addressed
Myanmar (Burma)	Not addressed	Not addressed
Nepal	Unknown	Not addressed
New Zealand	Not addressed	Not addressed
Nigeria	Not addressed	Not addressed
Norway	Not addressed	Not addressed

Chapter 11. Table 3

(*Continued*)

Country	Sperm sorting	Selective fetal reduction for sex selection
Panamá	Not addressed	Unknown
Paraguay	Experimental	Not addressed
Perú	Experimental	Not addressed
Portugal	Not addressed	Not addressed
Qatar	Unknown	Unknown
Romania	Not addressed	Not addressed
Russia	Unknown	Unknown
Serbia	Not addressed	Not addressed
Singapore	Not addressed	Not addressed
Slovenia	Not addressed	Not addressed
South Africa	Not addressed	Not addressed
South Korea	Not addressed	Not addressed
Spain	Unknown	Not addressed
Sudan	Not addressed	Established medical practice
Sweden	Not addressed	Not addressed
Switzerland	Not addressed	Not addressed
The Netherlands	Not addressed	Not addressed
Tunisia	Unknown	Not addressed
Turkey	Established medical practice	Not addressed
Ukraine	Not addressed	Not addressed
United States of America	Experimental	Unknown
Uruguay	Established medical practice	Not addressed
Uzbekistan	Established medical practice	Not addressed
Venezuela	Experimental	Not addressed
Vietnam	Unknown	Unknown
Zambia	Established medical practice	Not addressed

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CHAPTER 11: SELECTIVE FETAL REDUCTION (SFR) AND SEX SELECTION (SS)

Introduction

Transfer of multiple embryos was considered an essential strategy to achieve an acceptable clinical pregnancy rate when ART was first offered. Clinics had widely different embryo implantation rates and as the technology and success rates improved, an epidemic of multiple pregnancies and their complications, primarily related to prematurity, ensued. Selective fetal reduction (SFR) was undertaken in many countries to convert these conceptions to twin pregnancies, in the case of high order multiple (HOM) pregnancies, or singleton gestations to reduce morbidity for the surviving fetuses and mother. Advances including improved media and incubation systems and embryo selection stratagems, such as pre-implantation genetic testing for aneuploidy (PGT-A) lead to better implantation rates and mitigated the rationale for multiple embryo transfer. Single embryo transfer (SET) became the standard and, where it was implemented, a dramatic reduction in multiple pregnancy and need for SFR was recorded. However, clinical pregnancy rates among ART centres have remained variable and SET is not consistently practiced in many parts of the world[1-3]. Although the HOM rate from ART has fallen in many countries, there are still significant numbers of HOM pregnancies resulting from superovulation therapies with gonadotropins that have provided a continued demand for SFR. SFR is still used extensively but continues to be a contentious topic and its availability, acceptance and employment differ markedly among the Triennial Report responding countries.

Despite its controversial nature, preferences for sex selection (SS) have engrained cultural traditions and have long been a topic of interest among some prospective parents. Most of the proposed methods for sex selection based on sperm separation techniques have been unreliable though they are still performed. However, embryo selection with PGT-A, which reveals the biologic gender of the embryo and SFR after genetic testing for gender are reliable. Both are used in several locations, despite engendering vigorous controversy. The ongoing application of these technologies for these indications makes this topic the most sensitive presented in the current Triennial Report.

Analysis of the Survey

The following questions were posed in the 2024 questionnaire:
(1) Are sex selection and sex-selective fetal reduction practiced/performed in your country?
(2) Is sex selection and sex-selective fetal reduction allowed/permitted in your country?
(3) If allowed/permitted, are there regulations that govern? How is it regulated?

Chapter 11. Table 4

During which procedures is sex selection performed?

Country	Intrauterine insemination	IVF or IVF/ICSI	Fetal reduction
Albania	No	No	No
Argentina	Unknown	Unknown	Unknown
Armenia	No	No	No
Australia	No	Yes	No
Austria	No	No	No
Bangladesh	Yes	Yes	
Belarus		Yes	
Benin	No	No	No
Bolivia	No	Yes	No
Bosnia and Herzegovina	No	No	No
Brazil	No	Yes	No
Bulgaria	No	No	No
Burkina Faso	No	No	Yes
Cambodia	No	Yes	No
Cameroun	No	No	No
Chile	No	No	No
China	No	No	No
Colombia	No	Yes	Unknown
Costa Rica	No	No	No
Côte d'Ivoire	Yes	Yes	No
Croatia	No	No	No
Cyprus	No	No	No
Czech Republic	No	Yes	No
Democratic Republic of the Congo	No	No	No
Dominican Republic		Yes	
Ecuador	No	Yes	No
Egypt	No	Yes	No
El Salvador		Yes	
Equatorial Guinea	No	Yes	No
Estonia	No	No	No
Ethiopia	No	No	No
Finland	No	No	No
France	No	No	No
Georgia	No	No	No
Germany	No	No	No
Ghana	No	Yes	No
Greece	No	No	No
Guatemala	Yes	Yes	No
Hong Kong		Yes	Yes
Hungary	Yes	Yes	Yes
Iceland	No	No	No
India	No	No	No
Indonesia		Yes	
Iran	Yes	Yes	Yes
Iraq	Unknown	Unknown	Unknown
Israel	Yes	Yes	No
Italy	No	No	No
Jamaica	No	Yes	No
Japan	Unknown	Unknown	Unknown
Jordan	Yes	Yes	No
Kazakhstan	No	No	No
Kenya		Yes	
Kuwait	Yes	Yes	Unknown
Latvia	No	No	No
Libya	Yes	Yes	No
Lithuania	No	No	No
Malaysia	Unknown	Unknown	Unknown
Mali	Unknown	Unknown	Unknown
Mexico	No	Yes	No
Moldova	Unknown	Unknown	Unknown
Montenegro	No	No	No
Morocco	No	No	No

Chapter 11. Table 4

(*Continued*)

Country	Intrauterine insemination	IVF or IVF/ICSI	Fetal reduction
Nepal	No	No	No
New Zealand	No	No	No
Nigeria		Yes	
Norway	No	No	No
Oman	No	No	No
Pakistan	Yes	Yes	Unknown
Panamá	No	Yes	No
Paraguay	No	Yes	No
Perú	Yes	Yes	
Philippines	No		No
Portugal	No	No	No
Qatar	Yes	Yes	No
Republic of the Congo	No	No	No
Romania	No	No	No
Russia	No	No	No
Serbia		Yes	
Singapore	No	No	No
Slovenia	No	No	No
South Africa	No	Yes	No
South Korea	No	No	No
Sudan	Unknown	No	No
Sweden	No	No	No
Switzerland	No	No	No
Tajikistan	No	Yes	No
Tanzania	Unknown	Unknown	Unknown
The Netherlands	No	No	No
Tunisia			No
Uganda	No	Yes	No
Ukraine		Yes	
United Kingdom	No	No	No
United States of America	Unknown	Yes	Yes
Uruguay	No	No	Unknown
Uzbekistan	No	No	No
Venezuela	Yes	Yes	No
Vietnam	No	No	No
Zambia	Unknown	Yes	Unknown

(4) Are there specific ART/IVF centers or institutions where these techniques are only allowed/permitted to be performed?
(5) Are these techniques considered experimental or part of established medical practice?
(6) During which procedures is sex selection performed?
(7) Is selective fetal reduction allowed/permitted in your country?
(8) Is selective fetal reduction performed in your country? If yes, frequency
(9) If allowed/permitted in your country, are there regulations that address selective fetal reduction? If yes, who oversees the regulations?
(10) Are outcomes of selective reduction monitored and/or documented?

Some data was provided by 108 national respondents for this section, but many representatives did not answer all of the relevant questions. In 2021, our collected data reflected the practices of 75 countries regarding this topic. National participants provided significantly more information about SFR (108 responses) than all types of SS (24 responses).

(1) *Are sex selection and sex-selective fetal reduction practiced/performed in your country?*
Only 24 respondents acknowledged that SS was performed by either sperm sorting or SFR specific for SS (Table 1, Chart 1). Of this group, 18 (75%) only utilize sperm sorting, four (17%) use SFR alone for this purpose and two (8%) use both.
(2) *Is sex selection and sex-selective fetal reduction allowed/permitted in your country?*
Of 24 the countries that responded, 18 countries (75%) allow or permit sperm sorting for sex selection, three countries (13%) allow selective fetal reduction for sex selection and three countries (13%) permit both sperm sorting and selective fetal reduction (Table 1, Chart 2).
(3) *If allowed/permitted, are there regulations that govern? How is it regulated?*
Of 21 the countries that responded, 16 countries (76%) have no formal regulatory oversight for sperm sorting. Three countries (14%) do have oversight and one each relies on agency regulations, cultural practice and professional organization standards and 2 countries (10%) responded "unknown". Only 6 countries reported on SFR for SS of which four (67%) do not permit it and two (33%) do relying on federal/national laws, statutes, or ordinances and professional organization standards/guidelines or federal/national laws, state/provincial/regional laws, and agency regulations/oversight.
(4) *Are there specific ART/IVF centers or institutions where these techniques are only allowed/permitted to be performed?*

Chapter 11. Table 5

Is selective fetal reduction allowed/permitted or performed in your country? If yes, frequency?

Country	Allowed/Permitted	Performed	Frequency
Albania	Not Addressed		
Algeria	Not Addressed		
Argentina	Unknown	Unknown	Unknown
Armenia	Allowed	Yes	Infrequently used
Australia	Allowed	Yes	Infrequently used
Austria	Allowed with conditions	Yes	Infrequently used
Bangladesh	Not Addressed		
Barbados	Unknown		
Belarus	Allowed with conditions	Yes	Infrequently used
Benin	Unknown		
Bolivia	Not allowed		
Bosnia and Herzegovina	Allowed with conditions	Yes	Infrequently used
Brazil	Not allowed		
Bulgaria	Allowed	Yes	Infrequently used
Burkina Faso	Unknown		
Cambodia	Not Addressed		
Cameroon	Allowed	Yes	Infrequently used
Chile	Not allowed		
China	Allowed	Yes	Infrequently used
Colombia	Allowed with conditions	Yes	Infrequently used
Costa Rica	Not allowed		
Côte d'Ivoire	Unknown		
Croatia	Allowed with conditions	No	
Cyprus	Not allowed		
Czech Republic	Not allowed		
Democratic Republic of the Congo	Not Addressed		
Denmark	Allowed	Yes	Infrequently used
Dominican Republic	Not allowed		
Ecuador	Not Addressed		
Egypt	Allowed	Yes	Frequently used
El Salvador	Not allowed		
Equatorial Guinea	Unknown		
Estonia	Not Addressed		
Ethiopia	Allowed	Yes	Infrequently used
Finland	Not allowed		
France	Allowed with conditions	Yes	Infrequently used
Georgia	Not allowed		
Germany	Allowed with conditions	Yes	Infrequently used
Ghana	Not Addressed		
Greece	Allowed with conditions	Yes	Infrequently used
Guatemala	Not allowed		
Hong Kong	Allowed with conditions	Yes	Infrequently used
Hungary	Allowed with conditions	Yes	Infrequently used
Iceland	Not Addressed		
India	Allowed with conditions	Yes	Frequently used
Indonesia	Not allowed		
Iran	Allowed	Yes	Infrequently used
Iraq	Unknown		
Israel	Allowed	Yes	
Italy	Allowed with conditions	Yes	Infrequently used
Jamaica	Not Addressed		
Japan	Not Addressed		
Jordan	Allowed with conditions	Yes	Infrequently used
Kazakhstan	Not allowed		
Kenya	Not Addressed		
Kuwait	Not allowed		
Latvia	Allowed with conditions	Yes	Infrequently used
Libya	Allowed	Yes	Infrequently used
Lithuania	Not Addressed		
Malaysia	Unknown		
Mali	Unknown		
Malta	Not allowed		

Chapter 11. Table 5

(*Continued*)

Country	Allowed/Permitted	Performed	Frequency
Mexico	Not allowed		
Moldova	Unknown		
Montenegro	Allowed with conditions	Yes	Infrequently used
Morocco	Allowed	Yes	Frequently used
Myanmar (Burma)	Not Addressed		
Namibia	Allowed with conditions	No	
Nepal	Not allowed		
New Zealand	Allowed with conditions	Yes	Infrequently used
Nigeria	Not allowed		
Norway	Allowed	Yes	Infrequently used
Oman	Not allowed		
Pakistan	Not allowed		
Panamá	Not allowed		
Paraguay	Not Addressed		
Perú	Not allowed		
Philippines	Not allowed		
Portugal	Not allowed		
Qatar	Not allowed		
Republic of the Congo	Unknown		
Romania	Allowed	Yes	Infrequently used
Russia	Allowed	Yes	Infrequently used
Serbia	Allowed with conditions	Yes	Infrequently used
Singapore	Allowed with conditions	Yes	Infrequently used
Slovenia	Allowed	Yes	Infrequently used
South Africa	Allowed with conditions	Yes	Infrequently used
South Korea	Not allowed		
Sudan	Allowed with conditions	Yes	Infrequently used
Sweden	Allowed	Yes	Infrequently used
Switzerland	Allowed with conditions	Yes	Infrequently used
Tajikistan	Not allowed		
Tanzania	Not Addressed		
The Netherlands	Allowed with conditions	Yes	Infrequently used
Trinidad & Tobago	Not allowed		
Tunisia	Allowed	Yes	Infrequently used
Turkey	Not allowed		
Uganda	Not Addressed		
Ukraine	Allowed	Yes	Infrequently used
United Arab Emirates	Not allowed		
United Kingdom	Allowed	Yes	Infrequently used
United States of America	Allowed	Yes	Infrequently used
Uruguay	Not allowed		
Uzbekistan	Allowed	Yes	Infrequently used
Venezuela	Not allowed		
Vietnam	Allowed	Yes	Frequently used
Zambia	Not Addressed		
Zimbabwe	Not allowed		

There is some variation among countries, but no general trend as to which procedures were restricted to hospitals or dedicated centers was identified (Table 2). Sperm sorting is more commonly performed across different clinic types, particularly in large private physician clinics (65%) and small private clinics (60%). Selective fetal reduction is most commonly performed in university-based (52%) and public hospital-based clinics (55%).

- Sole Practitioner Clinics (Total: 23 countries)
  - 13 countries (57%) reported that sperm sorting is performed.
  - 8 countries (35%) indicated that selective fetal reduction is performed.
  - 2 countries (9%) allow both procedures.
- Small Private Physician Clinics (<5 Physicians) (Total: 20 countries)
  - 12 countries (60%) reported sperm sorting.
  - 6 countries (30%) allow selective fetal reduction.
  - 2 countries (10%) perform both procedures.
- Large Private Physician Clinics (≥ 5 Physicians) (Total: 20 countries)
  - 13 countries (65%) reported sperm sorting.
  - 5 countries (25%) perform selective fetal reduction.
  - 2 countries (10%) allow both procedures.
- Hospital-Based Clinics (Total: 22 countries)
  - 12 countries (55%) perform sperm sorting.
  - 7 countries (32%) allow selective fetal reduction.
  - 3 countries (14%) perform both procedures.

Chapter 11. Table 6

If allowed/permitted in your country, are there regulations that address selective fetal reduction? If yes, who oversees the regulations?

Country	Allowed/ Permitted	Federal/ National	State/Provincial/ Regional	Municipal	Agency	Professional Organization	Cultural practice	Religious decree
Argentina	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Armenia	No							
Australia	No							
Austria	Unknown							
Belarus	Yes	Yes	No	No		Yes	No	No
Bosnia and Herzegovina	No							
Bulgaria	Yes	Yes						
Cameroon	No							
China	Yes	Yes	Yes					
Colombia	Unknown							
Croatia	Yes	Yes						
Denmark	Unknown							
Egypt	Yes					Yes	Yes	Yes
Ethiopia	Unknown							
France	No							
Germany	Yes	Yes						
Greece	Yes	Yes						
Hong Kong	Yes	Yes	Yes		Yes			
Hungary	Yes	Yes						
India	Yes	Yes						
Iran	No							
Israel	Yes	Yes	No	No	No	Yes	No	
Italy	Yes	Yes						
Jordan	No							
Latvia	No							
Libya	No							
Montenegro	Yes	Yes						
Morocco	No							
Namibia	Unknown							
New Zealand	No							
Norway	Yes	Yes						
Romania	No							
Russia	Yes	Yes	Yes			Yes		
Serbia	No							
Singapore	Yes	Yes	Unknown	Unknown	Yes	Yes	Unknown	Unknown
Slovenia	Yes	Yes				Yes		
South Africa	Yes	Yes						
Sudan	Yes	Yes	Unknown	Unknown	No	Yes	No	Yes
Sweden	No							
Switzerland	Yes	Yes						
The Netherlands	Yes	Yes	No	No	No	Yes	No	No
Tunisia	Unknown							
Ukraine	Unknown							
United Kingdom	Yes	Yes				Yes		
United States of America	No							
Uzbekistan	Yes	Yes						
Vietnam	No							

- University-Based Clinics (Total: 23 countries)
  - 12 countries (52%) perform selective fetal reduction.
  - 5 countries (22%) perform sperm sorting.
  - 6 countries (26%) allow both procedures.
- Public Hospital-Based Clinics (Total: 22 countries)
  - 12 countries (55%) perform selective fetal reduction.
  - 6 countries (27%) perform sperm sorting.
  - 4 countries (18%) allow both procedures.
- Unknown Institutional Settings (Total: 20 countries)
  - 5 countries (25%) perform selective fetal reduction.
  - 2 countries (10%) perform sperm sorting.
  - 13 countries (65%) allow both procedures.

(5) *Are these techniques considered experimental or part of established medical practice?*

The majority of the 87 responding countries have either not addressed this question for sperm sorting for SS (50, 58%) or its status is unknown (21, 24%) (Table 3). The

Chapter 11. Table 7

Are outcomes of selective reduction monitored and/or documented?

Country	Monitored or documented?
Albania	Partially (inconsistently)
Algeria	No
Argentina	Unknown
Armenia	Partially (inconsistently)
Australia	No
Austria	Yes
Bangladesh	Unknown
Barbados	Unknown
Belarus	Yes
Benin	Unknown
Bolivia	Unknown
Bosnia and Herzegovina	No
Brazil	No
Bulgaria	Partially (inconsistently)
Burkina Faso	No
Cambodia	Unknown
Cameroon	No
Chile	No
China	Yes
Colombia	No
Costa Rica	No
Côte d'Ivoire	Unknown
Croatia	Yes
Czech Republic	No
Democratic Republic of the Congo	No
Denmark	Yes
Dominican Republic	No
Ecuador	No
Egypt	Yes
El Salvador	No
Estonia	Partially (inconsistently)
Ethiopia	Yes
Finland	No
France	Partially (inconsistently)
Georgia	Unknown
Germany	Yes
Ghana	Partially (inconsistently)
Greece	Partially (inconsistently)
Guatemala	No
Hong Kong	Yes
Hungary	Yes
Iceland	No
India	Partially (inconsistently)
Iran	Partially (inconsistently)
Iraq	Unknown
Israel	Yes
Italy	Yes
Jamaica	No
Japan	No
Jordan	No
Kazakhstan	No
Kenya	Unknown
Kuwait	Unknown
Latvia	Unknown
Libya	No
Malaysia	No
Mali	Unknown
Mexico	No
Moldova	Unknown
Montenegro	Yes

Chapter 11. Table 7

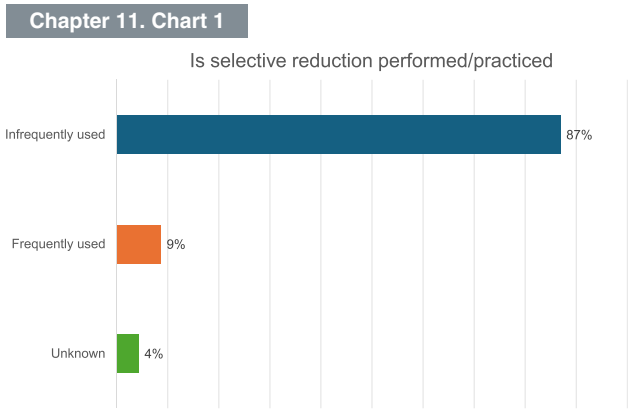
(*Continued*)

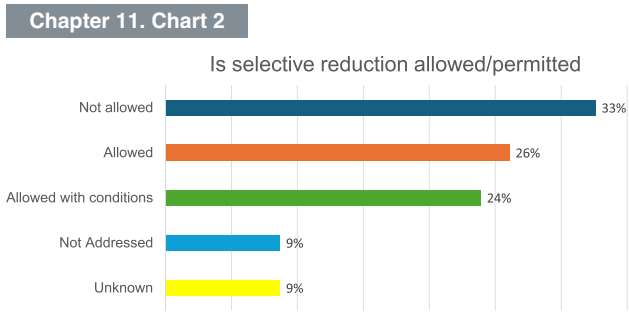
Country	Monitored or documented?
Morocco	No
Myanmar (Burma)	Unknown
Namibia	Unknown
Nepal	Unknown
New Zealand	Yes
Nigeria	No
Norway	Yes
Oman	Unknown
Pakistan	Unknown
Panamá	No
Paraguay	No
Perú	No
Qatar	Unknown
Republic of the Congo	No
Romania	Partially (inconsistently)
Russia	Yes
Serbia	Yes
Singapore	Yes
Slovenia	Yes
South Africa	No
South Korea	Unknown
Sudan	Yes
Sweden	Partially (inconsistently)
Switzerland	Partially (inconsistently)
Tajikistan	No
Tanzania	Unknown
The Netherlands	Yes
Tunisia	Partially (inconsistently)
Uganda	No
Ukraine	Unknown
United Kingdom	Yes
United States of America	No
Uruguay	No
Uzbekistan	Yes
Venezuela	No
Vietnam	Unknown
Zambia	Unknown

remainder are almost evenly split between those that regard sperm sorting as established medical practice (9, 10%) and experimental (7, 8%). For SFR for SS, a large majority also did not address it, or its status was unknown. Seven countries acknowledge it as an established medical practice, and none deem it as experimental. In 2021, six (10%) of 62 countries considered it to be an established medical practice.

(6) *During which procedures is sex selection performed?*
In most countries, SS is not performed with intrauterine insemination (65 of 88 countries, 74%) (Table 4). However, SS is performed utilizing IVF or IVF/ICSI in 41 (43%) of 96 countries. SFR is performed for SS in five (5%) of 98 responding countries.

(7) *Is selective fetal reduction allowed/permitted in your country?*
Of 108 responding countries, 23 (21%) allow SFR and an additional 23 permit it conditionally (Table 5). It is prohibited in 33 (31%) and its status is either not addressed in 18 (17%) or "unknown" in 11 (10%). In 2021, 46 (61%) of 75 responding countries and 47 (61%) of 77 countries in





2018 allowed SFR. As noted in previous surveys, a higher proportion of European respondents noted that SFR is allowed and a greater number from South and Central America noted that it was not allowed.

(8) *Is selective fetal reduction performed in your country?*
In all but two of the 46 countries that permit SFR, it is actually performed and of those 44 (96%) countries it is "infrequently" used in 39 (91%) and "frequently" used in four countries (Table 5). In 2021, respondents representing 75 countries noted that SFR was actually performed in 38 (51%).

(9) *If allowed/permitted in your country, are there regulations that address selective fetal reduction?*
Almost half, 23 (49%) of 47 responding countries, cited the existence of a regulatory framework overseeing SFR, usually provided by federal statutes or ordinances (22 countries, 96%) (Table 6). Nine (19%) countries reported regulatory framework of Professional Organization Standards/Guidelines, 3 (6%) countries reported regulatory framework of State/Provincial/Regional Laws, 2 (4%) countries reported Agency Regulations/Oversight or Religious decree, and 1 (2%) country cited Cultural Practice.

(10) *Are outcomes of selective reduction monitored and/or documented?*

SFR outcomes are monitored or documented in 23 (24%) of 97 responding countries, 13 (13%) countries reported partial or inconsistent documentation, and 25 (26%) countries reported "unknown" (Table 7).

Discussion

Of the 79 countries that submitted unequivocal responses regarding SFR, the majority, 46 (58%) permit it and 44 report performing SFR. Significant cultural and regional responses were noted with more European countries offering SFR and more South and Central American countries prohibiting it. Although these proportions have not changed appreciably over the past three surveys, SFR remains a contentious topic in all countries whether it is performed or prohibited. In this context, it has been used to reduce risks associated with HOM pregnancies and births. HOM pregnancies consistently lead to preterm delivery with significant maternal morbidity and fetal morbidly and mortality[4]. The 2024 survey notably did not address potential changes in the volume of SFR procedures. In light of improved embryo selection strategies, principally PGT-A, which allow greater utilization of SET, multiple pregnancy rates have declined in many countries with reduced need for SFR.

SS has been a topic of interest predating ART, primarily for non-medical (i.e., "social") reasons including family balancing and socio-cultural preferences. Although it has always been controversial, various techniques for performing it are allowed in many countries. Sperm sorting techniques coupled with artificial insemination has not proven to be reliable and SFR for SS is prohibited in most countries. PGT-A is reliable for biologic gender identification but has been mainly used for selection of a euploid embryo for transfer. Many ART centres, responding to patient requests offer SS to individuals undergoing PGT-A or PGT-M for other reasons and a smaller number permit it as a discrete procedure. A novel finding of the 2024 Triennial Report survey is that the application of PGT-A for SS increased from 16 to 41 countries over the past three years presumably reflecting increased acceptance and demand.

There is considerable variation in the acceptance and practice of SS. A 2018 United States survey indicated that 92% of 493 ART clinics performed PGT-A. Ninety-four percent of the clinics offered sex selection for family balancing, 81% did so for patient preference when ART was indicated, and 84% for sex selection alone[5]. In contrast, a cross-sectional-based survey that assessed the attitudes of 1,500 patients regarding sex selection for non-medical reasons in Beirut noted that 19% felt that sex selection should be strictly prohibited, 39% considered it acceptable if medically indicated, and 33% believed that it should be available to anyone requesting it[6]. A systematic review of PGT concluded that most couples who used PGT-A for SS did so to achieve gender balance and that most studies found no difference in the overall preference of couples for male or female offspring[7].

Historically, region-specific cultural, religious, and socio-economic factors have been found to be the primary drivers of acceptance or rejection of SS. Increased utilization of SS has been reported in several countries including Ukraine, the Republic of Korea, and Vietnam, where a two-fold increase has been reported for male sex selection[8,9]. Several Asian, African, and eastern European countries have documented altered sex ratios, reflecting a culturally engrained preference for sons.

Ethical challenges to SS has been presented from several different perspectives. Proponents of SS have emphasized respecting the autonomy of the patient. Some critics have posited that SS is unjust because it entails a value judgement based solely on the sex of the unborn child (sexism) which perpetuates sexual discrimination[10]. Others have argued that allowing family balancing in Western countries does not disturb the sex ratios due to presumed societal gender equity. SS undertaken to perpetuate predetermined sex roles remains unacceptable to others. Data

collected in the United States from 2014 through 2016 revealed that the male: female sex ratios of children born to mothers who underwent PGT shifted from 1.05 to 1.10 following its introduction[11].

Summary

The number of countries permitting and performing SFR has not changed appreciably over the past three years. Of the 79 countries that provided definitive responses, the majority permit (46, 58%) and perform (44, 57%) SFR. In the countries that permit SFR, 50% allow it unconditionally and 50% permit it with conditions. SFR is performed for SS in five countries. In 2021, four countries acknowledged using SFR for SS. Approximately 50% of countries allowing SFR cite oversight by a regulatory framework which involves federal statutes or ordinances in 96% of countries.

When SS is performed, 13 countries rely on sperm separation techniques with IUI and 41 utilize PGT-A. A significant increase, from 16 to 41 countries, was noted in the use of PGT-A for SS over the past three years.

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CHAPTER 12: PREIMPLANTATION GENETIC TESTING

Introduction

Preimplantation genetic testing (PGT) is employed to avoid transferring affected embryos and to prevent transmission of genetic conditions to the offspring. PGT was first applied in the 1990s when, using fluorescent in situ hybridisation (FISH), sexual chromosomes were identified to avoid the transmission of X-linked disorders[1]. At this time, embryos were biopsied at the cleavage stage, removing one or two blastomeres. As the methodology improved, more chromosomes were assessed (5-10) using multiple FISH probes. In the 2000s, comprehensive chromosome screening (CCS) techniques were developed (i.e., comparative genome hybridisation arrays – aCGH and quantitative polymerase chain reaction – qPCR) which investigated all 24 chromosomes in a single analysis[2]. Since the introduction of next generation sequencing (NGS) for PGT applications in the 2010s, analytical costs have been reduced due to the ability to do parallel testing of specimens[3]. These advancements have led to the broad adoption of PGT for assisted reproduction treatments (ART). Its applications encompass different types of assessments, including the chromosomal status of the embryo (PGT for aneuploidies, PGT-A), the presence of a pathological variant in the embryonic genome (PGT for monogenic conditions, PGT-M), and detection of chromosomal structural rearrangements (PGT-SR). PGT has also been employed for HLA matching and for assessing disease risk for late onset polygenic conditions (PGT-P) such as diabetes mellitus, and some cardiovascular diseases and cancers. With the advancement of embryo culture systems in the 2000s, embryos could be incubated in the IVF laboratory until post insemination day 5 or 6, when the blastocyst stage is reached. This potentiated development of trophectoderm (TE) biopsy, where multiple cells are collected (typically 2-8), providing a more robust substrate for subsequent DNA analysis, while requiring the removal of a smaller portion of the embryo compared to cleavage stage biopsy[4].

Strategies for the embryo's genetic assessment

PGT-M: Monogenic pathogenic variants in preimplantation embryos are investigated when a couple is identified as being at increased risk (at-risk couples, ARCs) of passing on an inheritable condition to their offspring[5]. ARCs can be detected through family history, preconception carrier screening, or following the birth of an affected child. PGT-M is primarily conducted using three approaches: targeted multiplex PCR, Karyomapping, and NGS[6]. In targeted multiplex PCR, the genetic region of interest is amplified, and the presence of the pathogenic variant is assessed using techniques such as Sanger sequencing, mini-sequencing, or single nucleotide polymorphism (SNP) genotyping. Additionally, linkage analysis using informative markers flanking the mutation site is employed to enhance diagnostic accuracy. Another approach, Karyomapping, relies on parental informative single nucleotide polymorphisms (SNPs) to diagnose the embryo, utilizing linkage analysis with data derived from microarrays containing 300,000

Chapter 12. Table 1

Are pre-implantation genetics practised/performed in your country?

Country	PGT-M monogenic disorders	PGT-A aneuploidy	PGT-P polygenic disorders	PGT-M, performed in tandem with PGT-A for sex selection	PGT- A for sex selection
Albania	Yes	Yes	Yes		
Argentina	Yes	Yes	Yes	Yes	Yes
Armenia	Yes	Yes	Yes		
Australia	Yes	Yes		Yes	Yes
Austria	Yes	Yes	Yes		
Belarus	Yes	Yes		Yes	Yes
Bolivia		Yes			Yes
Bosnia and Herzegovina	Yes	Yes	Yes		
Brazil	Yes	Yes	Yes		
Bulgaria	Yes	Yes	Yes		
Cambodia	Yes	Yes			Yes
Chile	Yes	Yes	Yes		
China	Yes	Yes	Yes		
Colombia	Yes	Yes		Yes	Yes
Cyprus	Yes	Yes			
Czech Republic	Yes	Yes	Yes		
Denmark	Yes	Yes		Yes	Yes
Dominican Republic		Yes			Yes
Ecuador	Yes	Yes	Yes	Yes	Yes
Egypt	Yes	Yes	Yes	Yes	Yes
El Salvador	Yes	Yes			Yes
Equatorial Guinea	Yes	Yes		Yes	Yes
Finland	Yes				
France	Yes		Yes		
Georgia	Yes	Yes			
Germany	Yes	Yes			
Ghana	Yes	Yes	Yes	Yes	Yes
Greece	Yes	Yes	Yes		
Guatemala	Yes	Yes	Yes	Yes	Yes
Hong Kong	Yes	Yes		Yes	Yes
Hungary	Yes		Yes		
India	Yes	Yes	Yes		
Indonesia		Yes			Yes
Iran	Yes	Yes	Yes	Yes	Yes
Iraq					Yes
Israel	Yes	Yes	Yes	Yes	
Jamaica	Yes	Yes		Yes	Yes
Japan	Yes	Yes			
Jordan	Yes	Yes	Yes	Yes	Yes
Kazakhstan	Yes	Yes			
Kenya					Yes
Kuwait	Yes	Yes	Yes	Yes	Yes
Latvia	Yes	Yes	Yes		
Libya		Yes			Yes
Lithuania	Yes		Yes		
Malaysia	Yes	Yes	Yes	Yes	Yes
Malta	Yes	Yes			
Mexico	Yes	Yes	Yes	Yes	Yes
Montenegro	Yes	Yes	Yes		
Morocco	Yes	Yes	Yes		
Nepal	Yes	Yes	Yes		
New Zealand	Yes	Yes			
Nigeria	Yes	Yes	Yes	Yes	Yes
Norway	Yes				
Oman	Yes	Yes			
Pakistan	Yes	Yes		Yes	Yes
Panamá	Yes	Yes	Yes	Yes	Yes
Paraguay	Yes	Yes	Yes	Yes	Yes
Perú	Yes	Yes		Yes	Yes
Philippines		Yes			

Chapter 12. Table 1

(*Continued*)

Country	PGT-M monogenic disorders	PGT-A aneuploidy	PGT-P polygenic disorders	PGT-M, performed in tandem with PGT-A for sex selection	PGT- A for sex selection
Portugal	Yes	Yes			
Qatar	Yes	Yes			
Romania	Yes	Yes	Yes	Yes	
Russia	Yes		Yes		
Singapore	Yes		Yes		
Slovenia	Yes	Yes			
South Africa	Yes	Yes		Yes	Yes
Spain	Yes	Yes		Yes	
Sweden	Yes				
Switzerland	Yes	Yes			
Tanzania		Yes			
Trinidad & Tobago	Yes	Yes	Yes		
Tunisia	Yes	Yes	Yes		
Turkey	Yes	Yes			
Uganda	Yes	Yes		Yes	Yes
Ukraine	Yes	Yes	Yes	Yes	Yes
United States of America	Yes	Yes	Yes	Yes	Yes
Uruguay	Yes	Yes	Yes	Yes	
Uzbekistan	Yes	Yes	Yes		
Venezuela	Yes	Yes			Yes
Vietnam	Yes	Yes	Yes		
Zambia	Yes	Yes	Yes	Yes	Yes

SNPs. NGS applications in PGT-M amplify the entire region of interest, including the mutation site and flanking regions, facilitating both direct and linkage analysis-based diagnoses.

PGT-A: Aneuploidy is common in human preimplantation embryos and is a leading cause of failed implantation and miscarriage[7]. PGT-A is intended to identify embryos with chromosomal abnormalities and exclude them from transfer, thereby maximizing the chances of successful implantation and a healthy pregnancy. Since the introduction of comprehensive chromosome screening (CCS) and TE biopsy, PGT-A has improved diagnostic accuracy and clinical outcomes by expanding the number of chromosomes analyzed and minimizing the impact of biopsy on embryo viability[8]. The shift from direct chromosome visualization with FISH to bioinformatics-driven analysis of molecular signals, such as aCGH, SNP arrays, qPCR, and NGS, has enabled the use of multicellular specimens, providing a more robust and reliable diagnostic conclusion[8]. Today, NGS is widely utilized in most PGT-A analyses, as sample barcoding allows for parallel processing, significantly reducing the cost per analysis. While TE biopsy is the most often used strategy for embryo sampling for PGT-A and combined analyses, single cell, cleavage biopsy is still used in approximately 60% of cases applying PGT-M or PGT-SR[9].

Analysis of the Survey

The following six questions were included in the 2024 Triennial Report questionnaire to address PGT.

(1) Are pre-implantation genetics practised/performed in your country?
(2) Are pre-implantation genetics allowed/permitted in your country?
(3) If allowed/permitted, are there regulations that govern pre-implantation genetics and how is it regulated?
(4) Is PGT-M allowed for preventing or allowing the treatment of disease?
(5) Are there specific ART/IVF centres or institutions where certain PGT strategies are only performed/allowed?
(6) Are PGT strategies considered experimental or established medical practice?

Responses were received from 102 national participants for this chapter, but not all responders answered each question. The response rate was 80% for question 1 (n = 82), 73.5% for question 2 (n = 75), 77.5% for question 3 (n = 79), 88% for question 4 (n = 90), 75.5% for question 5 (n = 77), and 88% for question 6 (n = 90).

1. *Are pre-implantation genetics practised/performed in your country?*
   Of the 82 national representatives who responded to question 1, 74 (90%) reported that PGT-M was practiced in their country, 72 (88%) reported that PGT-A was practiced, 43 (52%) practiced PGT-P, 31 (38%) used PGT-M combined with PGT-A for sex selection, and 36 (44%) performed PGT-A for sex selection. Additionally, 16% of respondents indicated that both PGT-M and PGT-A were performed; 22% practiced PGT-M, PGT-A, and PGT-P; and 12% performed PGT-M, or PGT-M combined with PGT-A for sex selection, and PGT-A alone for sex selection. Finally, 20% reported offering all forms of PGT. Notably, PGT-A was not performed in 10 countries, where either only PGT-M (4%, n = 3), PGT-M and PGT-P (6%, n = 5), or sex selection alone (2%, n = 2) were practiced (Table 1). In 2021, responses were received from 56 countries. PGT-A for aneuploidy was allowed in 43 countries. Of these responses, 46 allowed PGT-M (92%), of which 22 (48%) permitted PGT-M in tandem with PGT-A for sex selection.
2. *Are pre-implantation genetics allowed/permitted in your country?*
   According to the survey, PGT-M is allowed in 70 (92%) of the 75 responding countries, PGT-A in 63 (84%), PGT-P in 50 (67%), PGT-M with PGT-A for sex selection in 31 (41%), and

Chapter 12. Table 2

Are pre-implantation genetics allowed/permitted in your country?

Country	PGT-M monogenic disorders	PGT-A aneuploidy	PGT-P polygenic disorders	PGT-M, performed in tandem with PGT-A for sex selection	PGT-A for sex selection
Albania	Yes	Yes	Yes		
Argentina	Yes	Yes	Yes	Yes	
Armenia	Yes	Yes	Yes		
Australia	Yes	Yes		Yes	Yes
Austria	Yes	Yes	Yes		
Belarus	Yes	Yes		Yes	Yes
Bosnia and Herzegovina	Yes	Yes	Yes		
Brazil	Yes	Yes	Yes		
Bulgaria	Yes	Yes	Yes		
Chile	Yes	Yes	Yes		
China	Yes	Yes	Yes		
Colombia	Yes	Yes		Yes	Yes
Croatia	Yes		Yes		
Cyprus	Yes	Yes			
Czech Republic	Yes	Yes	Yes		
Denmark	Yes	Yes		Yes	Yes
Dominican Republic	Yes	Yes	Yes	Yes	Yes
Ecuador	Yes	Yes	Yes	Yes	Yes
Egypt	Yes	Yes	Yes	Yes	Yes
Equatorial Guinea	Yes	Yes	Yes	Yes	Yes
Finland	Yes				
France	Yes	Yes	Yes		Yes
Germany	Yes				
Ghana	Yes	Yes	Yes	Yes	Yes
Greece	Yes	Yes	Yes		
Guatemala	Yes	Yes	Yes	Yes	Yes
Hong Kong	Yes	Yes		Yes	Yes
Hungary	Yes		Yes		
India	Yes	Yes	Yes		
Indonesia	Yes				Yes
Iran	Yes	Yes	Yes	Yes	Yes
Iraq					Yes
Israel	Yes	Yes	Yes	Yes	
Jamaica	Yes	Yes	Yes	Yes	Yes
Japan	Yes	Yes			
Jordan	Yes	Yes	Yes	Yes	Yes
Kazakhstan	Yes	Yes	Yes		Yes
Latvia	Yes	Yes	Yes		
Libya		Yes			Yes
Lithuania	Yes		Yes		
Malaysia	Yes	Yes	Yes	Yes	Yes
Malta	Yes	Yes			
Mexico	Yes	Yes	Yes	Yes	Yes
Montenegro	Yes		Yes		
Morocco	Yes	Yes	Yes	Yes	
Nepal	Yes	Yes	Yes		
New Zealand	Yes	Yes			
Nigeria	Yes	Yes	Yes	Yes	Yes
Norway	Yes				
Oman	Yes	Yes			
Pakistan	Yes	Yes			Yes
Panamá	Yes	Yes	Yes	Yes	Yes
Paraguay	Yes	Yes	Yes	Yes	Yes
Perú	Yes	Yes	Yes	Yes	Yes
Philippines		Yes			
Portugal	Yes	Yes			
Qatar	Yes	Yes			
Romania	Yes	Yes	Yes	Yes	
Russia	Yes		Yes		
Singapore	Yes		Yes		

Chapter 12. Table 2

(*Continued*)

Country	PGT-M monogenic disorders	PGT-A aneuploidy	PGT-P polygenic disorders	PGT-M, performed in tandem with PGT-A for sex selection	PGT-A for sex selection
South Africa	Yes	Yes	Yes	Yes	Yes
Spain	Yes	Yes		Yes	Yes
Sudan			Yes		
Sweden	Yes				
Switzerland	Yes	Yes			
Tanzania		Yes			
Tunisia	Yes	Yes	Yes		
Uganda	Yes	Yes		Yes	Yes
Ukraine	Yes	Yes	Yes	Yes	Yes
United States of America	Yes	Yes	Yes	Yes	Yes
Uruguay	Yes	Yes	Yes		
Uzbekistan	Yes	Yes	Yes		
Venezuela	Yes	Yes	Yes	Yes	Yes
Vietnam	Yes	Yes	Yes		
Zambia	Yes	Yes	Yes	Yes	Yes

PGT-A exclusively for sex selection in 33 (44%). Among countries where PGT is allowed, the practice of PGT-M is regulated in 40 (58%) of the 70 responding countries, PGT-A in 30 (48%) of 62 countries, PGT-M in tandem with PGT-A for sex selection in 11 (35%) of 31 countries, and PGT-A alone for sex selection in ten (30%) of 33 countries. Notably, the percentage of responders that did not answer or were not aware of a national regulation were 6% (n = 4/70), 24% (n = 15/62), 10% (n = 3/31), and 15% (n = 5/33), respectively (Table 2).

3. *If allowed/permitted, are there regulations that govern pre-implantation genetics and how is it regulated?*
   PGT-M is primarily regulated through Federal or National Laws in 22 countries (55%). An additional five countries (13%) follow a combination of Federal/National Laws and Professional Organization Standards. Four countries (10%) rely solely on Professional Organization Standards, while two countries (5%) follow Agency Regulations. Smaller regulatory frameworks include combinations of Federal/National Laws with State/Regional Laws, Agency Regulations, Professional Guidelines, Cultural Practices, or Religious Decrees, each accounting for one country (3%). In total, 40 countries are represented in this regulatory analysis.When PGT-M is performed alongside PGT-A for sex selection, four countries (36%) regulate it through Federal/National Laws. Another two countries (18%) adhere to both Federal/National Laws and Professional Organization Standards. Similarly, two countries (18%) rely solely on Professional Organization Standards. A combination of Federal/National Laws, State/Provincial/Regional Laws, and Agency Regulations governs one country (9%), while Cultural Practices and Religious Decrees also apply to one country (9%). Another country is regulated solely by Agency Oversight. This category includes 11 countries in total. Regulatory approaches for PGT-A vary, with 17 countries (57%) following Federal/National Laws. Another four countries (13%) adhere to a mix of Federal/National Laws and Professional Organization Standards. Three countries (10%) rely solely on Professional Organization Standards, while 2 countries (7%) follow only Agency Regulations. One country (3%) each relies on a mix of Federal/National Laws, State/Regional Laws, and Agency Regulations; Federal/National Laws combined with Cultural Practices; or is regulated through Professional Organization Standards, Cultural Practices, and Religious Decrees. A total of 30 countries were analyzed in this category.For sex selection using PGT-A, three countries (30%) follow Federal/National Laws. Another two (20%) adhere to a combination of Federal/National Laws and Professional Organization Standards or a mix of Federal/National Laws, State/Regional Laws, and Agency Regulations, each. A single country each utilizes Professional Organization Standards alone; Federal/National Laws combined with Agency Regulations; or a combination of Professional Organization Standards, Cultural Practices, and Religious Decrees. A total of 10 countries are included in this analysis.
4. *Is PGT-M allowed for preventing or allowing the treatment of diseases?*
   Among the 95 responding countries, 69 (73%) permit the use of PGT-M to prevent or allow the treatment of disease in the child to be born, 7 countries (7%) prohibit its use, while its acceptance status remains unknown in 19 countries (20%). Among the 93 responding countries, 38 (41%) allow PGT-M to assist in generating a child on behalf of a diseased sibling, 24 countries (26%) prohibit this application, and its acceptance is unknown in 31 countries (33%). Among the 93 responding countries, 25 (27%) approve PGT-M for generating a child as an immunologically matched donor for a diseased sibling, 35 countries (38%) prohibit this practice, while the status remains unknown in 33 countries (36%). Among the 92 responding countries, 30 (33%) allow PGT-M to generate an embryo on behalf of a diseased sibling, 27 countries (29%) prohibit it, and the acceptance status is unknown in 35 countries (38%). Among the 92 responding countries, 23 (25%) permit PGT-M for generating an embryo as an immunologically matched donor for a diseased child, 35 countries (38%) prohibit it, while its acceptance is unknown in 34 countries (37%). Among the 93 responding countries, 33 (36%) allow PGT-M to be used for conditions that will manifest in the child to be born, 21 countries (23%) prohibit this, and 39 countries (42%) have an unknown status on this issue. Among the 92 responding countries, 5 (5%) permit

Chapter 12. Table 3

If allowed/permitted, are there regulations that govern PGT- in your country and how is it regulated?

Country	PGT-M	PGT-M with PGT-A	PGT-A	PGT-A with sex selection
Albania	No		No	
Argentina	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	
Armenia	No		No	
Australia	Yes Federal/National State/Provincial/Regional Agency	Yes Federal/National State/Provincial/Regional Agency	Yes Federal/National State/Provincial/Regional Agency	Yes Federal/National State/Provincial/Regional Agency
Austria	Yes Federal/National		Yes Federal/National	
Belarus	No	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization
Bosnia and Herzegovina	No		No	
Brazil	Yes Federal/National		Yes Federal/National	
Bulgaria	Yes Federal/National		Yes Federal/National	
Chile	No		No	
China	Yes Federal/National State/Provincial/Regional Agency Professional Organization		Yes Federal/National State/Provincial/Regional Agency Professional Organization	
Colombia	No	No	No	No
Croatia	Yes Federal/National Professional Organization			
Cyprus	Yes Federal/National		Yes Federal/National	
Czech Republic	Yes Federal/National		Yes Federal/National	
Denmark	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Dominican Republic	No	No	No	No
Ecuador	No	No	No	No
Egypt	Yes Professional Organization Cultural practice Religious decree	Yes Professional Organization Cultural practice Religious decree	Yes Professional Organization Cultural practice Religious decree	Yes Professional Organization Cultural practice Religious decree
Equatorial Guinea	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Finland	Yes Professional Organization			
France	Yes Federal/National Agency			Yes Federal/National Agency
Germany	Yes Federal/National Professional Organization		Yes Federal/National Professional Organization	
Ghana	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization	Yes Professional Organization
Greece	Yes Federal/National		Yes Federal/National	
Guatemala	No	No	No	No
Hong Kong	Yes Agency	Yes Agency	Yes Agency	Yes Federal/National State/Provincial/Regional Agency
Hungary	Yes Federal/National Professional Organization			
India	Yes Federal/National		Yes Federal/National	
Indonesia			Yes Federal/National Professional Organization	Yes Federal/National Professional Organization
Iran	No	No	No	No
Israel	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	Yes Federal/National Professional Organization	
Jamaica	No	No	No	No
Japan	Yes Professional Organization		Yes Professional Organization	
Jordan	No	No	No	No
Kazakhstan	Yes Federal/National Cultural practice		Yes Federal/National Cultural practice	No

Chapter 12. Table 3

(*Continued*)

Country	PGT-M	PGT-M with PGT-A	PGT-A	PGT-A with sex selection
Latvia	No		No	
Lithuania	Yes Federal/National			
Malaysia	No	No	No	No
Malta	Yes Federal/National		Yes Federal/National	
Mexico	No	No	No	No
Montenegro	Yes Federal/National			
Morocco	Yes Federal/National	Yes Federal/National	Yes Federal/National	
Nepal	No		No	
New Zealand	Yes Federal/National		Yes Federal/National	
Nigeria	No	No	No	No
Norway	Yes Federal/National			
Oman	Yes Federal/National		Yes Federal/National	
Pakistan	Yes Professional Organization Religious decree			No
Panamá	No	No	No	No
Paraguay	No	No	No	No
Perú	No	No	No	No
Portugal	Yes Agency		Yes Agency	
Qatar	Yes Federal/National		Yes Federal/National	
Romania	No	No		
Russia	Yes Federal/National Professional Organization			
Singapore	Yes Federal/National Agency Professional Organization			
South Africa	No	No		No
Spain	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Sweden	Yes Federal/National			
Switzerland	Yes Federal/National		Yes Federal/National	
Tunisia	Yes Federal/National		Unknown	
Uganda	No	No		No
Ukraine	Unknown	Unknown	Unknown	Unknown
United States of America	No	No		No
Uruguay	No			
Uzbekistan	Yes Federal/National		Yes Federal/National	
Venezuela	No	No		No
Vietnam	No			
Zambia	Unknown	Unknown	Unknown	Unknown

PGT-M to generate a diseased embryo for research or experimentation, 57 countries (62%) prohibit this practice, while its acceptance remains unknown in 30 countries (33%).

5. *Are there specific ART/IVF centres or institutions where certain PGT strategies are only performed/allowed?*
   Among the 39 responding countries, 19 (49%) only permit PGT-M and PGT-A to be performed in sole practitioner clinics. Additionally, 16 countries (41%) allow PGT-M, PGT-A, and PGT-A for sex selection in these settings. A small percentage of countries restrict permissions to PGT-A alone (3%), PGT-A for sex selection alone (3%), or PGT-M alone (3%). Among the 40 responding countries, 20 (50%) allow PGT-M and PGT-A to be performed in small private physician clinics with fewer than five physicians. Another 18 countries (45%) allow PGT-M, PGT-A, and PGT-A for sex selection in these clinics. A limited number of countries (3%) permit either PGT-M alone or PGT-A combined with PGT-A for sex selection. Among the 45 responding countries, 22 (49%) permit PGT-M and PGT-A in large private physician clinics with five or more physicians, while 19 countries (42%) also allow PGT-A for sex selection in these settings. A small percentage of countries (4%) allow only PGT-A, while 2% of countries permit either PGT-M alone or a combination of PGT-A with PGT-A for sex selection. Among the 44 responding countries, 21 (48%) allow PGT-M and PGT-A in hospital-based clinics, while 18 countries (41%) also permit PGT-A for sex selection in these institutions. A smaller fraction of countries (5%) allow only PGT-A, while 2% permit either PGT-M alone, PGT-M combined with PGT-A for sex selection, or PGT-A combined with PGT-A for sex selection. Among the 48 responding countries, 24 (50%) allow

Chapter 12. Table 4

Is PGT-M (monogenic disorders) accepted for use to prevent or allow the treatment of disease?

Country	In the child to be born from the embryo	For assisting in generating a child on behalf of a diseased sibling	For assisting in generating a child for any immunologically donor matched diseased child	For assisting in generating an embryo on behalf of a diseased sibling	For assisting in generating an embryo for any immunologically donor matched diseased child	To be manifested in the child to be born from the embryo	For assisting in generating a diseased embryo for research/ experimentation
Albania	Yes	Yes	Yes	Yes	Unknown	Unknown	No
Argentina	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Armenia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Australia	Yes	Yes	Yes	Yes	Yes	No	No
Austria	Yes	No	No	No	No	No	No
Bangladesh	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Bolivia	No	No	No	No	No	No	No
Bosnia and Herzegovina	Yes	Yes	Unknown	Unknown	Unknown	Unknown	Unknown
Brazil	Yes	Yes	Yes	Yes	Yes	Yes	Unknown
Bulgaria	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	No
Burkina Faso	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cambodia	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroon	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Chile	Yes	No	No	No	No	No	No
China	Yes	Yes	Yes	Yes	Yes	Yes	No
Colombia	Yes	Yes	No	Yes	No	Yes	No
Costa Rica	No	No	No	No	No	No	No
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Yes	No	No	No	No	Yes	No
Cyprus	Yes	Unknown	Unknown	Unknown	Unknown	Yes	No
Czech Republic	No	No	No	No	No	No	No
Democratic Republic of the Congo	No	No	No	No	No	No	No
Denmark	Yes	Unknown	Unknown	Unknown	Unknown	Yes	Unknown
Dominican Republic	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Ecuador	Yes	Yes	Yes	Yes	Yes	Yes	No
Egypt	Yes	Yes	No	Yes	No	Yes	No
El Salvador	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Equatorial Guinea	Yes	Yes	Unknown	Unknown	Unknown	Unknown	No
Estonia	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	No
Ethiopia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Finland	Yes	No	No	No	No	No	No
France	Yes	Yes	Yes	Yes	Yes	Yes	No
Georgia	Yes	Yes	Yes	Yes	Yes	Unknown	No
Germany	Yes	No	No	No	No	No	No
Ghana	Yes	No	No	No	No	Yes	No
Greece	Yes	Yes	Yes	Unknown	Yes	No	No
Guatemala	Yes	No	No	No	No	Yes	No
Hong Kong	Yes	Yes	Yes	Yes	Yes	Yes	No
Hungary	Yes		Unknown	Unknown	Unknown	Unknown	Unknown
Iceland	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
India	Yes	Yes	Unknown	Yes	Unknown	Unknown	Unknown
Iran	Yes	Yes	Yes	Yes	Yes	Yes	No
Iraq	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Israel	Yes	Yes	Yes	Yes	Yes	Yes	No
Jamaica	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	No
Japan	Yes	No	No	No	No	Yes	No
Jordan	Yes	Yes	No	Yes	No	Unknown	No
Kazakhstan	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kenya	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Kuwait	Yes	Yes	Yes	Yes	Yes	Yes	No
Latvia	Yes	No	No	No	No	Yes	No

Chapter 12. Table 4

(*Continued*)

Country	In the child to be born from the embryo	For assisting in generating a child on behalf of a diseased sibling	For assisting in generating a child for any immunologically donor matched diseased child	For assisting in generating an embryo on behalf of a diseased sibling	For assisting in generating an embryo for any immunologically donor matched diseased child	To be manifested in the child to be born from the embryo	For assisting in generating a diseased embryo for research/ experimentation
Lithuania	Yes	No	No	No	No	Yes	No
Malaysia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Mali	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Malta	Yes						No
Mexico	No	No	No	No	No	No	No
Moldova	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Montenegro	Yes	No	No	No	No	No	No
Morocco	Yes	Yes	No	Yes	No	Yes	No
Namibia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Nepal	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
New Zealand	Yes	Yes	Yes			Yes	
Nigeria		No					
Norway	Yes	Yes	Yes	Unknown	Yes	Unknown	No
Oman	Yes	Yes	Yes	Yes	Yes	Unknown	Unknown
Pakistan	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panamá	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Paraguay	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Perú	Yes	Yes	Yes	Yes	Yes	Yes	No
Portugal	Yes	Yes	No	No	No	No	No
Qatar	Yes	Unknown	No	Unknown	Unknown	Unknown	No
Romania	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Russia	Yes	Unknown	No	No	No	Unknown	No
Serbia	No	No	No	No	No	No	No
Singapore	Yes	Unknown	Unknown	Unknown	Unknown	No	No
Slovenia	Yes	No	No	No	No	Yes	No
South Africa	Yes	Yes	Yes	Yes	Yes	Yes	No
Spain	Yes	Yes	No	Yes	No	Yes	No
Sudan	Unknown	Unknown	Unknown	Unknown	No	Unknown	No
Sweden	Yes	Yes	Yes	Yes	Yes	Unknown	No
Switzerland	Yes	No	No	No	No	Yes	No
Tajikistan	Yes	No	No	No	No	No	No
Tanzania	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
The Netherlands	Unknown	No	No	No	No	No	No
Tunisia	Yes						
Turkey	Yes	Yes	No	Yes	No	Yes	No
Uganda	Yes	No	No	No	No	Yes	No
Ukraine	Yes	Yes	No	No	No	No	No
United Arab Emirates	Yes	Yes	Yes	Yes	Yes	Yes	Unknown
United States of America	Yes	Yes	Yes	Yes	Yes	Unknown	Unknown
Uruguay	No	No	No	No	No	No	
Uzbekistan	Yes	Yes	No	Yes	No	Yes	Yes
Venezuela	Yes	Yes	No	No	No	No	No
Vietnam	Yes	Yes	Yes	Yes	Yes	No	No
Zambia	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

PGT-M and PGT-A in university-based clinics, while 16 countries (33%) also permit PGT-A for sex selection in these settings. A smaller portion of countries (10%) allow only PGT-M, while 2% of countries permit either PGT-A alone, PGT-A combined with PGT-A for sex selection, or PGT-M combined with PGT-A for sex selection. Among the 35 responding countries, 20 (57%) permit PGT-M and PGT-A in public hospital-based clinics, while 12 countries (34%) also allow PGT-A for sex selection in these institutions. A smaller fraction of countries (6%) allow PGT-M combined with PGT-A for sex selection, while 3% permit only PGT-M. Among the 27 responding countries, 13 (48%) have unclear regulations but appear to permit PGT-M, PGT-A, and PGT-A for sex selection. Seven countries (26%) only allow PGT-A for sex selection, five countries (19%) permit PGT-M and PGT-A, and two countries (7%) allow only PGT-M (Table 3–5).

6. *Are PGT strategies considered experimental or established medical practice?*

Chapter 12. Table 5

Are there specific ART/IVF centers or institutions where these techniques are only allowed/permitted to be performed?

Country	Sole Practitioner clinic	Small Private physician clinic <5 physician	Large, Private physician clinic 5 or > physicians	Hospital-based clinic	University-based clinic	Public Hospital-based	Unknown
Albania	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	
Argentina	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-A for sex selection
Armenia				PGT-M PGT-A	PGT-M PGT-A		
Australia	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	
Austria	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	
Belarus			PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	
Bolivia			PGT-A				PGT-M PGT-A for sex selection
Bosnia and Herzegovina		PGT-M PGT-A					
Brazil	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-A for sex selection
Bulgaria	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	
Cambodia							PGT-M PGT-A PGT-A for sex selection
Cameroon							PGT-M PGT-A PGT-A for sex selection
Chile	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-A for sex selection
China					PGT-M PGT-A	PGT-M PGT-A	PGT-A for sex selection
Colombia	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	
Côte d'Ivoire							PGT-M PGT-A PGT-A for sex selection
Croatia	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	
Democratic Republic of the Congo							PGT-M PGT-A PGT-A for sex selection
Denmark							PGT-M PGT-A PGT-A for sex selection
Dominican Republic	PGT-A PGT-A for sex selection	PGT-A PGT-A for sex selection	PGT-A PGT-A for sex selection				PGT-M
Ecuador			PGT-M PGT-A PGT-A for sex selection				
Egypt	PGT-M PGT-A PGT-A for sex selection			PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	
El Salvador		PGT-M PGT-A PGT-A for sex selection					
Finland			PGT-M PGT-A		PGT-M PGT-A		
France					PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A for sex selection	
Georgia							PGT-M PGT-A
Germany	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	

Chapter 12. Table 5

(*Continued*)

Country	Sole Practitioner clinic	Small Private physician clinic <5 physician	Large, Private physician clinic 5 or > physicians	Hospital-based clinic	University-based clinic	Public Hospital-based	Unknown
Ghana		PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection		
Greece	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	
Hong Kong	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	
Hungary				PGT-M PGT-A for sex selection	PGT-M PGT-A for sex selection	PGT-M PGT-A for sex selection	
India	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-A for sex selection
Indonesia				PGT-A, PGT-A for sex selection	PGT-A, PGT-A for sex selection		
Iran	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	
Iraq	PGT-A for sex selection						
Israel	PGT-M			PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	
Japan	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	
Jordan				PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	
Kazakhstan	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	
Kenya							PGT-M PGT-A PGT-A for sex selection
Kuwait	PGT-M PGT-A PGT-A for sex selection		PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection			
Latvia	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A PGT-M	PGT-M PGT-A	
Lithuania							
Malaysia							PGT-M PGT-A PGT-A for sex selection
Mali							PGT-M PGT-A PGT-A for sex selection
Mexico	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	
Montenegro					PGT-M PGT-A		
Nepal	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A	
Nigeria	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection		
Norway					PGT-M		
Oman							PGT-M PGT-A
Pakistan			PGT-M PGT-A PGT-A for sex selection				
Panamá	PGT-M PGT-A PGT-A for sex selection	PGT-M PGT-A PGT-A for sex selection					
Perú	PGT-M PGT-A	PGT-M PGT-A	PGT-M PGT-A				

Chapter 12. Table 5

(Continued)

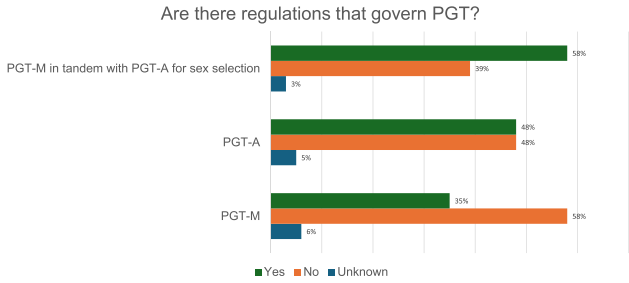
Country	Sole Practitioner clinic	Small Private physician clinic <5 physician	Large, Private physician clinic 5 or > physicians	Hospital-based clinic	University-based clinic	Public Hospital-based	Unknown
	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection				
Philippines				PGT-A			
Portugal			PGT-M, PGT-A		PGT-M, PGT-A		
Qatar	PGT-M, PGT-A	PGT-M	PGT-M	PGT-M, PGT-A		PGT-M, PGT-A	
		PGT-A	PGT-A				
		PGT-A for sex selection	PGT-A for sex selection				
Romania	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	
	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	
	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	
Russia	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	PGT-A for sex selection
	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	
Serbia					PGT-M		
Singapore		PGT-M	PGT-M	PGT-M	PGT-M, PGT-A	PGT-M, PGT-A	
Slovenia					PGT-M, PGT-A		
South Africa	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	
	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	
	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	
South Korea			PGT-A		PGT-A		
Spain	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	PGT-A for sex selection
	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A		
	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection		
Sudan							PGT-M
							PGT-A
							PGT-A for sex selection
Sweden					PGT-M		
Tanzania	PGT-A			PGT-A			
The Netherlands					PGT-M		
Tunisia							PGT-M
Turkey	PGT-M	PGT-M	PGT-M	PGT-M			PGT-A for sex selection
	PGT-A	PGT-A	PGT-A	PGT-A			
Uganda		PGT-M					
		PGT-A					
		PGT-A for sex selection					
Ukraine	PGT-M	PGT-M	PGT-M	PGT-M			
	PGT-A	PGT-A	PGT-A	PGT-A			
	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection			
United Arab Emirates			PGT-M	PGT-M	PGT-M	PGT-M	
			PGT-A	PGT-A	PGT-A	PGT-A	
United States of America	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	
	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	
	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	
Uruguay	PGT-M	PGT-M	PGT-M				
	PGT-A	PGT-A	PGT-A				
Uzbekistan		PGT-M	PGT-M	PGT-M			
		PGT-A	PGT-A	PGT-A			
Vietnam	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	PGT-M	
	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	PGT-A	
Zambia	PGT-M	PGT-M	PGT-M	PGT-M			
	PGT-A	PGT-A	PGT-A	PGT-A			
	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection	PGT-A for sex selection			

Of the 95 responding countries, 73 (77%) classify PGT-M as established medical practice, 13 countries (14%) do not address its status, 8 countries (8%) responded unknown, and 1 country (1%) considers it experimental. Of the 98 responding countries, 69 (70%) classify PGT-A)as established medical practice, 16 countries (16%) do not address its status, 7 countries (7%) consider it experimental, and the status remains unknown in 6 countries (6%). Of the 93 responding countries, 56 (60%) classify PGT-M performed in tandem with PGT-A as established medical practice, 22 countries (24%) do not address its status, while 11 countries (12%) responded unknown, and 4 countries (4%) consider it experimental. Of the 92 responding countries, 33 (36%) classify PGT-A for sex selection as established medical practice, 45 countries (49%) do not address its status, while 13 countries (14%) responded unknown, and 1 country (1%) considers it experimental. Of the 88 responding countries, 32 (36%) classify PGT-P as established medical practice, 33 countries (38%) do not address its status, while 17 countries (19%) responded unknown, and 6 countries (7%) consider it experimental (Chart 2).

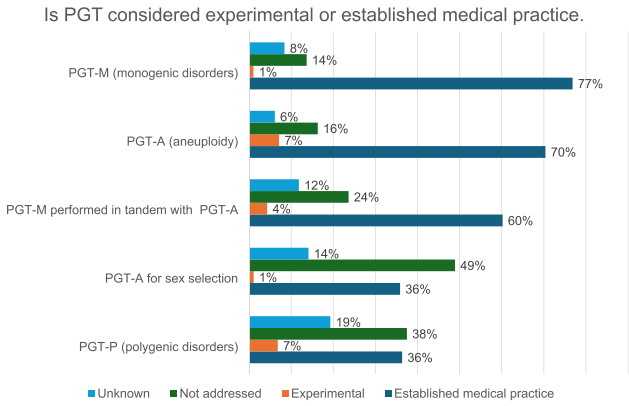
Discussion

PGT technology has become increasingly widespread due to advancements in genetic analytical methodologies, as well as

Chapter 12. Chart 1



Chapter 12. Chart 2



improvements in IVF laboratory protocols for embryo culture and biopsy. PGT-M is the most widely recognized application of PGT, with clear clinical benefits and consolidated practice contributing to its broad implementation globally. Current PGT-M protocols provide exceptionally high diagnostic accuracy and have proven highly effective in preventing the transmission of inheritable disorders to the offspring of parents carrying pathogenic genetic variants. Moreover, PGT-M has seen recent increase in application in the detection of variants predisposing to serious late onset conditions involving genes like BRCA1/2[9]. Utilization of PGT-M for disease prevention (its least controversial application) has increased from 46 (92% of 50 countries) to 74 (90% of 82 countries) over the past three years.

A significant increase in PGT-A utilization was noted with 72 countries noting that it is being performed, compared to 43 in the 2021 survey. It was not specifically noted to be absent in any country at this time. The use of more advanced and accurate sequencing technologies now enables even more precise diagnoses of segmental aneuploidies and mosaic chromosomal conformations[10,11]. PGT-M and PGT-A are widely recognised as established medical practices and the technical expertise in molecular genetics required for diagnostics can be outsourced to dedicated genetic services. The establishment of analytical services with reproductive genetics expertise has enabled clinics to offer PGT without the need to develop in-house competence Newer applications, specifically PGT-P, where the clinical benefits remain unproven, have not achieved the same level of acceptance. Newer non-invasive strategies for sampling embryo-derived DNA to use for PGT applications (niPGT) are also under development. Despite promising advantages in terms of workload reduction, the diagnostic accuracy is yet not as robust as biopsy-based approaches and further developments are required before niPGT can be considered an established preimplantation diagnostic approach.

Summary

The IFFS Surveillance 2024 documents the expanded acceptance and practice of all types of PGT with the number of countries performing it increasing from 46 to 74 for PGT-M and 43 to 72 for PGT-A over the past three years. Various combinations of PGT have been used for SS with differing requirements and the prevalence of these practices are much less than for PGT-A and M alone and are more controversial (see Chapter 11). The practice of embryo biopsy has been assimilated by IVF laboratories of all sizes and is being offered and performed more consistently. Regulation of PGT exists in 71 (90%) countries, primarily with oversight by government, including federal, national, state, provincial, and regional agencies. Regulation is less robust in some areas, especially with more recent introduction of ART services. There continues to be interest in alternative approaches to classic TE biopsy with the aim of making embryonic DNA sampling more cost-effective and less time-consuming. However, diagnostic efficacy will need to match current practice before non-invasive strategies can replace biopsy-based approaches.

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CHAPTER 13: SURROGACY

Introduction

Surrogacy is an arrangement in which a woman, designated the *surrogate mother*, becomes pregnant, carries, and gives birth to a child or children with the intention of giving them to another person or couple, *the intended parent or parents*. The 2024 IFFS Survey questionnaire considered both "gestational" and "traditional" surrogacy.

Gestational surrogacy, which is sometimes referred to as "full" or "IVF" surrogacy, refers to a situation in which gametes from both intended parents (or from one of the intended parents and a donor egg or sperm) are used to create an embryo, which is then transferred to the uterus of the surrogate mother. The surrogate mother's own eggs are not used. Alternatively, a donated embryo created from gametes that are not related to either the intended parent(s) or surrogate mother can be used. The surrogate mother is genetically unrelated to the offspring produced by this arrangement, but she carries the child for the duration of the pregnancy and gives birth to the child.

Traditional surrogacy, sometimes termed "natural" or "partial" surrogacy, refers to a situation in which the surrogate mother is inseminated with sperm from the male intended parent and the surrogate's own oocytes are fertilized *in vivo*. This may involve some form of reproductive assistance, usually artificial or intrauterine insemination (IUI) rather than IVF which is essential for gestational surrogacy. The children produced are genetically related to the surrogate mother since they arise from her oocytes.

Both gestational and traditional surrogacy can be undertaken for either altruistic or commercial motivation. The woman is compensated for her medical costs and providing gestational services for commercial surrogacy. Such payments typically exceed reimbursement of costs associated with the conception and delivery and may provide some financial incentive to the surrogate mother. Women offering altruistic surrogacy are typically compensated for their medical expenses and in some cases for income lost while providing the service, significantly, no additional remuneration is provided.

The laws governing surrogacy are complex and vary widely among jurisdictions. Many countries prohibit surrogacy entirely. Most prohibit commercial surrogacy. Most jurisdictions that legislatively permit surrogacy only allow altruistic surrogacy, and only under specific limited circumstances. Similarly, the few jurisdictions that regulate commercial surrogacy often limit access and who may serve as a surrogate mother. Several preliminary steps must first be undertaken by individuals pursuing surrogacy. Couples considering any type of surrogacy must initially determine the legal status of the arrangement in their domicile. Even in countries where surrogacy is lawfully permitted, full and informed legal advice from someone familiar with the laws of the country where the treatment will be provided is essential. In most countries where surrogacy is allowed, the "birth mother" is considered the legal mother of the child, but legislation usually exists that permits the intended parent(s) to become the legal parents after the birth of the child, provided that the minimal statutory requirements are met.

If surrogacy involves cross-border parties, laws pertaining to both surrogacy in the location in which this will take place and in the domicile of the intended parent(s) require specific consideration. A thorough medical assessment of the surrogate mother and counselling of all parties involved in the arrangement at the outset are essential steps.

The principal reasons that individuals or couples enter surrogacy arrangements include:

1. Medical indications pertaining to a female parent, including:
- A woman without a functional uterus but has one or both ovaries intact. This may include women with congenital absence of the uterus and women who have undergone a hysterectomy.
- A woman who has experienced repeated miscarriages or otherwise has limited potential for carrying a baby to term. This may include women who have undergone repeated failed cycles of IVF.
- A woman with a medical condition such that pregnancy might be life-threatening, but whose long-term health prospects are otherwise good.

2. Non-medical or social reasons, including same-sex couples, or ongoing single status. Surrogacy in these situations is permitted in a limited number of jurisdictions.

Analysis of the Survey

In the 2024 Survey questionnaire, the following questions regarding surrogacy were posed:

(1) Is surrogacy practised/performed in your country?
(2) Is surrogacy allowed/permitted in your country?
(3) Are surrogates compensated?
(4) Are the qualifications to be a surrogate based upon medical, mental health and/or any lifestyle (age and occupational) criteria?
(5) Are there regulations that govern surrogacy in your country?
(6) How is surrogacy regulated?
(7) How often is surrogacy performed in programs within your country?
(8) How much is compensation for surrogacy allowed, is there a minimum or a maximum amount allowed?

Of the 122 countries that participated in the 2024 survey, 36 (30%) answered at least one question pertaining to surrogacy. In 2021, 71 (79%) of the 90 participating countries submitted responses to at least one question regarding surrogacy. In 2018, 73 (82%) of the 89 participating countries submitted responses to at least one question pertaining to surrogacy. In 2016, 62 (95%) of the 65 participating countries submitted relevant data. The variable response rates may reflect, in part, the different respondents' familiarity with surrogacy regulations and practices in their countries of residence.

In the 2024 survey, of the 83 countries that responded to the question "Is third party reproduction practiced or performed in your country?", 36 (43%) reported that gestational surrogacy was practiced or performed in specific circumstances, including those in which the surrogate received an embryo or embryos created from the gametes of both prospective parents (the commissioning couple), from donated ova and commissioning male's sperm, or from donated embryos. Ten (28%) of the 36 countries

Chapter 13. Table 1

Is surrogacy practised/performed and/or allowed permitted in your country?

	Practised/Performed		Allowed/Permitted	
Country	**Gestational Surrogacy**	**Traditional Surrogacy**	**Gestational Surrogacy**	**Traditional Surrogacy**
Argentina	Yes	Yes	Yes	Yes
Armenia	Yes		Yes	
Australia	Yes		Yes	
Belarus	Yes		Yes	
Bolivia	Yes	Yes	Yes	Yes
Brazil	Yes		Yes	
Colombia	Yes		Yes	
Cyprus	Yes		Yes	
Czech Republic	Yes		Yes	
Dominican Republic	Yes	Yes	Yes	Yes
Ecuador	Yes		Yes	
Equatorial Guinea	Yes	Yes	Yes	Yes
Georgia	Yes		Yes	
Ghana	Yes		Yes	
Greece	Yes		Yes	
Hong Kong			Yes	
India	Yes		Yes	
Iran	Yes		Yes	
Israel	Yes		Yes	
Kazakhstan	Yes		Yes	
Kenya	Yes	Yes		
Mexico	Yes		Yes	
New Zealand	Yes	Yes	Yes	Yes
Nigeria	Yes		Yes	
Perú	Yes			
Portugal			Yes	
Russia	Yes		Yes	
South Africa	Yes		Yes	
Tanzania	Yes		Yes	
The Netherlands	Yes	Yes	Yes	Yes
Uganda	Yes		Yes	
Ukraine	Yes		Yes	
United Kingdom	Yes	Yes	Yes	Yes
United States of America	Yes	Yes	Yes	Yes
Uruguay	Yes		Yes	
Vietnam	Yes		Yes	
Zambia	Yes	Yes	Yes	Yes
Zimbabwe	Yes			

also noted that traditional surrogacy was performed in specific circumstances (Table 1).

Of the 35 (42%) countries that affirmed that gestational surrogacy was allowed or permitted, nine noted that both types of surrogacies were allowed.

Twenty (57%) of 35 national respondents noted that gestational surrogates were reimbursed for time and expenses. Seven (20%) reported that gestational surrogates received compensation that exceeded coverage for time and expenses. Five respondents reported that compensation was not permitted, and three respondents replied "unknown" (Table 2).

In 2021, 25 countries responded to this survey question. At that time, 15 (60%) of the respondents noted that gestational surrogates could be reimbursed for time and expenses only, while three reported that no compensation was permitted. Five (20%) respondents reported that compensation in excess of reimbursement was allowed, three respondents reported that compensation was not permitted and two answered "unknown". Five of nine respondents reported that traditional surrogates were reimbursed for time and expenses, two answered that traditional surrogates were compensated beyond reimbursement alone, one replied that compensation was not allowed, and one answered "unknown".

A limited amount of information was received which specifically addressed the limits and ranges of compensation for surrogacy services. Regarding gestational surrogacy, respondents from Armenia, Uganda and the United States reported that there were no minimum or maximum levels of compensation. The respondent from Georgia reported a minimum limit of $18,000 (USD) and a maximum payment limit of $28,000 (USD). Greece has a maximum compensation limit of €10,000. Russia reported a minimum payment of $80,000 (USD) and a maximum payment of $200,000 (USD). Only the United States reported financial information for traditional surrogacy where no limits exist (Table 2).

Chapter 13. Table 2

Are surrogates compensated?

	Gestational surrogates		Traditional surrogates	
Country	**Compensated**	**Min/Max**	**Compensated**	**Min/Max**
Argentina	Reimbursement for time and expenses		Reimbursement for time and expenses	
Armenia	Compensated Beyond Reimbursement	No min/max		
Australia	Reimbursement for time and expenses			
Belarus	Reimbursement for time and expenses			
Bolivia	Reimbursement for time and expenses		Reimbursement for time and expenses	
Brazil	No			
Colombia	Reimbursement for time and expenses			
Cyprus	Reimbursement for time and expenses			
Czech Republic	Reimbursement for time and expenses			
Dominican Republic	Compensated Beyond Reimbursement	Unknown	Compensated Beyond Reimbursement	
Ecuador	Reimbursement for time and expenses			
Equatorial Guinea	Reimbursement for time and expenses		Reimbursement for time and expenses	
Georgia	Compensated Beyond Reimbursement	18000/28000		
Ghana	Reimbursement for time and expenses			
Greece	Compensated Beyond Reimbursement	No min/10000		
Hong Kong	Reimbursement for time and expenses			
India	Reimbursement for time and expenses			
Iran	Reimbursement for time and expenses			
Israel	Reimbursement for time and expenses			
Kazakhstan	No			
Mexico	Reimbursement for time and expenses			
New Zealand	Reimbursement for time and expenses		No	
Nigeria	Reimbursement for time and expenses			
Portugal	No			
Russia	Compensated Beyond Reimbursement	800000/2000000		
South Africa	Reimbursement for time and expenses			
Tanzania	Unknown			
The Netherlands	Reimbursement for time and expenses		Reimbursement for time and expenses	
Uganda	Compensated Beyond Reimbursement	No min/max		
Ukraine	Unknown			
United Kingdom	Reimbursement for time and expenses		Reimbursement for time and expenses	
United States of America	Compensated Beyond Reimbursement	No min/max	Compensated Beyond Reimbursement	No min/max
Uruguay	No			
Vietnam	No			
Zambia	Unknown		Unknown	

Thirty-five respondents replied to the query, "are the qualifications to be a gestational surrogate based upon medical, mental health, and/or any lifestyle (age and occupational) criteria?" and 33 (94%) respondents replied "yes", and two respondents replied that such qualifications are "not addressed". When the same question was posed regarding traditional surrogates, eight replied "yes" and one respondent replied, "not addressed". In 2021, twenty-five respondents replied to the query. Twenty-four (96%) respondents replied "yes", and one respondent replied "unknown". Regarding traditional surrogates, ten replied "yes" and one respondent replied "no" (Table 3).

In the 2024 survey, 33 (27%) of 122 countries had regulations specifically pertaining to gestational surrogacy (Table 4). The type of regulation pertaining to gestational surrogacy was specified in 33 countries, and demonstrated a variety of different approaches:

- 16 countries reported the existence of only federal/national laws/statutes/ordinances;
- Seven countries reported having a mix of federal/national laws/statutes/ordinances and professional organization standards/guidelines;
- Three countries reported the existence of a mix of federal/national laws/statutes/ordinances, and agency regulations/oversight;
- One country reported the existence of a mix of federal/national laws/statutes/ordinances, state/provincial/regional laws/statutes/ordinances, agency regulations/oversight, and professional organization standards/guidelines;
- One country reported the existence of a mix of federal/national laws/statutes/ordinances, state/provincial/regional laws/statutes/ordinances, and agency regulations/oversight,
- One country reported the existence of a mix of federal/national laws/statutes/ordinances, cultural practice, and religious decree;
- One country reported the existence of professional organization standards/guidelines only;
- One country reported the existence of state laws only;
- One country reported a mix of state/provincial/regional laws/statutes/ordinances and professional organization standards/guidelines;
- One country reported a mix of agency regulations/oversight and professional standards/guidelines.

Chapter 13. Table 3

Are the qualifications to be a surrogate based upon medical, mental health and/or lifestyle (age and occupational) criteria?

Country	Gestational surrogate	Traditional surrogate
Argentina	Yes	Yes
Armenia	Yes	
Australia	Yes	
Belarus	Yes	
Bolivia	Yes	Yes
Brazil	Yes	
Colombia	Yes	
Cyprus	Yes	
Czech Republic	Yes	
Dominican Republic	Yes	Yes
Ecuador	Yes	
Equatorial Guinea	Yes	Yes
Georgia	Yes	
Ghana	Yes	
Greece	Yes	
Hong Kong	Yes	
India	Yes	
Iran	Yes	
Israel	Yes	
Kazakhstan	Yes	
Mexico	Yes	
New Zealand	Yes	Yes
Nigeria	Yes	
Portugal	Yes	
Russia	Yes	
South Africa	Yes	
Tanzania	Yes	
The Netherlands	Yes	Yes
Uganda	Yes	
Ukraine	Not addressed	
United Kingdom	Yes	Yes
United States of America	Yes	Yes
Uruguay	Yes	
Vietnam	Yes	
Zambia	Not addressed	Not addressed

Chapter 13. Table 4

Are there regulations that govern third party reproduction in your country?

Country	Gestational surrogates	Traditional surrogates
Armenia	Yes	
Australia	Yes	Yes
Belarus	Yes	
Bosnia and Herzegovina	Yes	Yes
Brazil	Yes	
Colombia	Yes	
Cyprus	Yes	
Czech Republic	Yes	
Equatorial Guinea	Yes	Yes
Finland	Yes	Yes
Georgia	Yes	
Ghana	Yes	
Greece	Yes	
Hong Kong	Yes	Yes
India	Yes	
Israel	Yes	
Italy	Yes	Yes
Japan	Yes	
Kazakhstan	Yes	
Mexico	Yes	
New Zealand	Yes	
Portugal	Yes	
Romania	Yes	Yes
Russia	Yes	
South Africa	Yes	
The Netherlands	Yes	Yes
Tunisia	Yes	Yes
Ukraine	Yes	
United Kingdom	Yes	Yes
United States of America	Yes	Yes
Uruguay	Yes	
Vietnam	Yes	
Zambia	Yes	Yes

Twelve (10%) of 122 countries reported the existence of regulations governing traditional surrogacy. Seven responders noted only the existence of federal laws, statutes, or ordinances governing the practice of traditional surrogacy. One country reported that it was addressed by both federal laws and agency regulations or oversight. One country reported the existence of federal laws and professional organization standards or guidelines. One country reported the existence of federal laws, statutes or ordinances; state, provincial or regional laws, statutes or ordinances; and, agency regulations or oversight. One country reported the existence of federal laws, statutes or ordinances; state, provincial or regional laws, statutes or ordinances; agency regulations or oversight; in addition, to professional organization standards or guidelines. One country noted the existence of only professional organization standards or guidelines (Table 5).

Respondents from 93 countries provided information pertaining to the frequency of both gestational and traditional surrogacy utilization (Table 6). Nineteen (20%) reported that gestational surrogacy was commonly used, and 23 (25%) reported that it was used infrequently. Forty-two (45%) reported that gestational surrogacy was not performed, and 8 (9%) replied "unknown". Traditional surrogacy is only commonly performed in Zambia, and 11 (12%) of 89 respondents noted that it was used infrequently. Sixty-three (71%) described traditional surrogacy as never performed and 14 (16%) responded "unknown".

In 2021, respondents from 71 countries provided information pertaining to the frequency of use of both gestational and traditional surrogacy. Fifteen (21%) reported that gestational surrogacy was in frequent use, and 16 (23%) reported that it was used infrequently. Thirty-two (45%) reported that gestational surrogacy was not performed, and eight (11%) replied "unknown". In 2021, no respondents reported that traditional surrogacy was performed commonly, and 13 (19%) of 69 respondents noted that it was used infrequently. Forty-four (64%) reported that traditional surrogacy was never performed and 12 (17%) responded "unknown".

Discussion

With more than 50 additional responses in this section of the 2025 Triennial Report than in 2022, a more complete depiction of the global status of surrogacy is emerging. It remains a controversial topic and with more countries and human rights groups

Chapter 13. Table 5

How is surrogacy regulated?

Country	Gestational surrogacy	Traditional surrogacy
Armenia	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines	
Australia	State/Provincial/Regional Laws/Statutes/Ordinances Professional Organization Standards/Guidelines	Professional Organization Standards/Guidelines
Belarus	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines	
Bosnia and Herzegovina	Federal/National Laws/Statutes/Ordinances	Federal/National Laws/Status/Ordinances
Brazil	Agency Regulations/Oversight Professional Organization Standards/Guidelines	
Colombia	Federal/National Laws/Statutes/Ordinances	
Cyprus	Federal/National Laws/Statutes/Ordinances	
Czech Republic	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines	
Equatorial Guinea	Federal/National Laws/Statutes/Ordinances	Federal/National Laws/Status/Ordinances
Finland	Federal/National Laws/Statutes/Ordinances	Federal/National Laws/Status/Ordinances
Georgia	Federal/National Laws/Statutes/Ordinances Cultural Practice Religious Decree	
Ghana	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines	
Greece	Federal/National Laws/Statutes/Ordinances	
Hong Kong	Federal/National Laws/Statutes/Ordinances State/Provincial/Regional Laws/Statutes/Ordinances Agency Regulations/Oversight	Federal/National Laws/Status/Ordinances State/Provincial/Regional Laws/Statutes/Ordinances Agency Regulations/Oversight
India	Federal/National Laws/Statutes/Ordinances	
Israel	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines	
Italy	Federal/National Laws/Statutes/Ordinances	Federal/National Laws/Status/Ordinances
Japan	Professional Organization Standards/Guidelines	
Kazakhstan	Federal/National Laws/Statutes/Ordinances	
Mexico	State/Provincial/Regional Laws/Statutes/Ordinances	
New Zealand	Federal/National Laws/Status/Ordinances Agency Regulations/Oversight	
Portugal	Federal/National Laws/Statutes/Ordinances Agency Regulations/Oversight	
Romania	Federal/National Laws/Statutes/Ordinances	Federal/National Laws/Status/Ordinances
Russia	Federal/National Laws/Statutes/Ordinances	
South Africa	Federal/National Laws/Statutes/Ordinances	
The Netherlands	Federal/National Laws/Status/Ordinances Professional Organization Standards/Guidelines	Federal/National Laws/Status/Ordinances Professional Organization Standards/Guidelines
Tunisia	Federal/National Laws/Statutes/Ordinances	Federal/National Laws/Status/Ordinances
Ukraine	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines	
United Kingdom	Federal/National Laws/Statutes/Ordinances	Federal/National Laws/Status/Ordinances
United States of America	Federal/National Laws/Status/Ordinances State/Provincial/Regional Laws/Statutes/Ordinances Agency Regulations/Oversight Professional Organization Standards/Guidelines	Federal/National Laws/Status/Ordinances State/Provincial/Regional Laws/Statutes/Ordinances Agency Regulations/Oversight Professional Organization Standards/Guidelines
Uruguay	Federal/National Laws/Statutes/Ordinances	
Vietnam	Federal/National Laws/Statutes/Ordinances	
Zambia	Federal/National Laws/Statutes/Ordinances Agency Regulations/Oversight	Federal/National Laws/Status/Ordinances Agency Regulations/Oversight

concerned about the rights of surrogates, its future is more uncertain. In the current survey, 36 (43%) countries reported that gestational surrogacy is practiced in their jurisdiction, compared to eight (28%) in 2022. Traditional surrogacy was performed in ten countries, including nine that offered both forms, according to the current survey. Three years ago, eleven countries were identified that offered both forms of surrogacy. It is likely that the 2024 survey was more successful in presenting a more complete data set reflecting gestational surrogacy practice than the results suggest a trend towards greater adoption by more countries. The

Chapter 13. Table 6

How often is third party reproduction performed in programs within your country?

Country	Gestational surrogacy	Traditional surrogacy
Algeria	Never Performed	Never Performed
Argentina	Infrequently Used	Infrequently Used
Armenia	Infrequently Used	Never Performed
Australia	Infrequently Used	Unknown
Bangladesh	Never Performed	Never Performed
Belarus	Commonly Used	Never Performed
Benin	Never Performed	Unknown
Bolivia	Infrequently Used	Infrequently Used
Bosnia and Herzegovina	Never Performed	Never Performed
Brazil	Commonly Used	Never Performed
Burkina Faso	Infrequently Used	Never Performed
Cambodia	Unknown	Unknown
Cameroun	Infrequently Used	
Chile	Commonly Used	Never Performed
China	Never Performed	Never Performed
Colombia	Commonly Used	Never Performed
Costa Rica	Never Performed	Never Performed
Côte d'Ivoire	Unknown	Unknown
Croatia	Never Performed	Never Performed
Cyprus	Commonly Used	Never Performed
Czech Republic	Infrequently Used	Never Performed
Democratic Republic of the Congo	Never Performed	Infrequently Used
Denmark	Never Performed	Never Performed
Dominican Republic	Infrequently Used	Infrequently Used
Ecuador	Infrequently Used	Unknown
Egypt	Never Performed	Never Performed
Equatorial Guinea	Infrequently Used	Infrequently Used
Estonia	Never Performed	Never Performed
Ethiopia	Never Performed	Never Performed
Finland	Never Performed	Never Performed
Georgia	Commonly Used	Never Performed
Germany	Never Performed	Never Performed
Ghana	Commonly Used	Unknown
Greece	Infrequently Used	Never Performed
Guatemala	Unknown	Unknown
Hong Kong	Infrequently Used	Never Performed
Hungary	Never Performed	Never Performed
India	Infrequently Used	Never Performed
Indonesia	Never Performed	Never Performed
Iran	Commonly Used	Never Performed
Iraq	Never Performed	Never Performed
Israel	Commonly Used	Never Performed
Japan	Never Performed	Unknown
Jordan	Never Performed	Never Performed
Kazakhstan	Infrequently Used	Never Performed
Kenya	Commonly Used	Infrequently Used
Latvia	Unknown	Never Performed
Libya	Never Performed	Never Performed
Lithuania	Never Performed	Never Performed
Malaysia	Infrequently Used	Infrequently Used
Mali	Never Performed	Never Performed
Malta	Never Performed	Never Performed
Mexico	Commonly Used	
Moldova	Unknown	Unknown
Montenegro	Never Performed	Never Performed
Morocco	Never Performed	Never Performed
Myanmar	Never Performed	Never Performed
Namibia	Unknown	Unknown
Nepal	Never Performed	Never Performed
New Zealand	Commonly Used	Infrequently Used
Nigeria	Commonly Used	Never Performed
Norway	Never Performed	Never Performed
Oman	Never Performed	Never Performed
Panamá	Unknown	Unknown
Paraguay	Never Performed	Never Performed
Perú	Infrequently Used	Unknown
Portugal	Never Performed	Never Performed
Romania	Never Performed	Never Performed
Russia	Infrequently Used	Never Performed
Serbia	Never Performed	Never Performed
Singapore	Never Performed	Never Performed
Slovenia	Never Performed	Never Performed
South Africa	Commonly Used	Never Performed
South Korea	Infrequently Used	Never Performed
Sudan	Never Performed	Never Performed
Sweden	Never Performed	Never Performed
Tajikistan	Never Performed	Never Performed
Tanzania	Infrequently Used	Unknown
The Netherlands	Infrequently Used	Infrequently Used
Trinidad & Tobago	Never Performed	Never Performed
Tunisia	Never Performed	Never Performed
Uganda	Commonly Used	Never Performed
Ukraine	Commonly Used	
United Arab Emirates	Never Performed	Never Performed
United Kingdom	Commonly Used	Infrequently Used
United States of America	Commonly Used	Infrequently Used
Uruguay	Infrequently Used	Never Performed
Uzbekistan	Never Performed	Never Performed
Venezuela	Unknown	Never Performed
Vietnam	Infrequently Used	Never Performed
Zambia	Infrequently Used	Commonly Used
Zimbabwe	Commonly Used	Unknown

2024 data confirm earlier survey findings that most countries have extant explicit prohibitions for both types of surrogacies and it is infrequently employed. However, a recent review identified 65 countries in which surrogacy is legal or admitted[1]. Only altruistic surrogacy is permitted in Australia, Belgium, Canada, the Czech Republic, Denmark, the Netherlands, and the United Kingdom[2].

In recent years several countries have passed legislation prohibiting or restricting both types, in part, in response to a considerable literature depicting potential harm from surrogacy arrangements. In 2024, there were prosecutions for human trafficking of women involved with gestational surrogacy in Crete, Greece and similar allegations arose in Cordoba, Argentina. However, some studies have concluded that, "altruism and empathy are the primary motivations for participating in surrogacy processes"[3]. Ethical and clinical guidelines have been developed by some professional organizations and nations, but they have not been consistently followed.

There is little reliable data regarding the volume of gestational surrogacy and the effect of national sanctions and there is essentially none for traditional surrogacy . Perhaps the best reflection of trends is the proliferation of commercial enterprises promoting surrogacy contracts in countries that permit them.

Summary

This section of the 2025 Triennial Report offers a more complete depiction of the global status of gestational and traditional surrogacy with 51 additional countries now providing data suggesting that gestational surrogacy is more prevalent than previously reported. Gestational surrogacy is practiced in 36 countries and traditional surrogacy in ten, according to our data. Twenty countries permit compensation for gestational surrogates that is limited to reimbursement for time and expenses and seven countries allow compensation to exceed reimbursement expenses. Both types of surrogacies are extensively regulated where they are practised, relying on a variety of federal and state laws and statutes and other means of enforcement.

Surrogacy continues to be a topic of intense international debate regarding the indications for its application and concerns for exploiting participants. These include several unresolved concerns encompassing social justice, autonomy, and transparency.

References

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CHAPTER 14: CROSS-BORDER REPRODUCTIVE CARE

Introduction

The term cross-border reproductive care (CBRC) refers to the practice in which citizens of one country travel to another country to obtain ART or related services. CBRC may also refer to cases in which gametes and embryos are imported or exported across national borders. CBRC is a contentious, relatively unregulated practice, making reliable data collection particularly challenging. The 2024 Surveillance questionnaire queried whether people travelled to or from the respondent's country to engage in ART, and, if so, whether regulations existed governing cross border reproduction in the respondents' country. The survey also sought information regarding the existence of regulations pertaining to the import of reproductive tissue into the respondents' county. Further questions focused on the existence of regulations regarding the export of reproductive tissue from the respondents' country.

Analysis of the Survey

The following questions were posed in the 2024 questionnaire:

(1) Do people travel to your country to seek assisted reproduction (For lower cost, higher quality, availability, egg donation, embryo donation, sperm donation, gestational or traditional surrogacy)?
(2) Are there regulations that govern cross border reproduction in your country (No regulations, Federal/National Laws/Statutes/Ordinances, State/Provincial/Regional Laws/Statutes/Ordinances, Municipal Laws/Statutes/Ordinances, Agency Regulations/Oversight, Professional Organization Standards/Guidelines, Cultural practices, religious decree or is it unknown)?
(3) Do people travel from your country to seek assisted reproduction (For lower cost, higher quality, availability, egg donation, embryo donation, sperm donation)?
(4) Are there regulations regarding the import of reproductive tissue into your country (ova, sperm, zygotes)?
(5) Are there regulations regarding the export of reproductive tissue from your country (ova, sperm, zygotes)?

Individuals entering the country seeking treatment (Table 1, **Chart 1**)

Lower-cost ART services: Respondents from 105 countries provided data pertaining to CBRC. The analysis included data from respondents that provided at least one relevant answer to the issues under consideration. Seventy-nine (75%) of 105 respondents reported that individuals travel to their country to obtain lower-cost ART services. Respondents from another 19 (18%) countries reported that people did not travel to their country for lower-cost ART services. Respondents from seven countries answered "unknown".

Higher quality ART services: 74 (70%) of 106 respondents reported that individuals travel to their country seeking higher quality ART services. By contrast, 15 (14%) respondents reported that individuals do not travel to their country for higher quality ART services. Respondents from another 17 (16%) countries answered "unknown".

ART services that are unavailable in their home countries: 71 (68%) of 105 respondents reported that individuals travel to their country seeking ART services that are not available in their home countries. Twenty-three (22%) of 105 respondents reported that individuals do not travel to their country seeking ART services that are unavailable at home. Eleven (10%) respondents replied "unknown".

Access to donated eggs: 57 (55%) of 104 respondents reported that individuals travel to their country to access donated eggs. Thirty-nine (37%) of the respondents reported that potential recipients from other countries do not travel to their country to gain access to donated eggs. Eight respondents responded "unknown".

Access*to donated embryos*: 35 (34%) of 103 respondents noted that people travel to their country seeking access to donated embryos. Fifty-three (51%) of the respondents reported that individuals from other countries do not travel to their country to gain access to donated embryos. Fifteen (15%) respondents replied that they did not know whether individuals travelled to their country seeking embryo donation.

Access to donated sperm: 48 (46%) of 104 respondents reported that individuals travelled to their country seeking access to donated sperm. By contrast, 47 (45%) of the respondents noted that individuals from other countries did not travel to their country seeking access to donated sperm. Nine respondents answered "unknown".

To engage in gestational surrogacy: 20 (29%) of 104 respondents answered affirmatively, while 66 (63%) of the respondents said "no" and eight replied "unknown".

To engage in traditional surrogacy: 10 (10%) of 104 respondents answered affirmatively, while 86 (83%) of the respondents replied "no" and eight answered "unknown".

Individuals leaving the country seeking treatment (Table 3, **Chart 1**)

Chapter 14. Table 1

Do people travel to your country to seek assisted reproduction?

Country	Lower cost ART services	Higher quality ART services	ART services unavailable in their home country	Egg donation	Embryo donation	Sperm donation	Surrogacy	
							Gestational	Traditional
Albania	Yes		Yes	Yes	Yes	Yes	Unknown	Unknown
Algeria	No	No	Unknown	No	No	No	No	No
Argentina	Yes	Yes	Unknown	Yes	Unknown	Yes	Yes	Yes
Armenia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Australia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Austria	No	Yes	Yes	No	No	No	No	No
Bangladesh	No	No	No	No	No	No	No	No
Barbados	Yes	Yes	Yes	No	No	No	No	No
Belarus	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Benin	Yes	Yes	Yes	Yes		Yes		
Bolivia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Bosnia and Herzegovina	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Brazil	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Bulgaria	Yes	Unknown	Yes	Yes	Yes	Yes	No	No
Burkina Faso	Yes	Yes	Yes	Yes	No	Yes	No	No
Cambodia	Yes	Yes	Yes	No	No	No	Unknown	Unknown
Cameroon	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chile	Yes	Yes	No	Yes	No	No	No	No
China	No	No	No	No	No	No	No	No
Colombia	Yes	Yes	Yes	Yes	No	No	Yes	No
Costa Rica	Yes	No	No	Unknown	Unknown	Unknown	No	No
Côte d'Ivoire	Unknown	Yes	Yes	Unknown	Unknown	Unknown	No	No
Croatia	Yes	Unknown	Unknown	No	No	No	No	No
Cyprus	Yes	Unknown	Yes	Yes	Unknown	Yes	No	No
Czech Republic	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Democratic Republic of the Congo		Yes	Yes	Yes	No	Yes	Yes	No
Denmark	Unknown	Unknown	Yes	Yes	Unknown	Yes	No	No
Dominican Republic	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ecuador	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Egypt	Yes	Yes	Yes	No	No	No	No	No
El Salvador	Yes	Yes	No	Yes	Yes	Yes	No	No
Equatorial Guinea	Yes	Yes	Yes	Yes	No	No	Unknown	No
Estonia	Yes	No	Unknown	Unknown	No	No	No	No
Ethiopia	Yes	Yes	Yes	No	No	No	No	No
Finland	No	Yes	Yes	Yes	Yes	Yes	No	No
France	Yes	Yes	Yes	No	No	No	No	No
Gambia	Yes	Unknown	Yes	Yes	Yes	Yes	Yes	Yes
Georgia	Yes	Yes	Yes	Yes	Unknown	Yes	Yes	No
Germany	No	Yes	Yes	No	No	Unknown	No	No
Ghana	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Greece	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Guatemala	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Hong Kong	Unknown	Yes	Yes	Yes	Yes	Yes	No	No
Hungary	Yes	Yes	Yes	No	No	No	No	No
Iceland	Unknown	Unknown	Yes	Yes	Unknown	Yes	No	No
India	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Indonesia	Yes	Unknown	No	No	No	No	No	No
Iran	Yes	Yes	No	Yes	Yes	Unknown	Yes	Yes
Iraq	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Israel	Yes	Yes	Yes	No	No	No	No	No
Italy	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Jamaica	Yes	Yes	Yes	Yes	No	No	No	No
Japan	No	Yes	No	No	No	No	No	No
Jordan	Yes	Yes	Yes	No	No	No	No	No
Kazakhstan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Kenya	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kuwait	No	No	No	No	No	No	No	No
Latvia	Yes	Unknown	Yes	Yes	Yes	Yes	No	No

Chapter 14. Table 1

(Continued)

Country	Lower cost ART services	Higher quality ART services	ART services unavailable in their home country	Egg donation	Embryo donation	Sperm donation	Surrogacy	
							Gestational	Traditional
Libya	No	No	No	No	No	No	No	No
Lithuania	Unknown	Unknown	Unknown	No	No	No	No	No
Malaysia	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Mali	Yes	Yes	Yes	Unknown	Unknown	Unknown	No	No
Malta			Yes					
Mexico	Yes	No	No	Yes	No	No	Yes	Yes
Moldova	Yes	Yes	No	No	No	No	No	No
Montenegro	Yes	Unknown	Yes	No	No	No	No	No
Morocco	Yes	Yes	Yes	No	No	No	No	No
Myanmar	No	No	No	No	No	No	No	No
Namibia	Yes	Yes	Yes	Yes	Yes	Yes	Unknown	Unknown
Nepal	Yes	Unknown	No	Yes	Yes	Yes	No	No
New Zealand	No	No	Yes	Yes	No	Yes	Yes	No
Nicaragua		Yes					No	No
Nigeria	Yes	No	No	Yes	Yes	Yes	Yes	No
Norway	Yes	Unknown	Yes	Unknown	No	No	No	No
Oman	Yes	Yes	Yes	No	No	No	No	No
Pakistan	Yes	Yes	Yes	No	No	No	No	No
Panamá	Yes	Yes	No	Yes	Unknown	Yes	Unknown	Unknown
Paraguay	No	Yes	No	Yes	No	No	No	No
Perú	Yes	Yes	No	Yes	No	Yes	Yes	No
Philippines	No	Yes	No	No	No	No	No	No
Portugal	Yes	Unknown	Yes	Yes	Unknown	No	No	No
Qatar	Yes	Yes	No	No	No	No	No	No
Republic of the Congo	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Romania	No	No	No	No	No	No	No	No
Russia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Serbia	Yes	Yes	Yes	No	No	No	No	No
Singapore	Unknown	Yes	Yes	Yes	Unknown	Yes	No	Unknown
Slovenia	Yes	Yes	Unknown	No	No	No	No	No
South Africa	Yes	Yes	Yes	Yes	Yes	Yes	No	No
South Korea	Yes	Yes	Unknown	No	No	No	No	No
Sudan	Yes	Yes	Yes	No	No	No	No	No
Sweden	No	No	No	No	No	No	No	No
Switzerland	No	Yes	Yes	No	No	No	No	No
Tajikistan	Yes	Unknown	Yes	No	No	No	No	No
Tanzania	Yes	No	Yes	Yes	No	Yes	Yes	No
Trinidad & Tobago	Yes	Yes	Yes	Yes	Yes	Unknown	No	No
Tunisia	Yes	Yes	Yes	No	No	No	No	No
Turkey	Yes	Yes						
Uganda	No	No	Yes	Yes	Yes	Yes	Yes	No
Ukraine	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
United Arab Emirates		Yes	Yes					
United Kingdom	No	Yes	No	No	No	No	No	No
United States of America	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Uruguay	Yes	Yes	Unknown	Unknown	Unknown	Unknown	No	No
Uzbekistan	Yes	Yes	Yes	No	No	No	No	No
Venezuela	Yes							
Vietnam	Yes	Unknown	Yes	No	No	No	No	No
Zambia	Yes	Yes	Unknown	Yes	Unknown	Yes	Unknown	Unknown
Zimbabwe	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

Lower-cost ART services: 40 (38%) of 104 respondents reported that individuals travelled from their country to seek lower-cost ART services elsewhere (Table 2). Thirty-seven (36%) of the respondents indicated that people did not travel from their country seeking lower-cost ART services elsewhere. Twenty-two (21%) responded "unknown" and five respondents replied, "not addressed".

Higher quality ART services: 58 (56%) of 103 respondents reported that individuals travelled from their country to seek higher quality ART services elsewhere. Twenty-four (23%) responded that individuals did not travel from their country seeking higher quality ART services; 18 (17%) respondents selected "unknown", and three respondents replied, "not addressed".

Chapter 14. Table 2a

Are there regulations that govern cross border reproduction in your country?

Patients that visit your country seeking treatment

Country	No regulations	Federal/ National	State/Provincial/ Regional	Municipal	Agency	Professional	Cultural practice	Religious decree	Unknown
Albania	X								
Argentina	X								
Armenia		X				X			
Australia		X	X			X			
Austria	X								
Bangladesh									X
Barbados									X
Belarus		X							
Benin	X								
Bolivia	X								
Brazil	X								
Bulgaria		X							
Burkina Faso	X								
Cambodia		X				X			
Cameroon	X							X	
Chile	X								
China	X								
Colombia	X								
Costa Rica		X							
Côte d'Ivoire									X
Croatia		X							
Cyprus		X							
Czech Republic		X							
Democratic Republic of the Congo	X								
Dominican Republic	X								
Ecuador	X								
Egypt		X	X	X	X	X	X	X	
El Salvador	X								
Equatorial Guinea	X								
Estonia	X								
Ethiopia	X								
Finland	X								
France	X								
Gambia					X	X	X	X	
Georgia									X
Germany	X								
Ghana		X				X			
Greece		X							
Guatemala	X								
Hong Kong	X								
Hungary	X								
Iceland	X								
India		X							
Indonesia	X								
Iran		X	X	X	X	X	X	X	
Israel		X							
Italy	X								
Jamaica	X								
Japan	X					X			
Jordan	X						X		
Kazakhstan	X								
Kenya	X								
Kuwait		X	X	X	X	X	X	X	
Latvia		X			X				
Lithuania	X								
Malaysia	X								
Mali	X								
Malta	X								
Mexico	X								

Chapter 14. Table 2a

(Continued)

Patients that visit your country seeking treatment

Country	No regulations	Federal/ National	State/Provincial/ Regional	Municipal	Agency	Professional	Cultural practice	Religious decree	Unknown
Moldova		X	X	X	X	X	X		
Montenegro	X								
Morocco	X								
Myanmar		X	X	X	X	X	X	X	
Namibia	X								
Nepal	X								
New Zealand	X								
Nicaragua	X								
Norway		X							
Oman	X						X	X	
Pakistan		X				X	X	X	
Panamá	X								
Paraguay	X								
Perú	X								
Philippines	X								
Portugal	X								
Qatar	X								
Republic of the Congo	X								
Romania		X	X	X	X	X	X	X	
Russia		X							
Serbia	X								
Singapore	X								
Slovenia	X								
South Africa		X							
South Korea	X								
Sudan		X		X	X	X	X	X	
Sweden	X								
Switzerland		X							
Tajikistan	X								
Tanzania	X								
Trinidad & Tobago	X								
Tunisia	X								
Turkey		X							
Uganda		X	X	X	X	X	X	X	
Ukraine		X				X			
United Arab Emirates		X							
United Kingdom		X			X				
United States of America		X	X		X	X	X		
Uzbekistan		X							
Venezuela	X								
Vietnam		X	X	X	X	X	X	X	
Zambia		X	X	X		X		X	
Zimbabwe									X

ART services that are unavailable in their home countries: 50 (50%) of 101 respondents reported that individuals travelled from their country in search of ART services that were currently unavailable. Thirty-seven (37%) of the respondents noted that people did not travel from their country in search of ART services that were currently unavailable in their home country. Twelve (12%) respondents answered "unknown" and two replied, "not addressed".

Access to donated eggs: 54 (54%) of 100 respondents reported that individuals travelled from their country to obtain access to donated eggs. Twenty-seven (27%) of the respondents indicated that individuals did not travel from their countries for access to donated eggs. Fourteen (14%) respondents replied "unknown" and five replied, "not addressed".

Access to donated embryos: 40 (41%) of 98 respondents reported that individuals travelled from their country to access donated embryos. Thirty-two (33%) respondents reported that individuals did not travel from their countries to gain access to donated embryos. Twenty (20%) respondents selected "unknown", and six answered, "not addressed".

Access to donated sperm: 40 (41%) respondents from 97 countries reported that individuals travelled from their country to another country for access to donated sperm. Thirty-two (33%) respondents replied that individuals did not travel from their countries to other countries for greater access to donated sperm. Twenty (20%) responded "unknown" and six replied, "not addressed".

To engage in gestational surrogacy: 52 (52%) respondents from 100 countries reported that individuals travelled from their

Chapter 14. Table 2b

Are there regulations that govern cross border reproduction in your country?

Citizens that visit other countries seeking treatment

Country	No regulations	Federal/ National	State/Provincial/ Regional	Municipal	Agency	Professional	Cultural practice	Religious decree	Unknown
Albania	X								
Algeria		X	X	X	X	X			
Argentina	X								
Armenia	X								
Australia	X								
Austria	X								
Bangladesh	X								
Belarus		X							
Benin	X								
Bolivia	X								
Bosnia and Herzegovina		X	X	X	X	X	X	X	
Brazil	X								
Bulgaria	X								
Burkina Faso	X								
Cambodia									X
Cameroon		X					X		
Chile	X								
China	X								
Colombia	X								
Côte d'Ivoire									X
Croatia		X							
Czech Republic	X								
Democratic Republic of the Congo	X								
Ecuador	X								
Egypt		X	X	X	X	X	X	X	
El Salvador									X
Equatorial Guinea	X								
Estonia	X								
Ethiopia		X							
Finland	X								
France		X							
Gambia		X	X	X					
Germany	X								
Ghana							X	X	
Greece	X								
Guatemala	X								
Hong Kong	X								
Hungary	X								
Iceland	X								
India	X								
Indonesia	X								
Iraq		X	X	X	X	X	X	X	
Israel			X	X	X	X	X	X	
Italy	X								
Japan	X								
Jordan	X								
Kazakhstan	X								
Kenya	X								
Kuwait		X	X	X	X	X	X	X	
Latvia	X								
Lithuania	X								
Mali	X								
Malta	X								
Mexico	X								
Moldova								X	
Montenegro	X								
Morocco	X								
Myanmar		X	X	X	X	X	X	X	
Namibia	X								

Chapter 14. Table 2b

(*Continued*)

Citizens that visit other countries seeking treatment

Country	No regulations	Federal/ National	State/Provincial/ Regional	Municipal	Agency	Professional	Cultural practice	Religious decree	Unknown
Nepal	X								
Norway		X							
Oman	X								
Pakistan			X	X	X				
Panamá	X								
Paraguay	X								
Perú	X								
Philippines	X								
Portugal	X								
Qatar	X								
Republic of the Congo					X				
Romania	X								
Russia	X								
Singapore	X								
Slovenia	X								
South Korea	X								
Sudan		X		X	X	X	X	X	
Sweden	X								
Switzerland	X								
Tajikistan	X								
Tanzania	X								
Trinidad & Tobago	X								
Tunisia	X								
Turkey		X							
Uganda		X	X	X	X	X	X	X	
United Arab Emirates		X							
United Kingdom					X				
United States of America		X	X		X	X	X		
Uzbekistan	X								
Venezuela	X								
Vietnam	X								
Zambia		X	X	X		X		X	
Zimbabwe	X								

country to other countries to engage in gestational surrogacy. By contrast, 24 (24%) answered "no" to this question, 19 (19%) replied "unknown" and five replied, "not addressed".

To engage in traditional surrogacy: 38 (38%) respondents from 99 countries reported that individuals from their country travelled to other countries to engage in traditional surrogacy. Thirty-one (31%) of the respondents replied "no", 24 (24%) responded "unknown"; and six replied, "not addressed".

Regulation of cross-border reproductive care: Respondents were asked whether their countries maintain regulations that govern cross-border reproduction in respect of patients that visited their country, and citizens that visited other countries (Table 2a-b). Respondents from 102 countries provided answers to the first question. Fifty-seven (56%) of the 102 respondents stated that there were no regulations addressing individuals that visited their country seeking ART treatment. Forty (39%) respondents reported that their country did have regulations governing visitors seeking ART treatment and five respondents answered "unknown" to the question. Countries that reported having provisions in place to address patients that visited seeking treatment relied on federal or national laws, statutes, and ordinances; state or provincial or regional laws, statutes, and ordinances; municipal laws, statutes, and ordinances; agency regulations and oversight; professional organization standards and guidelines; cultural practice; and/or religious decrees in different combinations.

With respect to the question about citizens that visited other countries seeking reproductive treatment, respondents from 93 countries provided answers to this question. Sixty-three (68%) of the 93 respondents stated that there were no regulations. Thirty (32%) respondents reported that their country did have regulations governing citizens that visited other countries seeking treatment. Three respondents answered "unknown" to this question. Countries that reported having provisions in place to address citizens that visited other countries seeking treatment relied on federal or national laws, statutes, and ordinances; state or provincial or regional laws, statutes, and ordinances; municipal laws, statutes, and ordinances; agency regulations and oversight; professional organization standards and guidelines; cultural practice; and/or religious decrees.

Regulation of the importation of ova, sperm, and zygotes: 53 (49.5%) of 107 respondents reported that regulations existed that addressed the importation of ova into their countries. Thirty-nine (36%) respondents reported that no such regulations existed in their countries, six answered "unknown" and nine replied "not

Chapter 14. Table 3

Do people travel from your country to seek assisted reproduction?

Country	Lower cost ART services	Higher quality ART services	ART services unavailable in their home country	Egg donation	Embryo donation	Sperm donation	Gestational surrogacy	Traditional surrogacy
Albania	Not addressed	Not addressed	Yes	Unknown	Unknown	Unknown	Unknown	Unknown
Algeria	Yes	Yes	Not addressed	No	No	No	No	No
Argentina	Yes	Yes	Unknown	Yes	Unknown	Yes	Yes	Yes
Armenia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Australia	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Austria	No	No	Yes	Yes	Yes	No	No	Yes
Bangladesh	Yes	Yes	Yes	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Barbados	Yes	Yes	Yes	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Benin	No	No	Yes	Yes	Yes	Not addressed	Yes	No
Bolivia	No	Yes	No	No	No	No	No	No
Bosnia and Herzegovina	Not addressed	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Brazil	No	No	No	Yes	Yes	No	Yes	Yes
Bulgaria	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Burkina Faso	Unknown	Unknown	Yes	Yes	No	Yes	No	No
Cambodia	No	Yes	No	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroon	Unknown	Yes	Yes	Yes				
Chile	Yes	Yes	Yes	Yes	No	No	Yes	Yes
China			Yes					
Colombia	No	Unknown	No	No	No	No	No	Unknown
Costa Rica	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	No	No	Yes	Yes	Yes	Yes	No	No
Cyprus	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Yes	Yes
Czech Republic	No	No	No	No	No	No	Unknown	Unknown
Democratic Republic of the Congo	Yes	Yes	Yes	No	No	No	Yes	Yes
Denmark	Unknown	Unknown	Unknown	Yes	Unknown	Unknown	Yes	Yes
Dominican Republic	Unknown	Yes	No	No	No	No	No	No
Ecuador	Yes	Yes	No	No	No	No	Yes	No
Egypt	Yes	Yes	Yes	Yes	Yes	Yes	Unknown	Unknown
El Salvador		Yes					Yes	Yes
Equatorial Guinea	No	No	No	No	No	No	No	No
Estonia	No	No		Unknown	Unknown	Unknown	Yes	Unknown
Ethiopia	No	Yes	Yes	Yes	Yes	Yes	Yes	Not addressed
Finland	Yes	No	Yes	Yes	No	No	Yes	Yes
France	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gambia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Georgia	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Germany	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ghana	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Greece	Unknown	No	No	No	No	No	No	No
Guatemala	No	Yes	No	No	No	No	Yes	Yes
Hong Kong	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hungary	No	Yes	No	Yes	Yes	No	Unknown	Unknown
Iceland	Not addressed	Not addressed	Yes	Yes	No	Yes	No	No
India	No	Yes	Yes	Unknown	Unknown	Unknown	Yes	No
Indonesia	Yes	Yes	No	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Iran	No	No	No	No	No	Yes	No	No
Iraq	Yes	Yes	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Israel	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Italy	Yes	Yes	Yes	Yes	Yes	Yes		
Japan	No	Yes	Yes	No	No	No	No	No
Jordan	No	No	No	Yes	Yes	Yes	No	No
Kazakhstan	Yes	Yes	No	No	No	No	No	No
Kenya	Yes	Yes		Yes		Yes		
Kuwait	Yes	No	No	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Latvia	No	Unknown	Yes	No	No	No	Yes	No
Libya	Unknown	Yes	No	Unknown	Unknown	Unknown	No	No
Lithuania	Unknown	Yes	Yes	Yes	Unknown	Unknown	Unknown	Unknown
Malaysia	Unknown	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mali	Unknown	Unknown	No	No	No	Unknown	Unknown	Unknown
Malta	Yes	Yes	Yes				Yes	Yes
Mexico	No	Yes	No	Yes	No	Yes	Yes	Yes
Moldova	Unknown	No	Unknown	Yes	Yes	Yes	Yes	Yes
Montenegro	No	Not addressed	Yes	Yes	Yes	Yes	Yes	Yes
Morocco	Unknown	Unknown	No	Yes	Yes	Yes	Unknown	Unknown
Myanmar	No	Yes	No	No	No	No	No	No
Namibia	Unknown	Unknown	Yes	No	No	No	Unknown	Unknown
Nepal	No	Yes	No	No	No	No	Unknown	Unknown
New Zealand	No	No	Yes	Yes	Unknown	Yes	Yes	No
Nicaragua	Yes	Yes						

Chapter 14. Table 3

(*Continued*)

Country	Lower cost ART services	Higher quality ART services	ART services unavailable in their home country	Egg donation	Embryo donation	Sperm donation	Gestational surrogacy	Traditional surrogacy
Nigeria	No	Yes	No	No	No	No	No	No
Norway	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Unknown
Oman	Yes	Yes	No	No	No	No	No	No
Pakistan	Yes	Yes	Yes	No	No	No	No	No
Panamá	No	Yes	No	No	No	No	Yes	Yes
Paraguay	Yes	No	No	No	No	No	Yes	Yes
Perú	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Philippines	Yes	Yes	No	Yes	Yes	Yes	Yes	Unknown
Portugal	Unknown	Unknown	Unknown	Unknown	Unknown		Yes	Yes
Qatar	No	No	No	Not addressed	Not addressed	Not addressed	Not addressed	Not addressed
Republic of the Congo	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Romania	No	Unknown	Yes	Yes	Yes	No	Yes	Yes
Russia	No	Yes	No	No	No	No	Yes	
Serbia	Yes	Yes	No	Yes	Yes	No	No	No
Singapore	Not addressed	Yes	Yes	Yes	Not addressed	Yes	Yes	Yes
Slovenia	No	No	Yes	Yes	Yes	Yes	Yes	Yes
South Africa	No	No	No	No		No	No	No
South Korea	Unknown	Unknown	Unknown					
Sudan	Yes	Unknown	No	Unknown	Unknown	Unknown	Unknown	Unknown
Sweden	No	No	Yes	Yes	Unknown	Yes	Yes	Yes
Switzerland	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Tajikistan	Unknown	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tanzania					Yes	Yes	Yes	Yes
Trinidad & Tobago	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Tunisia	No	No	No	Yes	No	Yes	No	No
Turkey	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Uganda	No	No	Yes	Yes	Yes	Yes	Yes	No
Ukraine	Unknown	Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
United Arab Emirates	Yes							
United Kingdom	Yes	Unknown	Yes	Yes	Yes	Unknown	Yes	Yes
United States of America	Yes	No	No	Yes	Yes	No	Yes	Yes
Uzbekistan	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Venezuela	Unknown	Yes	Yes	No	No	No	Yes	Unknown
Vietnam	Not addressed	Unknown	Yes	No	No	No	Yes	Yes
Zambia	Yes	Yes	Unknown	Yes	Unknown	Yes	Unknown	Unknown
Zimbabwe	Yes	Yes	Yes	Yes	Yes	Yes	Unknown	Unknown

addressed" (Table 4). Fifty-three (49.5%) of 107 respondents reported that regulations existed that applied to the importation of sperm into their countries. Thirty-nine (36%) reported that no such regulations existed in their countries, six responded "unknown" and nine replied, "not addressed".

Forty-nine (46%) of 107 respondents reported that regulations existed that addressed the importation of zygotes into their countries. Thirty-nine (36%) of the respondents reported that no such regulations existed, eight responded "unknown" and 11 replied, "not addressed".

Regulation of the export of ova, sperm, and zygotes 51 (48%) of 107 respondents reported the existence of regulations pertaining to the exportation of ova from their countries. Forty (37%) respondents noted that no such regulations existed, seven respondents answered "unknown" and nine replied, "not addressed" (Table 5).

Fifty (47%) of 107 respondents reported the existence of regulations pertaining to the exportation of sperm from their countries. Forty (37%) reported that no regulations existed, seven answered "unknown" and ten replied, "not addressed".

Forty-eight (45%) of 107 respondents affirmed the existence of regulations pertaining to the exportation of zygotes from their countries. Forty (37%) reported that no such regulations existed, nine answered "unknown" and ten responded, "not addressed".

Discussion

A majority of the national respondents reported that individuals and couples travel to the respondents' home countries seeking ART treatment that was of lower cost, higher quality, or otherwise not available to them in their countries of residence. Little change was noted between the responses provided in previous years in the 2018 and 2021 surveys, respectively. The 2024 findings include 75% reporting incoming travel to obtain services at lower cost (versus 71% in 2018 and 75% in 2021), 70% reporting incoming travel to obtain services of higher quality (versus 79% in 2018 and 79% in 2021), and 68% reporting incoming travel to obtain services that were not available in their countries of residence (versus 72% in 2018 and 66% in 2021). Fewer respondents reported incoming travel to their respective countries to utilize third-party reproductive options, including donor oocytes, 47% (2018), 57% (2021) and 55% (2024); donor sperm 51% (2018), 55% (2021) and 46% (2024); and donor embryos 37% (2018), 40% (2021) and 34% (2024). An increase in incoming travel for gestational surrogacy was noted in comparison to previous years; 28% in 2018, 27% in 2021 and 63% in 2024. This trend was also found for traditional surrogacy; 19% in 2018, 13% in 2021 and 83% in 2024. The latter two findings may also be, in part, attributed to a higher response rate in 2024.

Compared to previous years, a smaller proportion of respondents reported that individuals travelled from their

Chapter 14. Table 4

Are there regulations regarding the import of reproductive tissue into your country?

Country	Ova	Spermatozoa	Zygotes
Albania	No	No	No
Algeria	No	No	No
Argentina	Not addressed	Not addressed	Not addressed
Armenia	Yes	Yes	Yes
Australia	Yes	Yes	Yes
Austria	Yes	Yes	Yes
Bangladesh	Not addressed	Not addressed	Not addressed
Barbados	No	No	No
Belarus	Yes	Yes	Yes
Benin	No	No	No
Bolivia	No	No	No
Bosnia and Herzegovina	No	No	No
Brazil	Yes	Yes	Not addressed
Bulgaria	Yes	Yes	Yes
Burkina Faso	No	No	No
Cambodia	Not addressed	Not addressed	Not addressed
Cameroon	No	No	No
Chile	Yes	Yes	Unknown
China	No	No	No
Colombia	No	No	No
Costa Rica	Yes	Yes	Yes
Côte d'Ivoire	Unknown	Unknown	Unknown
Croatia	Yes	Yes	Yes
Cyprus	Yes	Yes	Yes
Czech Republic	Yes	Yes	Yes
Democratic Republic of the Congo	No	No	No
Denmark	Yes	Yes	Yes
Dominican Republic	No	Yes	No
Ecuador	Yes	Yes	No
Egypt	Yes	Yes	Yes
El Salvador	No	No	No
Equatorial Guinea	No	No	No
Estonia	No	No	No
Ethiopia	Not addressed	Not addressed	Not addressed
Finland	Yes	Yes	Yes
France	Yes	Yes	Yes
Gambia	Not addressed	Not addressed	Not addressed
Georgia	No	No	No
Germany	No	No	No
Ghana	No	No	No
Greece	Yes	Yes	Yes
Guatemala	Yes	Yes	Yes
Hong Kong	Yes	Yes	Yes
Hungary	Unknown	Unknown	Unknown
Iceland	Unknown	Unknown	Unknown
India	Yes	Yes	Yes
Indonesia	Yes	Yes	Yes
Iran	No	No	No
Iraq	Not addressed	Not addressed	Not addressed
Israel	Yes	Yes	Yes
Italy	Yes	Yes	Yes
Jamaica	Yes	Yes	Yes
Japan	No	No	No
Jordan	No	No	No
Kazakhstan	Yes	Yes	Yes
Kenya	No	No	No
Kuwait	Yes	Yes	Yes
Latvia	Yes	Yes	Yes
Libya	Yes	Yes	Yes
Lithuania	Yes	Yes	Yes
Malaysia	Yes	Yes	Yes
Mali	No	No	No

Chapter 14. Table 4

(*Continued*)

Country	Ova	Spermatozoa	Zygotes
Malta	Yes	Yes	Yes
Mexico	Yes	Yes	Yes
Moldova	No	No	No
Montenegro	Yes	Yes	Yes
Morocco	Yes	Yes	Yes
Myanmar	Yes	Not addressed	Not addressed
Namibia	Yes	Yes	Yes
Nepal	No	No	No
New Zealand	No	No	No
Nicaragua	Yes	Yes	Yes
Nigeria	No	No	Unknown
Norway	Yes	Yes	Yes
Oman	Yes	Yes	Yes
Pakistan	No	No	No
Panamá	Yes	Yes	Yes
Paraguay	Not addressed	Not addressed	Not addressed
Perú	No	No	No
Philippines	No	No	No
Portugal	Yes	Yes	Yes
Qatar	No	No	No
Republic of the Congo	No	No	No
Romania	Yes	Yes	Yes
Russia	Yes	Yes	Yes
Serbia	No	No	No
Singapore	Yes	Yes	Yes
Slovenia	Yes	Yes	Yes
South Africa	Yes	Yes	Yes
South Korea	No	No	No
Sudan	No	No	No
Sweden	Unknown	Unknown	Unknown
Switzerland	Unknown	Unknown	Unknown
Tajikistan	Yes	Yes	Yes
Tanzania	No	No	No
Trinidad & Tobago	Yes	Yes	Yes
Tunisia	Not addressed	Not addressed	Not addressed
Uganda	No	No	No
Ukraine	No	No	No
United Arab Emirates	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes
United States of America	Yes	Yes	Yes
Uzbekistan	Yes	Yes	Yes
Venezuela	No	No	No
Vietnam	Not addressed	Not addressed	Not addressed
Zambia	Unknown	Unknown	Unknown
Zimbabwe	Yes	Yes	Yes

home country to seek ART services elsewhere. Among those that did, the motivations included: lower cost, 65% in 2018, 53% in 2021 and 38% in 2024; higher quality, 51% in 2018, 61% in 2021 and 56% in 2024; and, for otherwise unavailable services in their country of residence; 51% in 2018, 57% in 2021, and 50% in 2024. Comparing outgoing to incoming individuals seeking donor gametes, national reports noted a lower frequency of individuals traveling elsewhere seeking donated oocytes and sperm, but not embryos. These rates were 54% versus 55% for oocytes; 41% versus 46% for sperm; and 41% versus 34% for embryos, respectively. In 2021, the proportion of respondents reporting outgoing vs incoming travel by individuals seeking oocytes was 73% versus 57%; for sperm 62% versus 55%; and for embryos 57% versus 40%, respectively. In 2018, the proportion of respondents reporting outgoing vs incoming travel by individuals seeking donor gametes and embryos was 47% versus 65% for oocytes; 51% for both for sperm; and 37% versus 52% for embryos, respectively. Interestingly, the 2024 data confirm an ongoing reversal of travel trends for CBRC, first noted in 2021.

Conversely, a greater proportion of the respondents reported travel elsewhere than those traveling to their countries of origin for *gestational* surrogacy; in 2024, 52% of respondents reported that individuals travelled out of their countries of residence to engage in

Chapter 14. Table 5

Are there regulations regarding the export of reproductive tissue into your country?

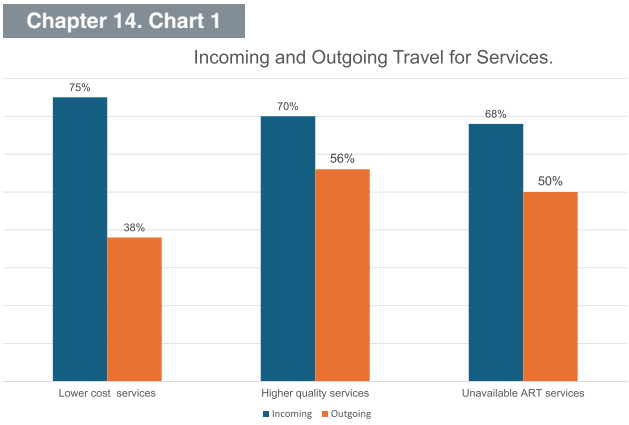
Country	Ova	Spermatozoa	Zygotes
Albania	Yes	Yes	Yes
Algeria	No	No	No
Argentina	Not addressed	Not addressed	Not addressed
Armenia	Yes	Yes	Yes
Australia	No	No	No
Austria	Yes	Yes	Yes
Bangladesh	Yes	Yes	Yes
Barbados	No	No	No
Belarus	Yes	Yes	Yes
Benin	No	No	No
Bolivia	No	No	No
Bosnia and Herzegovina	No	No	No
Brazil	Not addressed	Not addressed	Not addressed
Bulgaria	Yes	Yes	Yes
Burkina Faso	No	No	No
Cambodia	Not addressed	Not addressed	Not addressed
Cameroon	No	No	No
Chile	Yes	Yes	Unknown
China	Yes	Yes	Yes
Colombia	Yes	Yes	No
Costa Rica	Yes	Yes	Yes
Côte d'Ivoire	Unknown	Unknown	Unknown
Croatia	Yes	Yes	Yes
Cyprus	Yes	Yes	Yes
Czech Republic	Yes	Yes	Yes
Democratic Republic of the Congo	No	No	No
Denmark	Yes	Yes	Yes
Dominican Republic	No	No	No
Ecuador	Yes	Yes	No
Egypt	Yes	Yes	Yes
El Salvador	No	No	No
Equatorial Guinea	No	No	Yes
Estonia	No	No	No
Ethiopia	Not addressed	Not addressed	Not addressed
Finland	Yes	Yes	Yes
France	Yes	Yes	Yes
Gambia	Unknown	Unknown	Unknown
Georgia	No	No	No
Germany	No	No	No
Ghana	No	No	No
Greece	Yes	Yes	Yes
Guatemala	Yes	Yes	Yes
Hong Kong	Yes	Yes	Yes
Hungary	Unknown	Unknown	Unknown
Iceland	Unknown	Unknown	Unknown
India	Yes	Yes	Yes
Indonesia	No	No	No
Iran	No	No	No
Iraq	Not addressed	Not addressed	Not addressed
Israel	Yes	Yes	Yes
Italy	Yes	Yes	Yes
Jamaica	Yes	Yes	Yes
Japan	No	No	No
Jordan	No	No	No
Kazakhstan	Yes	Yes	Yes
Kenya	No	No	No
Kuwait	Yes	Yes	Yes
Latvia	Yes	Yes	Yes

Chapter 14. Table 5

(*Continued*)

Country	Ova	Spermatozoa	Zygotes
Libya	Yes	Yes	Yes
Lithuania	Yes	Yes	Yes
Malaysia	Yes	Yes	Yes
Mali	No	No	No
Malta	Yes	Yes	Yes
Mexico	Yes	Yes	Yes
Moldova	Unknown	Unknown	Unknown
Montenegro	Yes	Yes	Yes
Morocco	No	No	No
Myanmar	Yes	Not addressed	Not addressed
Namibia	Yes	Yes	Yes
Nepal	No	No	No
New Zealand	No	No	No
Nicaragua	Yes	Yes	Yes
Nigeria	No	No	Unknown
Norway	Yes	Yes	Yes
Oman	Yes	Yes	Yes
Pakistan	No	No	No
Panamá	Yes	Yes	Yes
Paraguay	Not addressed	Not addressed	Not addressed
Perú	No	No	No
Philippines	No	No	No
Portugal	Yes	Yes	Yes
Qatar	No	No	No
Republic of the Congo	No	No	No
Romania	No	No	No
Russia	Yes	Yes	Yes
Serbia	No	No	No
Singapore	Yes	Yes	Yes
Slovenia	Yes	Yes	Yes
South Africa	Yes	Yes	Yes
South Korea	No	No	No
Sudan	No	No	No
Sweden	Unknown	Unknown	Unknown
Switzerland	No	No	No
Tajikistan	Yes	Yes	Yes
Tanzania	No	No	No
Trinidad & Tobago	Unknown	Unknown	Unknown
Tunisia	Not addressed	Not addressed	Not addressed
Uganda	No	No	No
Ukraine	No	No	No
United Arab Emirates	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes
United States of America	Yes	Yes	Yes
Uzbekistan	Yes	Yes	Yes
Venezuela	No	No	No
Vietnam	Not addressed	Not addressed	Not addressed
Zambia	Not addressed	Not addressed	Not addressed
Zimbabwe	Yes	Yes	Yes

gestational surrogacy and 29% reported inbound travel for the same service. Likewise, 38% of the respondents reported that individuals travelled out of their countries of residence seeking *traditional* surrogacy and 10% reported inbound travel. In 2021, 67% reported outbound travel and 27% inbound travel for *gestational* surrogacy; and 51% reported outbound travel and 13% inbound travel for *traditional* surrogacy. This pattern was similar to that reported in 2018, when 57% of the respondents reported that individuals were seeking outbound *gestational* surrogacy and 28% reported inbound *gestational* surrogacy. For *traditional* surrogacy in 2018, 46% reported that individuals were traveling elsewhere compared to 19% that reported inbound travel.



The respondents also indicated that there was little overall direct regulation of individuals traveling either to or from their respective countries to seek ART services, although regulation of the import and export of tissue was more prevalent. Nonetheless, several respondents reported either that no regulations existed or that they were unaware of any existing regulations. The lack of regulation and lack of knowledge about specific regulations may ultimately be relevant to oocyte, sperm, and embryo donation and surrogacy stakeholders. Specifically, children born as a result of such practices, may have great difficulty seeking information about their oocyte or sperm donors and surrogate mothers in the future. Tracking and reporting of treatment outcomes is more difficult in the absence of a defined regulatory process. Cross border follow-up is a considerable challenge.

While these data do not reflect actual numbers of CBRC travelers, they do suggest an increased national awareness of new trends, including a reversal of some trends noted in 2018 and 2021 when the participating countries reported that more individuals were traveling inbound as opposed to outbound. The currently recorded decrease in outbound travel for CBRC, especially for donor oocytes and embryos, may reflect changes in local access since the end of the COVID-19 pandemic.

Although these data offer a larger sample size from the global ART community, they do not suggest new trends or significant changes in CBRC utilization between 2018 and 2024. While the responses may provide some clues of the effects of the resolution of the COVID-19 pandemic and its impact on travel for CBRC services, a more definitive assessment of this situation remains to be determined.

Summary

CBRC remains prevalent when comparing findings from 2018 and 2021 to those obtained from the 2024 responses to the Triennial Report questionnaire. Overall, the responses suggested that there were comparable numbers of countries reporting patients seeking CBRC at lower cost, perceived higher quality, and with greater access to specific services, as in the past. The findings from the 2024 national respondents suggested that fewer countries noted patients seeking CBRC specifically for sperm, egg, or embryo donation, and even fewer for any type of surrogacy arrangement. A relatively smaller proportion of respondents reported that patients were traveling from their country for any of these services. The 2024 respondents perceived that a fewer proportion of patients sought oocyte, sperm, and embryo donation in other countries than the proportion of those traveling to their countries seeking these services. This pattern was first reported in 2021 and appears to persist. More than half of respondents reported that there were no regulations pertaining to patients traveling to (56%) or traveling from (68%) their countries in search of CBRC services. These data suggest that a substantial amount of CBRC is provided, but the survey did not seek data regarding the actual volume or the extent of oversight.

Chapter 15: Human Preimplantation Embryo Research

Introduction

For the past 40 to 45 years, most countries that have participated in embryo research not intended to produce ongoing pregnancies have relied on the *14-day rule* for guidance, which stipulates that *in vitro* culture of embryos is not permitted beyond the equivalent of 14 days of embryonic development, coincident with the appearance of the primitive streak. The first reference to the 14-day rule appeared in the Ethics Advisory Board of the (then) Department of Health Education and Welfare in the United States (HEW Support of Research Involving Human In Vitro Fertilisation and Embryo Transfer) in 1979 and it was subsequently endorsed by the UK Committee of Inquiry into Human Fertilisation and Embryology (the Warnock Committee) in 1984[1]. Principal points used to justify this time limit included that twinning did not occur after this time which was assumed to be the point of individuation; the nervous system had not begun to form; significant embryo loss typically occurred until this stage; and the lack of potential for further development unless the implantation process was completed. At the time that these guidelines were adopted, it was not feasible to continue embryo culture for a longer time and the 14-day rule was broadly accepted by consensus and used as a template by several countries seeking to regulate these studies. However, the ongoing relevance of the 14-day rule has been questioned in the past ten years as investigators have succeeded in sustaining human *in vitro* embryo growth for 12-13 days and beyond enabling developmental biologists to study early human development with previously unrealized precision with the potential to offer great new therapeutic opportunities[2].

Embryos have historically been defined as entities resulting from fertilization of heterogeneous gametes, "a group of cells resulting from fertilization whose completion was signaled by the first cell division or the expulsion of the polar bodies"[3]. When it was appreciated that the natural fertilization process could be circumvented in mammals by transfer of a nucleus into an enucleated oocyte (somatic cell nuclear transfer, SCNT) with a viable animal resulting, the traditional biological definition of an embryo was upended. An alternative definition was proposed to reflect the new reality, "a cell or set of cells with the capacity to grow into a human"[4]. Each of these definitions are problematic (see Chapter 16 Status of the Embryo) but may enable some human pre-implantation research precluded by the 14-day rule. A wide array of approaches has been adopted by various countries reflecting their individual goals, concerns and cultures.

The questions posed in the 2024 Triennial Report pertaining to human pre-implantation research were intended to determine the global status of embryo research, considering the influence of national customs and the interpretation of these practices by

Chapter 15.Table 1a

Is experimentation/research allowed/permitted in your country and if yes is there a requirement for specific approval of an experimentation/research proposal?

	Donated unused pre-implantation embryos		Donated unused pre-implantation embryos for stem cell research	
Country	**Allowed/permitted**	**Requirement for specific approval**	**Allowed/permitted**	**Requirement for specific approval**
Albania	Yes With restrictions	Yes National Ethics/Oversight	No	
Algeria	No		No	
Argentina	Unknown		No	
Armenia			No	
Australia	Yes With restrictions	Yes National Ethics/Oversight Local or national IRB	Yes With restrictions	Yes National Ethics/Oversight
Austria	No		No	
Bangladesh	No		Unknown	
Barbados	No		No	
Belarus	Yes With restrictions	No	No	
Benin	Unknown		Unknown	
Bolivia	Unknown		Unknown	
Bosnia and Herzegovina	No		No	
Brazil	Yes	Yes National Ethics/Oversight	Yes With restrictions	Yes Local or national IRB
Bulgaria	No		No	
Burkina Faso	No		No	
Cambodia	Unknown		Unknown	
Cameroun	No		No	
Chile	No		No	
China	Yes With restrictions	Yes National Ethics/Oversight Ethics	Yes	Yes National Ethics/Oversight Ethics
Colombia	Yes With restrictions	Yes Ethics Local or national IRB	Unknown	
Costa Rica	No		No	
Côte d'Ivoire	Unknown		Unknown	
Croatia	No		No	
Cyprus	Yes With restrictions	Yes National Ethics/Oversight Local or national IRB	Yes With restrictions	Yes National Ethics/Oversight Local or national IRB
Czech Republic	Yes	Yes Ethics Local or national IRB	Yes	Yes National Ethics/Oversight
Democratic Republic of the Congo	No		No	
Denmark	Unknown		Unknown	
Dominican Republic	Yes	No	Yes	No
Ecuador	No		No	
Egypt	Yes	Yes National Ethics/Oversight	Yes	Yes National Ethics/Oversight
El Salvador	No		No	
Equatorial Guinea	Yes	Yes National Ethics/Oversight Ethics	Yes	Yes National Ethics/Oversight Ethics
Estonia	Yes	Yes National Ethics/Oversight Ethics	Unknown	
Ethiopia	No		No	
Finland	Yes With restrictions	Yes National Ethics/Oversight Ethics	Yes With restrictions	Yes National Ethics/Oversight Ethics
France	Yes With restrictions	Yes National Ethics/Oversight	Yes With restrictions	Yes National Ethics/Oversight
Georgia	Unknown		Unknown	
Germany	No		No	
Ghana	No		No	
Greece	Yes With restrictions	Yes National Ethics/Oversight Local or national IRB	Yes With restrictions	Yes National Ethics/Oversight Local or national IRB
Guatemala	No		No	
Hong Kong	Yes With restrictions	Yes Ethics Local or national IRB	Yes With restrictions	Yes Ethics Local or national IRB

Chapter 15.Table 1a

(*Continued*)

	Donated unused pre-implantation embryos		Donated unused pre-implantation embryos for stem cell research	
Country	**Allowed/permitted**	**Requirement for specific approval**	**Allowed/permitted**	**Requirement for specific approval**
Hungary	Yes	Yes	Yes	Yes
	With restrictions	National Ethics/Oversight	With restrictions	National Ethics/Oversight
Iceland	Yes	Yes	Yes	Yes
	With restrictions	National Ethics/Oversight	With restrictions	National Ethics/Oversight
India	Yes	Yes	Yes	Yes
	With restrictions	Local or national IRB	With restrictions	National Ethics/Oversight
Indonesia	Yes	Yes	No	
		National Ethics/Oversight Ethics		
Iran	No		No	
Iraq	Unknown		Unknown	
Israel	Yes	Yes	Yes	Yes
	With restrictions	National Ethics/Oversight		National Ethics/Oversight
		Ethics Local or national IRB		Ethics Local or national IRB
Italy			No	
Jamaica	Yes	Yes	Unknown	
	With restrictions	Ethics Local or national IRB		
Japan	Yes	Yes	Yes	Yes
	With restrictions	National Ethics/Oversight	With restrictions	National Ethics/Oversight
		Ethics Local or national IRB		
Jordan	No		No	
Kazakhstan	Yes	Yes	Yes	Yes
	With restrictions	National Ethics/Oversight		National Ethics/Oversight
Kenya	Unknown		Unknown	
Kuwait	No		No	
Latvia	Yes	Yes	No	
		National Ethics/Oversight		
Libya	Yes	Unknown	Unknown	
Lithuania	No		No	
Malaysia	Unknown		Unknown	
Mali	Unknown		Unknown	
Malta	No		No	
Mexico	No		No	
Moldova	Unknown		Unknown	
Montenegro	Yes	Yes	Yes	Yes
	With restrictions	National Ethics/Oversight	With restrictions	National Ethics/Oversight
Morocco	Yes	Yes	No	
	With restrictions	Local or national IRB		
Myanmar	No		No	
Namibia	No		No	
Nepal	Unknown		Unknown	
New Zealand	No		No	
Nigeria	No		No	
Norway	Yes	Yes	Yes	Yes
	With restrictions	National Ethics/Oversight Ethics	With restrictions	National Ethics/Oversight Ethics
Oman	No		No	
Pakistan	No		No	
Panamá	No		No	
Paraguay	Unknown		Unknown	
Perú	No		No	
Philippines	No		No	
Portugal	Yes	Yes	Yes	Yes
	With restrictions	National Ethics/Oversight	With restrictions	Unknown
Qatar	No		No	
Republic of the Congo	Unknown		Unknown	
Romania	No		No	
Russia			Unknown	
Serbia	No		No	
Singapore	Yes	Yes	Yes	Yes
	With restrictions	Ethics Local or national IRB	With restrictions	Ethics Local or national IRB
Slovenia	Yes	Yes	Yes	Yes
	With restrictions	National Ethics/Oversight	With restrictions	National Ethics/Oversight

Chapter 15.Table 1a

(Continued)

	Donated unused pre-implantation embryos		Donated unused pre-implantation embryos for stem cell research	
Country	**Allowed/permitted**	**Requirement for specific approval**	**Allowed/permitted**	**Requirement for specific approval**
South Africa	Yes With restrictions	Yes National Ethics/Oversight	Yes With restrictions	Yes National Ethics/Oversight
South Korea	Yes With restrictions	Yes National Ethics/Oversight	Yes	Yes National Ethics/Oversight
Spain	Yes	Yes National Ethics/Oversight		
Sudan	Unknown		Unknown	
Sweden	Yes With restrictions	Yes National Ethics/Oversight	Yes With restrictions	Yes National Ethics/Oversight
Switzerland	No		No	
Tajikistan	No		No	
Tanzania	Unknown		Unknown	
Trinidad & Tobago	Unknown		Unknown	
Tunisia	No		No	
Turkey	No			
Uganda	No		No	
Ukraine	Unknown		Unknown	
United Arab Emirates	Unknown		Unknown	
United Kingdom			Yes With restrictions	Yes National Ethics/Oversight
United States of America	Yes With restrictions	Yes National Ethics/Oversight Local or national IRB	Yes With restrictions	Yes Local or national IRB
Uruguay	No		No	
Uzbekistan	Yes	No	No	
Venezuela	No		No	
Vietnam	Yes	Yes Ethics Local or national IRB	Yes	Yes Ethics Local or national IRB
Zambia	Unknown		Unknown	

governments, municipalities, and scholarly committees. More detailed questions were incorporated into the 2024 survey addressing pre-implantation embryo research including the allowed limit on developmental stage for embryo research. For this section, respondents from 105 countries submitted data.

Analysis of the survey

Analysis of the Survey Questions posed in the survey included:

(1) Is experimentation/research allowed/permitted in your country on donated unused pre-implantation embryos, donated unused pre-implantation embryos for stem cell research, reproductive cloning (generating a human clone), therapeutic cloning (generating an embryo that is not transferred whole into a human uterus for implantation), embryonic stem cell research (generating embryos specifically for research)] allowed or permitted? If yes, is there a requirement for specific approval of an experimentation/research proposal? What body/agency approves experimentation/research?
(2) Are there regulations that address experimentation on reproductive cloning in your country? Regulated by whom?
(3) Is experimentation/research on the pre-implantation embryo performed in your country?
(4) Is experimentation on the pre-implantation embryo being performed by clinical or research programs in your country?
(5) In your country, up to what age (developmental days) can experimentation be performed on a developing non-implanted embryo?

1. Is experimentation/research allowed/permitted in your country (Table 1a-b***)?***

Donated unused human preimplantation embryos

Experimentation/research involving human preimplantation embryos is permitted without restrictions in 12 (12%) of the 103 countries that responded to this question, while 27 (26%) of the countries allow it with restrictions. This represents an increase from 22 (30%) of 72 countries that responded "yes" in the 2021 survey. The proportion of countries responding "no" decreased, from 54% in 2021 to 42% countries in the current survey. Among the countries that permitted experimentation and research, such projects were subject to the approval of a national or local ethics committee in 35 (90%) countries.

Donated unused pre-implantation embryos for stem cell research

Of the 105 countries that answered this question, only nine (9%) allow it without restrictions, 20 (19%) permit it with restrictions, and 50 (48%) do not allow it. The remaining 26 (25%) responded "unknown". In 2021, eleven (19%) of 59 respondent countries permitted stem cell research with or without restrictions compared to the 2024 total of 29 countries. Among the countries that permitted experimentation and research, such projects were subject to the approval of a national or local ethics committee in 28 (97%) countries.

Reproductive cloning (generating a human clone)

Three countries, China, Iceland and Israel, of 105 respondents, permit reproductive cloning with restrictions. All but Israel cite the requirement of special agency approval. In 2021, only Austria claimed to allow reproductive cloning, but it was not performed.

Chapter 15. Table 1b

Is experimentation/research allowed/permitted in your country and if yes is there a requirement for specific approval of an experimentation/research proposal?

	Reproductive cloning		Therapeutic cloning		Embryonic stem cell research	
Country	Allowed/ permitted	Requirement for specific approval	Allowed/ permitted	Requirement for specific approval	Allowed/ permitted	Requirement for specific approval
Albania	No		No		No	
Algeria	No		No		No	
Argentina	No		No		No	
Armenia	No		No		No	
Australia	No		No		No	
Austria	No		No		No	
Bangladesh	No		No		Unknown	
Barbados	No		No		No	
Belarus	No		No		No	
Benin	Unknown		Unknown		Unknown	
Bolivia	Unknown		Unknown		Unknown	
Bosnia and Herzegovina	No		No		No	
Brazil	No		No		No	
Bulgaria	No		No		No	
Burkina Faso	No		No		No	
Cambodia	Unknown		Unknown		Unknown	
Cameroun	No		No		No	
Chile	No		No		No	
China	Yes	Yes National Ethics/Oversight Ethics	No		Yes	Yes National Ethics/Oversight Ethics
Colombia	Unknown		Unknown		Unknown	
Costa Rica	No		No		No	
Côte d'Ivoire	Unknown		Unknown		Unknown	
Croatia	No		No		No	
Cyprus	No		No		No	
Czech Republic	No		Unknown		Yes With restrictions	Yes National Ethics/Oversight
Democratic Republic of the Congo	No		No		No	
Denmark	Unknown		Unknown		Unknown	
Dominican Republic	No		No		Yes	No
Ecuador	No		No		No	
Egypt	No		No		Yes	Yes National Ethics/Oversight
El Salvador	No		No		No	
Equatorial Guinea	No		Unknown		Unknown	
Estonia	No		No		No	
Ethiopia	No		No		No	
Finland	No		No		Yes With restrictions	Yes National Ethics/Oversight Ethics
France	No		No		No	
Georgia	Unknown		Unknown		Unknown	
Germany	No		No		No	
Ghana	No		No		No	
Greece	No		No		No	
Guatemala	No		No			
Hong Kong	No		No		No	
Hungary	No		No		Yes With restrictions	Yes National Ethics/Oversight
Iceland	Yes With restrictions	Yes National Ethics/Oversight	Yes With restrictions		Yes With restrictions	Yes National Ethics/Oversight
India	No		No		Yes	Yes National Ethics/Oversight
Indonesia	No		No		Yes	Yes National Ethics/Oversight Ethics
Iran	Unknown		Unknown		Unknown	

Chapter 15. Table 1b

(Continued)

Country	Reproductive cloning		Therapeutic cloning		Embryonic stem cell research	
	Allowed/ permitted	Requirement for specific approval	Allowed/ permitted	Requirement for specific approval	Allowed/ permitted	Requirement for specific approval
Iraq	Unknown		Unknown		Unknown	
Israel	Yes With restrictions	No	No		No	
Italy	No		No		No	
Jamaica	Unknown		Unknown		Unknown	
Japan	No		Yes With restrictions		Yes With restrictions	Yes National Ethics/Oversight
Jordan	No		No		No	
Kazakhstan	No		Yes With restrictions		Yes	Yes National Ethics/Oversight
Kenya	Unknown		Unknown		Unknown	
Kuwait	No		No		No	
Latvia	No		No		No	
Libya	Unknown		Unknown		Unknown	
Lithuania	No		No		No	
Malaysia	Unknown		Unknown		Unknown	
Mali	Unknown		Unknown		Unknown	
Malta	No		No		No	
Mexico	No		No		No	
Moldova	Unknown		Unknown		Unknown	
Montenegro	No		No		No	
Morocco	No		No		No	
Myanmar	No		No		No	
Namibia	No		No		No	
Nepal	No		No		Unknown	
New Zealand	No		No		No	
Nigeria	No		No		No	
Norway	No		No		No	
Oman	Unknown		Unknown		Unknown	
Pakistan	No		No		No	
Panamá	No		No		No	
Paraguay	Unknown		Unknown		Unknown	
Perú	No		No		No	
Philippines	No		No		No	
Portugal	No		No		No	
Qatar	No		No		No	
Republic of the Congo	Unknown		Unknown		Unknown	
Romania	No		No		No	
Russia	No		No		Unknown	
Serbia	No		No			
Singapore	No		No		Yes With restrictions	Yes Ethics Local or national IRB
Slovenia	No		No		No	
South Africa	No		Yes With restrictions		Yes With restrictions	Yes National Ethics/Oversight
South Korea	No		No		No	
Spain						
Sudan	Unknown		Unknown		Unknown	
Sweden	No		No		No	
Switzerland	No		No		Unknown	
Tajikistan	No		No		No	
Tanzania	Unknown		Unknown		Unknown	
Trinidad & Tobago	Unknown		Unknown		Unknown	
Tunisia	No		No		No	
Turkey						
Uganda	No		No		No	
Ukraine	Unknown		Unknown		Unknown	
United Arab Emirates	Unknown		Unknown		Unknown	
United Kingdom	No		Yes		Yes	Yes

Chapter 15. Table 1b

(*Continued*)

Country	Reproductive cloning		Therapeutic cloning		Embryonic stem cell research	
	Allowed/ permitted	Requirement for specific approval	Allowed/ permitted	Requirement for specific approval	Allowed/ permitted	Requirement for specific approval
			With restrictions		With restrictions	National Ethics/Oversight
United States of America	No		Yes		Yes	Yes
			With restrictions		With restrictions	National Ethics/Oversight
						Local or national IRB
Uruguay	No		No		No	
Uzbekistan	Unknown		Unknown		Unknown	
Venezuela	No		No		No	
Vietnam	Unknown		Unknown		Yes	Yes
						Ethics
						Local or national IRB
Zambia	Unknown		Unknown		Unknown	

Therapeutic cloning (generating an embryo that is not transferred whole into a human uterus for implantation)

Six countries, Iceland, Japan, Kazakhstan, South Africa, the United Kingdom and the United States permit therapeutic cloning with restrictions. No specific oversight agencies were reported by any of the respondents. In 2021, seven countries, the Czech Republic, Greece, Japan, Kazakhstan, South Korea, the United Kingdom and the United States permitted therapeutic cloning.

Embryonic stem cell research (generating embryos specifically for research)

Sixteen (15.5%) of 103 countries permit the creation of embryos expressly for embryonic stem cell research, either with or without restrictions. This question was not included in the 2021 survey. All but the Dominican Republic cited requirements for specific approval and most (53%) used a national ethics or oversight panel.

2. Are there regulations that address experimentation in your country (Table 2***)?***

Reproductive Cloning

Regulatory oversight of **reproductive cloning experimentation** varies widely among 101 respondent countries. **41%** of respondents (**41 countries**) reported that there are **no regulations addressing experimentation on reproductive cloning**, indicating a significant lack of formal governance in nearly half of the surveyed jurisdictions. Conversely, **24%** (**24 countries**) confirmed the **existence of regulations**, demonstrating that a minority of countries have implemented specific legislative or regulatory frameworks for this area of research. Meanwhile, **19%** (**19 countries**) reported that reproductive cloning is **explicitly banned**, reflecting strong national policies against its practice. A further **17%** (**17 countries**) indicated that the status of reproductive cloning regulations in their country is **unknown.**

Among the **24 countries** that reported having regulations on reproductive cloning, the vast majority (**83%**) stated that these policies are enforced through **Federal/National Laws, Statutes, or Ordinances.** A smaller subset of countries applies **multiple layers of oversight**, including a combination of **federal laws, agency regulations, and professional organization standards** (**8%**). Additionally, **4%** of respondents reported that regulations are enforced through **a mix of federal, state/provincial, and agency oversight mechanisms,** highlighting **regional governance variations**.

Donated Unused Embryos

Regulatory oversight of **experimentation on donated unused embryos** varies significantly across 100 respondent countries. **40%** of respondents (**40 countries**) reported that such research is **regulated.** However, **38%** of respondents (**38 countries**) stated that **no regulations exist**, highlighting a significant portion of jurisdictions where this area remains legally undefined. Additionally, **9%** (**9 countries**) reported that experimentation on donated unused embryos is **explicitly banned**, reflecting strict national policies that prohibit such research. Meanwhile, **13%** (**13 countries**) indicated that the regulatory status in their country is **unknown**.

Among the **40 countries** with regulations on embryo experimentation, the majority (**67.5%**) enforce their policies through **Federal/National Laws, Statutes, or Ordinances**, demonstrating a reliance on centralized legislative frameworks.

A smaller subset of countries incorporates **multiple regulatory layers**. Some jurisdictions (**7.5%**) regulate experimentation through **both federal laws and professional organization standards**, ensuring scientific and ethical oversight. Others (**5%**) rely on **agency regulations and oversight** as their primary governance mechanism.

A few countries apply **a combination of governance structures**, including federal laws, agency regulations, and professional organization standards (**2.5%**). Additionally, **some nations incorporate cultural and religious considerations** into their regulatory frameworks (**2.5%**), emphasizing **the ethical and societal complexities surrounding embryo research.**

Therapeutic Cloning

Regulatory oversight of **therapeutic cloning experimentation** varies significantly among 102 respondent countries. A **majority** (**40%**), or **41 countries**, reported that **no regulations exist** to govern therapeutic cloning. **25.5%** (**26 countries**) confirmed that **regulations are in place**, suggesting that a **quarter of surveyed nations have specific legal frameworks addressing therapeutic cloning research**. Conversely, **18%** (**18 countries**) reported that therapeutic cloning is **explicitly banned.** Additionally, **17%** (**17 countries**) indicated that the **regulatory status remains unknown.**

Among the **26 countries** that regulate therapeutic cloning, the majority (**73%**) enforce policies through **Federal/National Laws, Statutes, or Ordinances**, highlighting the dominant role of centralized government oversight in this area. A smaller number of countries (**4% each**) rely on **multiple layers of governance**, integrating federal laws with **agency regulations, professional organization guidelines, or regional laws**. In some cases, **cultural and religious practices** are also considered in shaping regulatory

Chapter 15. Table 2

Are there regulations that address experimentation?

Country	Reproductive cloning	Donated unused embryos	Therapeutic cloning	Embryonic stem cell research	Donated unused embryos for stem cell research
Albania	No	Yes Federal/National	No	No	Yes Federal/National
Algeria	No	No	No	No	No
Argentina	No	No	No	No	No
Armenia	No	Yes Federal/National	No	No	No
Australia	Banned	Yes Federal/National	Banned	Banned	Yes Federal/National
Austria	Yes Federal/National	Yes Federal/National	Unknown	Unknown	Yes Federal/National
Bangladesh	Banned	Banned	Banned	Unknown	Banned
Barbados	Unknown	Unknown	Unknown	Unknown	Unknown
Belarus	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Benin	No	No	No	No	No
Bolivia	No	No	No	No	No
Bosnia and Herzegovina	No	No	No	No	No
Brazil	Banned	Yes Agency Professional	Banned	Yes Agency Professional	Yes Federal Agency Professional
Bulgaria	Banned	Banned	Banned	Banned	Banned
Burkina Faso	No	No	No	No	No
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroon	No	No	No	No	No
Chile	No	No	No	No	No
China	No	Yes Federal/National State/Provincial/ Regional	Unknown	Unknown	Yes Federal/National State/Provincial/Regional
Colombia	Unknown	Yes Professional	Unknown	Unknown	Unknown
Costa Rica	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Cyprus	Yes Federal/ National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Czech Republic	No	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Democratic Republic of the Congo	No	No	No	No	No
Dominican Republic	No	No	No	No	No
Ecuador	No	No	No	No	No
Egypt	No	Yes Federal/National Professional Cultural practice Religious decree	Yes Federal/National Professional Cultural practice Religious decree	Yes Federal/National Professional Cultural practice Religious decree	Yes Federal/National Professional Cultural practice Religious decree
El Salvador	No	No	No	No	No
Equatorial Guinea	Unknown	Yes Federal/National	Unknown	Unknown	Yes Federal/National
Estonia	Unknown	Yes Federal/National	Unknown	Unknown	Unknown
Ethiopia	Unknown	Unknown	Yes Federal/National State/Provincial/Regional	Unknown	Unknown
Finland	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
France	Banned	Yes	Banned	Yes	Yes

Chapter 15. Table 2

(*Continued*)

Country	Reproductive cloning	Donated unused embryos	Therapeutic cloning	Embryonic stem cell research	Donated unused embryos for stem cell research
		Federal/National Agency		Federal/National Agency	Federal/National Agency
Georgia	Banned	Unknown	Banned	Banned	Banned
Germany	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Ghana	No	No	No	No	No
Greece	Banned	Yes Federal/National Professional	Banned	Yes Federal/National Professional	Yes Federal/National Professional
Guatemala	Banned	Banned	Banned	Banned	Banned
Hong Kong	Yes Federal/National State/Provincial/ Regional Agency	Yes Agency	Yes Federal/National State/Provincial/Regional Agency	Yes Federal/National State/Provincial/Regional Agency	Yes Agency
Hungary	Yes Federal/ National	Yes Federal/National	Banned	Yes Federal/National	Yes Federal/National
Iceland	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
India	No	Yes Federal/National	No	Yes Federal/National	Yes Federal/National
Indonesia	Unknown	Yes Federal/National Professional	Unknown	Unknown	Yes Federal/National Professional
Iran	No	No	No	No	No
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	Banned		Banned	Yes Federal/National Professional	Yes Federal/National Professional
Italy		Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Jamaica	No	No	No	No	No
Japan	Yes Federal/National Professional	Yes Federal/National Professional	Yes Federal/National Professional	Yes Federal/National Professional	Yes Federal/National Professional
Jordan	No	No	No	No	No
Kazakhstan	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Kenya	No	No	No	No	No
Kuwait	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Latvia	Banned	No	Banned	No	No
Libya	Unknown	Unknown	Unknown	Unknown	Unknown
Lithuania	No	No	No	No	No
Malaysia	No	No	No	No	No
Mali	No	No	No	No	No
Malta	Banned	Banned	Banned	Banned	Banned
Mexico	Yes Federal/National	No	No	No	No
Moldova	Unknown	Unknown	Unknown	Unknown	Unknown
Montenegro	Banned	Yes Federal/National	Banned	Yes Federal/National	Yes Federal/National
Morocco	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Myanmar	Unknown	Unknown	Unknown	Unknown	Unknown
Namibia	No	No	No	No	No
Nepal	Banned	Banned	Banned	No	No
New Zealand	Yes Federal/National	Yes Federal/National	No	No	No
Nigeria	No	No	No	No	No

Chapter 15. Table 2

(*Continued*)

Country	Reproductive cloning	Donated unused embryos	Therapeutic cloning	Embryonic stem cell research	Donated unused embryos for stem cell research
Norway	Banned	Banned	Banned	Banned	Banned
Oman	Unknown	Unknown	Unknown	Unknown	Unknown
Pakistan	No	Banned	No	Banned	No
Panamá	Yes Federal/National	No	Yes Federal/National	Yes Federal/National	Yes Federal/National
Paraguay	No	No	No	No	No
Perú	No	No	No	No	No
Portugal	Banned	Yes Agency	Banned	Yes Federal/National	Unknown
Republic of the Congo	No	No	No	No	No
Romania	Banned	Banned	Banned	Unknown	Banned
Russia	Yes Federal/National	No	Yes Federal/National	No	No
Serbia	No	No	No	No	No
Singapore	Yes Federal/National Agency Professional	Yes Federal/National Agency Professional	Yes Federal/National Agency Professional	Yes Federal/National Agency Professional	Yes Federal/National Agency Professional
Slovenia	Banned	Banned	Yes Federal/National	Yes Federal/National	Yes Federal/National
South Africa	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
South Korea	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Sudan	No	No	No	No	No
Sweden	Banned	Yes Federal/National	Banned	Yes Federal/National	Yes Federal/National
Switzerland	Yes Federal/National		Yes Federal/National	Yes Federal/National	Yes Federal/National
Tajikistan	No	No	No	No	No
Tanzania	No	No	No	Unknown	Unknown
Trinidad & Tobago	No	No	No	No	No
Tunisia	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National	Yes Federal/National
Uganda	No	No	No	No	No
Ukraine	Unknown	Unknown	Unknown	Unknown	Unknown
United Arab Emirates	Unknown	Unknown	Unknown	Unknown	Unknown
United Kingdom	Banned	Yes Federal/National Agency	Yes Federal/National Agency	Yes Federal/National	Yes Federal/National Agency
United States of America	Yes Federal/National Agency Professional	Yes State/Provincial/ Regional Professional Cultural practice	Yes Federal/National State/Provincial/Regional Agency Professional	Yes Federal/National State/Provincial/Regional Professional Cultural practice	Yes Federal/National State/Provincial/Regional Professional Cultural practice
Uruguay	No	No	No	Unknown	No
Uzbekistan	No	No	No	No	No
Venezuela	No	No	No	No	No
Vietnam	Unknown	Yes Federal/National	No	No	No
Zambia	Unknown	Unknown	Unknown	Unknown	Unknown

frameworks. A few countries implement **a combination of state, provincial, and agency-level regulations** alongside national laws, demonstrating **a multi-tiered approach to oversight.**

Embryonic Stem Cell Research

The regulation of **embryonic stem cell research** varies across 102 respondent countries, reflecting **divergent ethical, legal, and policy perspectives.** A **majority (39%),** or **40 countries,** reported that **there are no regulations** governing this area of research, suggesting **a lack of formal oversight in many jurisdictions.** Conversely, **33 countries (32%)** confirmed that **regulations are in place,** indicating that about one-third of surveyed nations have **specific policies addressing embryonic stem cell experimentation.** Meanwhile, **seven countries**

Chapter 15. Table 3

Is experimentation/research being performed in your country?

Country	Donated unused pre-implantation embryos	Donated unused pre-implantation embryos for stem cell research	Reproductive cloning	Therapeutic cloning	Embryonic stem cell research
Albania	Yes	No	No	No	No
Algeria	No	No	No	No	No
Argentina	No	No	No	No	Unknown
Armenia	No	No	No	No	No
Australia	Yes, with restrictions	Yes, with restrictions	No	No	Yes, with restrictions
Austria	No	No	No	No	No
Bangladesh	Unknown	Unknown	Unknown	Unknown	Unknown
Barbados	No	No	No	No	No
Belarus	Yes, with restrictions	No	No	No	No
Benin	No	No	No	No	No
Bolivia	Unknown	Unknown	Unknown	Unknown	Unknown
Bosnia and Herzegovina	No	No	No	No	No
Brazil	Yes, with restrictions	Yes, with restrictions	No	No	Yes, with restrictions
Bulgaria	Yes, with restrictions	No	No	No	No
Burkina Faso	No	No	No	No	No
Cambodia	Unknown	Unknown	Unknown	Unknown	Unknown
Cameroon	No	No	No	No	No
Chile	No	No	No	No	No
China	Yes, with restrictions	Yes, with restrictions	Unknown	Unknown	Yes, with restrictions
Colombia	Unknown	Unknown	Unknown	Unknown	Unknown
Costa Rica	No	No	No	No	No
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown	Unknown
Croatia	No	No	No	No	No
Cyprus	Unknown	Unknown	No	No	No
Czech Republic	Yes	Yes, with restrictions	No	Yes, with restrictions	Yes, with restrictions
Democratic Republic of the Congo	No	No	No	No	No
Dominican Republic	Unknown	Unknown	Unknown	Unknown	Unknown
Ecuador	No	No	No	No	No
Egypt	Yes	Yes	No	Yes	Yes
El Salvador	No	No	No	No	No
Equatorial Guinea	No	No	No	No	No
Estonia	Yes	Unknown	No	No	Unknown
Ethiopia	No	No	No	No	No
Finland	Yes	Yes	No	No	Yes
France	Yes, with restrictions	Yes, with restrictions	No	No	Yes, with restrictions
Georgia	No	No	No	No	No
Germany	No	No	No	No	No
Ghana	No	No	No	No	No
Greece	Yes, with restrictions	Unknown	No	No	Unknown
Guatemala	No	No	No	No	No
Hong Kong	Yes, with restrictions	Yes, with restrictions	No	No	Yes, with restrictions
Hungary	Unknown	Unknown	No	No	Unknown
Iceland	No	No	No	No	No
India	Yes, with restrictions	No	No	No	No
Indonesia	Yes, with restrictions	Unknown	No	No	Unknown
Iran	Unknown	Unknown	No	No	Unknown
Iraq	Unknown	Unknown	Unknown	Unknown	Unknown
Israel	No	No	No	No	No
Italy	No	No	No	No	No
Jamaica	Yes, with restrictions	Unknown	Unknown	Unknown	Unknown
Japan	Yes, with restrictions	Yes, with restrictions	No	Yes, with restrictions	Yes, with restrictions
Jordan	No	No	No	No	No
Kazakhstan	Yes, with restrictions	Yes, with restrictions	No	No	Yes, with restrictions
Kenya	Unknown	Unknown	Unknown	Unknown	Unknown
Kuwait	No	No	No	No	No
Latvia	No	No	No	No	No
Libya	Unknown	Unknown	Unknown	Unknown	Unknown
Lithuania	No	No	No	No	No

Chapter 15. Table 3

(*Continued*)

Country	Donated unused pre-implantation embryos	Donated unused pre-implantation embryos for stem cell research	Reproductive cloning	Therapeutic cloning	Embryonic stem cell research
Malaysia	Unknown	Unknown	Unknown	Unknown	Unknown
Mali	No	No	No	No	No
Malta	No	No	No	No	No
Mexico	Yes	Yes	No	No	Yes
Moldova	Unknown	Unknown	Unknown	Unknown	Unknown
Montenegro	Yes, with restrictions	Yes, with restrictions	No	No	Unknown
Morocco	No	No	No	No	No
Myanmar Burma	No	No	No	No	No
Namibia	No	No	No	No	No
Nepal	No	No	No	No	No
New Zealand	No	No	No	No	No
Nigeria	No	No	No	No	No
Norway	No	No	No	No	No
Oman	No	No	Unknown	Unknown	Unknown
Pakistan	No	No	No	No	No
Panamá	Unknown	Unknown	Unknown	Unknown	Yes, with restrictions
Paraguay	No	No	No	No	No
Perú	No	No	No	No	No
Philippines	No	No	No	No	No
Portugal	Yes, with restrictions	No	No	No	No
Qatar	No	No	No	No	No
Romania	Unknown	Unknown	No	No	Unknown
Russia	Unknown	Unknown	Unknown	Unknown	Unknown
Serbia	No	No	No	No	No
Singapore	Yes, with restrictions	Yes, with restrictions	No	No	Yes, with restrictions
Slovenia	No	No	No	No	No
South Africa	Yes, with restrictions	Yes, with restrictions	No	Yes, with restrictions	Yes, with restrictions
South Korea	Yes, with restrictions	No	No	No	No
Sudan	Unknown	Unknown	Unknown	Unknown	Unknown
Sweden	Yes, with restrictions	Yes, with restrictions	No	No	Yes, with restrictions
Switzerland	No	No	No	No	Unknown
Tajikistan	No	No	No	No	
Tanzania	Unknown	Unknown	Unknown	Unknown	Unknown
Trinidad & Tobago	No	No	No	No	No
Tunisia	No	No	No	No	No
Uganda	No	No	No	No	No
Ukraine	Unknown	Unknown	Unknown	Unknown	Unknown
United Arab Emirates	Unknown	Unknown	Unknown	Unknown	Unknown
United Kingdom	Yes, with restrictions	Yes, with restrictions	No	Yes, with restrictions	Yes
United States of America	Yes, with restrictions	Yes, with restrictions	No	Yes, with restrictions	Yes, with restrictions
Uruguay	No	No	No	No	No
Uzbekistan	No	No	No	No	No
Venezuela	No	No	No	No	No
Vietnam	Yes	Unknown	Unknown	Unknown	Unknown
Zambia	Unknown	Unknown	Unknown	Unknown	Unknown

(7%) have **explicitly banned** such research, demonstrating **strict prohibitions due to ethical concerns and legal restrictions**. An additional, **22 countries** (22%) reported that the **regulatory status of embryonic stem cell research is unknown**.

Among the **33 countries** that regulate embryonic stem cell research, the **majority** (73%) enforce policies through **Federal/National Laws, Statutes, or Ordinances,** indicating that **national-level legislation serves as the primary governing framework** for this field. A smaller proportion (9%) regulate this research through **a combination of national laws and professional organization standards,** ensuring **both legal and ethical oversight**. Other **less common regulatory structures** include oversight by **agency regulations and professional organizations** (3%), a mix of **federal, state, and agency-level regulations** (3%), and governance influenced by **cultural and religious practices** (3%).

Donated Unused Embryos for Stem Cell Research

Regulatory oversight of **experimentation on donated unused embryos for stem cell research** varies across 102 respondent countries. A **majority** (40%), or **41 countries,** reported that **no regulations exist,** indicating a lack of formal policies governing this research in many jurisdictions. However, **38 countries** (37%) confirmed that **regulations are in place**. Conversely, **seven**

Chapter 15. Table 4

Is experimentation on the pre-implantation embryo being performed by clinical or research programs in your country?

Country	Reproductive cloning by clinical or research programs	Therapeutic cloning by clinical or research programs	Embryonic stem cell research	Research on donated unused embryos for stem cell research
Albania	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
Algeria	Never Performed	Never Performed	Never Performed	Never Performed
Argentina	Never Performed	Never Performed	Unknown	Unknown
Armenia	Never Performed	Never Performed	Never Performed	Never Performed
Australia	Never Performed	Never Performed	Never Performed	Never Performed
Austria	Never Performed	Never Performed	Never Performed	Never Performed
Bangladesh	Unknown	Unknown	Unknown	Unknown
Barbados	Never Performed	Never Performed	Never Performed	Never Performed
Belarus	Never Performed	Never Performed	Never Performed	Never Performed
Benin	Never Performed	Never Performed	Never Performed	Never Performed
Bolivia	Unknown	Unknown	Unknown	Unknown
Bosnia and Herzegovina	Never Performed	Never Performed	Never Performed	Never Performed
Brazil	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
Bulgaria	Never Performed	Never Performed	Never Performed	Never Performed
Burkina Faso	Never Performed	Never Performed	Never Performed	Never Performed
Cambodia	Unknown	Unknown	Unknown	Unknown
Cameroon	Never Performed	Never Performed	Never Performed	Never Performed
Chile	Never Performed	Never Performed	Never Performed	Never Performed
China	Never Performed	Never Performed	Never Performed	Never Performed
Colombia	Never Performed	Never Performed	Never Performed	Never Performed
Costa Rica	Never Performed	Never Performed	Never Performed	Never Performed
Côte d'Ivoire	Unknown	Unknown	Unknown	Unknown
Croatia	Never Performed	Never Performed	Unknown	Unknown
Cyprus	Never Performed	Infrequently Performed	Commonly Performed	Infrequently Performed
Czech Republic	Never Performed	Never Performed	Commonly Performed	Commonly Performed
Democratic Republic of the Congo	Never Performed	Never Performed	Never Performed	Never Performed
Dominican Republic	Unknown	Unknown	Unknown	Unknown
Ecuador	Never Performed	Never Performed	Never Performed	Never Performed
Egypt	Never Performed	Never Performed	Never Performed	Never Performed
El Salvador	Never Performed	Never Performed	Never Performed	Never Performed
Equatorial Guinea	Never Performed	Never Performed	Never Performed	Never Performed
Estonia	Never Performed	Never Performed	Never Performed	Never Performed
Ethiopia	Never Performed	Never Performed	Never Performed	Never Performed
Finland	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
France	Never Performed	Never Performed	Infrequently Performed	Unknown
Georgia	Never Performed	Never Performed	Never Performed	Never Performed
Ghana	Never Performed	Never Performed	Never Performed	Never Performed
Greece	Never Performed	Never Performed	Never Performed	Never Performed
Guatemala	Never Performed	Never Performed	Never Performed	Never Performed
Hong Kong	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
Hungary	Never Performed	Never Performed	Never Performed	Never Performed
Iceland	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
Indonesia	Never Performed	Never Performed	Never Performed	Never Performed
Iran	Infrequently Performed	Unknown	Unknown	Unknown
Iraq	Unknown	Unknown	Unknown	Unknown
Israel	Never Performed	Never Performed	Never Performed	Never Performed
Italy	Never Performed	Never Performed	Never Performed	Never Performed
Jamaica	Never Performed	Never Performed	Never Performed	Never Performed
Japan	Never Performed	Never Performed	Infrequently Performed	Never Performed
Jordan	Never Performed	Never Performed	Never Performed	Never Performed
Kazakhstan	Unknown	Unknown	Infrequently Performed	Infrequently Performed
Kenya	Unknown	Unknown	Unknown	Unknown
Kuwait	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
Latvia	Never Performed	Never Performed	Never Performed	Never Performed
Libya	Unknown	Unknown	Unknown	Unknown
Lithuania	Never Performed	Never Performed	Never Performed	Never Performed
Malaysia	Unknown	Unknown	Unknown	Unknown
Mali	Never Performed	Never Performed	Never Performed	Never Performed
Malta	Never Performed	Never Performed	Never Performed	Never Performed

Chapter 15. Table 4

(*Continued*)

Country	Reproductive cloning by clinical or research programs	Therapeutic cloning by clinical or research programs	Embryonic stem cell research	Research on donated unused embryos for stem cell research
Mexico	Unknown	Unknown	Unknown	Unknown
Moldova	Unknown	Unknown	Unknown	Unknown
Montenegro	Never Performed	Never Performed	Never Performed	Never Performed
Morocco	Never Performed	Never Performed	Never Performed	Never Performed
Myanmar (Burma)	Never Performed	Never Performed	Never Performed	Never Performed
Namibia	Never Performed	Never Performed	Never Performed	Never Performed
Nepal	Never Performed	Never Performed	Never Performed	Never Performed
New Zealand	Never Performed	Infrequently Performed	Commonly Performed	Commonly Performed
Nigeria	Unknown	Unknown	Unknown	Unknown
Norway	Never Performed	Never Performed	Never Performed	Never Performed
Oman	Unknown	Unknown	Unknown	Unknown
Pakistan	Never Performed	Never Performed	Never Performed	Never Performed
Panamá	Unknown	Unknown	Unknown	Unknown
Paraguay	Never Performed	Never Performed	Never Performed	Never Performed
Perú	Never Performed	Never Performed	Never Performed	Never Performed
Philippines	Never Performed	Never Performed	Never Performed	Never Performed
Qatar	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
Republic of the Congo	Never Performed	Never Performed	Never Performed	Never Performed
Russia	Unknown	Unknown	Unknown	Unknown
Rwanda	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
Serbia	Never Performed	Never Performed	Never Performed	Never Performed
Slovakia	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
Solomon Islands	Never Performed	Never Performed	Never Performed	Never Performed
South Korea	Never Performed	Infrequently Performed	Commonly Performed	Commonly Performed
South Sudan	Never Performed	Never Performed	Infrequently Performed	Infrequently Performed
Sudan	Unknown	Never Performed	Unknown	Unknown
Sweden	Unknown	Never Performed	Unknown	Unknown
Switzerland	Never Performed	Never Performed	Never Performed	Never Performed
Tanzania	Never Performed	Never Performed	Never Performed	Never Performed
Thailand	Unknown	Unknown	Unknown	Unknown
Trinidad & Tobago	Never Performed	Never Performed	Never Performed	Never Performed
Tunisia	Infrequently Performed	Unknown	Unknown	Unknown
Uganda	Never Performed	Never Performed	Never Performed	Never Performed
Ukraine	Unknown	Unknown	Unknown	Unknown
United Arab Emirates	Unknown	Unknown	Unknown	Unknown
United Kingdom	Never Performed	Never Performed	Commonly Performed	Commonly Performed
United States of America	Unknown	Unknown	Unknown	Unknown
Uruguay	Never Performed	Never Performed	Never Performed	Never Performed
Uzbekistan	Never Performed	Never Performed	Never Performed	Never Performed
Venezuela	Never Performed	Never Performed	Never Performed	Never Performed
Vietnam	Never Performed	Commonly Performed	Commonly Performed	Commonly Performed
Zambia	Unknown	Unknown	Unknown	Unknown

countries (7%) have **explicitly banned** this type of research, reflecting strong national prohibitions due to ethical and legal concerns. An additional, **16 countries (16%)** stated that the regulatory status in their country is **unknown.**

Among the **38 countries** that regulate experimentation on donated unused embryos for stem cell research, the **majority (68%)** enforce policies through **Federal/National Laws, Statutes, or Ordinances**, indicating that **national governments play the primary role in oversight.** A smaller proportion (**10.5%**) regulate research through **a combination of national laws and professional organization standards**, ensuring **both legal and ethical compliance**. Other **less common regulatory frameworks** include oversight by **agency regulations (5%)**, a mix of **federal, agency, and professional organization standards (5%)**, and governance influenced by **cultural and religious considerations (3%).**

3. Is experimentation/research on the pre-implantation embryo performed in your country (Table 3***)?***

Research on donated unused pre-implantation embryos

Out of 103 countries surveyed, **53 countries (52%)** do not allow experimentation or research on donated unused pre-implantation embryos. Twenty-one countries (**20%**) permit such research but with restrictions, while **seven countries (7%)** allow it without restrictions. The status remains **unknown for 22 c ountries (21%).**

Research on donated unused pre-implantation embryos for stem cell research

Out of 103 countries surveyed, 59 countries (57%) do not allow research on donated unused pre-implantation embryos for stem cell research. Fourteen countries (14%) permit such research but with restrictions, while 3 countries (3%) allow it without restrictions. The status remains unknown for 27 countries (26%).

Chapter 15. Table 5

In your country, up to what age developmental days can experimentation be performed on a developing non-implanted embryo?

Country	Developmental Days
Armenia	0
Australia	5
Belarus	14
Brazil	5
Bulgaria	5
Cambodia	0
Cameroon	0
Chile	0
China	14
Côte d'Ivoire	5
Cyprus	14
Democratic Republic of the Congo	0
Dominican Republic	8
Egypt	14
Equatorial Guinea	14
Estonia	7
Finland	14
Ghana	0
Greece	14
Hong Kong	14
Hungary	6
Iceland	14
India	6
Indonesia	5
Iran	0
Iraq	20
Israel	5
Jamaica	6
Japan	14
Kazakhstan	5
Kuwait	0
Latvia	14
Libya	0
Malaysia	0
Mexico	7
Montenegro	14
Norway	7
Perú	0
Portugal	14
Russia	7
Serbia	0
Singapore	7
South Africa	6
Sudan	5
Sweden	14
Tunisia	14
United Kingdom	14
United States of America	14
Uruguay	0
Vietnam	6
Zambia	42

Reproductive cloning

Out of 103 countries surveyed, 81 countries (79%) do not allow reproductive cloning. The status remains unknown for 22 countries (21%).

Therapeutic cloning

Out of 103 countries surveyed, 75 countries (73%) do not allow therapeutic cloning. Five countries (5%) permit it with restrictions, while one country allows it without restrictions. The status remains unknown for 22 countries (21%).

Embryonic stem cell research

Out of 102 countries surveyed, 56 countries (55%) do not allow embryonic stem cell research. Thirteen countries (13%) permit it with restrictions, while four countries (4%) allow it without restrictions. The status remains unknown for 29 countries (28%).

4. Is experimentation on the pre-implantation embryo being performed by clinical or research programs in your country? *(*Table 4)

Reproductive cloning

A very small proportion of countries are involved with any type of pre-implantation embryo research. The respondents indicated that experimentation on pre-implantation embryos by clinical or research programs for reproductive cloning is rare, with only two (2%) of 101 respondents, from Iran and Tunisia, indicating that it was "infrequently performed". Three respondents, from Cyprus, New Zealand and South Korea indicated that therapeutic cloning was "infrequently performed," and one respondent from Vietnam noted that it is "commonly performed." The prevalence of embryonic stem cell research is more common among the responding countries, with six respondents from Cyprus, the Czech Republic, New Zealand, South Korea, the United Kingdom and Vietnam indicating that it is "commonly performed" and 13 (12%) more indicating that it is "infrequently performed". Five countries, the Czech Republic, New Zealand, South Korea, the United Kingdom and Vietnam, also report that experimentation with donated unused embryos for stem cell research is "commonly performed" and additional 12 (12%) note that it is "infrequently performed".

In 2021, only Benin reported that reproductive cloning was commonly performed and six (9%) of 68 countries reported that therapeutic cloning was performed: commonly in two and infrequently in four. In 2021, eight countries, Benin, the Czech Republic, Greece, Japan, Kazakhstan, South Korea, the United Kingdom and the United States practiced and/or performed therapeutic cloning.

Therapeutic cloning

The practice of **therapeutic cloning** in clinical or research programs is **rarely conducted** across 101 respondent countries. A **large majority (73%),** or **74 countries**, reported that **therapeutic cloning has never been performed.** Only **3 countries (3%)** stated that therapeutic cloning is **infrequently performed**. Meanwhile, **one country** reported that therapeutic cloning is **commonly performed. Twenty-three countries (23%)** indicated that the status of therapeutic cloning research in their country is **unknown.**

Embryonic Stem Cell Research

The extent to which **embryonic stem cell research** is conducted in clinical, or research programs varies among 101 respondent countries. A **majority (55%)**, or **56 countries**, reported that such research has **never been performed.** However, **13 countries (13%)** indicated that embryonic stem cell research is **infrequently performed**. A smaller number, six countries (6%) reported that **such research is commonly performed,** indicating **a minority of nations where embryonic stem cell experimentation is actively pursued** within clinical or scientific settings. An additional, **26 countries (26%)** stated that the status of embryonic stem cell research in their country is **unknown.**

Research on Donated Unused Embryos for Stem Cell Research

The practice of **research on donated unused embryos for stem cell research** is **not widespread** among the 101 respondent countries. A **majority (56%),** or **57 countries**, reported that such research has **never been performed.**

A **smaller proportion, 12 countries (12%)**, stated that this research is **infrequently performed**, suggesting that some limited studies may be conducted under **strict oversight and regulations**. Meanwhile, **five countries (5%)** confirmed that research on donated unused embryos is **commonly performed. Twenty-seven countries (27%)** reported that the status of such research is **unknown**.

5. In your country, up to what age (developmental days) can experimentation be performed on a developing non-implanted embryo? (Table 5)

Fifty-one countries have instituted developmental day limits for non-implanted embryo research. Forty-nine (96%) countries follow the 14-day rule or have earlier limits, including 13 (25.5%) that only allow pre-fertilization (day 0) research. Only Iraq (day 20) and Zambia (day 42) allow investigations to exceed 14 days of development. In 2021, countries that recognized a limit used a range of 0 to 52 days, with a median of six days.

Discussion

The 2024 Triennial Report survey reveals a significant increase over the past three years, from 22 to 39, in the number of countries that now permit experimentation on human preimplantation embryos with 90% requiring permission of a national oversight body. Such experimentation is explicitly prohibited in 43 countries and the majority (27) of countries that permit it have restrictions in place. Most of this new activity pertains to stem cell research; the number of countries allowing it has increased from 11 to 29 (28%) of 105 countries, over the past three years. Of the 39 countries allowing this research, it is actually performed in 28 countries, compared to 19 in 2021. Modest to no changes have been noted over the same interval in both the allowance and practice of preimplantation embryo experimentation for therapeutic and reproductive cloning. No significant changes in oversight were noted.

The 2024 questionnaire provided further insight into the diverse approaches that countries have taken to establish limits for the experimental study of developing non-implanted embryos. Of the 51 countries that have imposed such limits, only two permit study beyond day 14; 17 use the day 14 rule; and 13 limit study to pre-fertilization (day 0). For much of the past 20 years, the 14-day limit has been the consensus-based, standard practice and it has been endorsed by several scientific guidelines[5]. Recent developments including successful embryo culture beyond day 14 and progress with pluripotent stem cells (PSCs) to create new developmental models, offer attractive technology to further elucidate early embryonic organization and differentiation and produce novel therapeutic options. However, their application has been constrained by the definition of the embryo inherent in the day-14 rule. To this end, new guidance and terminology for these models have been proposed, including the terms embryoid, organoid and artificial embryo[6].

While the 2024 Triennial Report survey confirms an extensive array of laws and guidelines applied to these research efforts, it does not reveal the extraordinary variability in the approaches undertaken by participating countries to facilitate and constrain it. A 2020 survey of 22 countries identified as having invested the most in embryo and embryoid basic research found that 12 had national laws or guidelines imposing the 14 day rule, one had a seven day limit, four had no date limit and five prohibited human embryo research[7]. Many countries have some legislation addressing various aspects of preimplantation embryo research, but it was highly variable and often does not encompass emerging technologies. For example, Australia permits human embryo and human embryonic stem cell research but restricts embryoid research[7]. Italy and Turkey allow embryoid research derived from existing human embryonic stem cells from another country but prohibit human embryo research. Legislation in the Netherlands, Belgium and Australia rely on whether the cells have the "potential" to become human to determine whether or not research is permissible but do not define "potential". These variations reflect very different concerns and attitudes, in part culturally derived, among the stakeholders. Human embryo and embryoid research is continuing to expand even as these issues remain unresolved.

Summary

The 2024 Triennial Report survey recorded a significant increase, from 22 to 39 countries that now allow experimentation on human preimplantation embryos. A large majority, 90%, require permission of a national oversight body. Such experimentation is explicitly prohibited in 43 countries and the majority (27) of countries that permit it have restrictions in place. Most of this new activity pertains to stem cell research; the number of countries allowing it has increased from 11 to 29 (28%) of 105 countries, over the past three years. There is considerable variability among countries in their support, encouragement and oversight of these technologies. No significant changes in the performance or oversight of therapeutic or reproductive cloning were noted.

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Chapter 16. Table 1

Is there a recognized point in time during human development at which a human person is considered to exist and thus provided human rights??

Country	Recognized point in time?	Recognized time of existence (days)	Governing body or agency
Albania	No		
Algeria	No		
Argentina	No		
Armenia	No		
Australia	No		
Austria	Unknown		
Bangladesh	No		
Barbados	Unknown		
Belarus	No		
Benin	Unknown		
Bolivia	No		
Bosnia and Herzegovina	No		
Brazil	Yes	7	Federal/National Laws/Statutes/Ordinances
Bulgaria	No		
Burkina Faso	No		
Cambodia	Unknown		
Cameroun	No		
Chile	No		
China	Unknown		
Colombia	Yes	168	Federal/National Laws/Statutes/Ordinances
Costa Rica	No		
Côte d'Ivoire	Unknown		
Croatia	Unknown		
Cyprus	Unknown		
Czech Republic	No		
Democratic Republic of the Congo	No		
Denmark	Yes	182	Federal/National Laws/Statutes/Ordinances
Dominican Republic	Yes	1	Federal/National Laws/Statutes/Ordinances State/Provincial/Regional Laws/Statutes/Ordinances Municipal Laws/Statutes/Ordinances Agency Regulations/Oversight Professional Organization Standards/Guidelines
Ecuador	Yes	1	Cultural practice Religious decree
Egypt	Yes	120	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines Cultural practice Religious decree
El Salvador	Yes	0	Federal/National Laws/Statutes/Ordinances Religious decree
Equatorial Guinea	Unknown		
Estonia	No		
Ethiopia	Unknown		
Finland	No		
France	Unknown		
Georgia	Unknown		
Germany	Yes	1	Federal/National Laws/Statutes/Ordinances
Ghana	No		
Greece	No		
Guatemala	Yes	1	Federal/National Laws/Statutes/Ordinances
Hungary	Yes	1	Federal/National Laws/Statutes/Ordinances
Iceland	No		
India	Unknown		
Indonesia	Unknown		
Iran	Yes	112	Federal/National Laws/Statutes/Ordinances Cultural practice Religious decree
Iraq	Unknown		
Israel	No		
Italy	Yes	90	Federal/National Laws/Statutes/Ordinances
Jamaica	No		

Chapter 16. Table 1

(*Continued*)

Country	Recognized point in time?	Recognized time of existence (days)	Governing body or agency
Japan	No		
Jordan	No		
Kazakhstan	No		
Kenya	No		
Kuwait	Unknown		
Latvia	Unknown		
Libya	Unknown		
Lithuania	No		
Malaysia	Yes	120	Religious decree
Mali	Unknown		
Malta	Yes	1	Federal/National Laws/Statutes/Ordinances
Mexico	Unknown		
Moldova	Unknown		
Montenegro	No		
Morocco	No		
Myanmar	Unknown		
Namibia	Unknown		
Nepal	Unknown		
New Zealand	No		
Nigeria	No		
Norway	Yes	147	Federal/National Laws/Statutes/Ordinances
Oman	Unknown		
Pakistan	Unknown		
Panamá	No		
Paraguay	Yes	1	Federal/National Laws/Statutes/Ordinances Cultural practice
Perú	Yes	0	Federal/National Laws/Statutes/Ordinances
Philippines	Yes		Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines
Portugal	No		
Qatar	Unknown		
Republic of the Congo	Unknown		
Romania	No		
Russia	No		
Serbia	Unknown		
Singapore	Unknown		
Slovenia	Yes	1	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines
South Africa	No		
South Korea	Unknown		
Sudan	No		
Sweden	No		
Switzerland	No		
Tajikistan	No		
Tanzania	Unknown		
Trinidad & Tobago	No		
Tunisia	No		
Turkey	Yes	6	Federal/National Laws/Statutes/Ordinances
Uganda	No		
Ukraine	Unknown		
United Arab Emirates	Unknown		
United Kingdom	No		
United States of America	Yes	1	State/Provincial/Regional Laws/Statutes/Ordinances Professional Organization Standards/Guidelines Cultural practice
Uruguay	No		
Uzbekistan	Yes	154	Federal/National Laws/Statutes/Ordinances
Venezuela	Yes	1	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines Cultural practice Religious decree
Vietnam	Unknown		
Zambia	Unknown		
Zimbabwe	Unknown		

Chapter 16. Table 2

Is there a recognized point in time during human development before which a human person is considered not to exist, and thus not provided human rights?

Country	Recognized point in time	Recognized time of non-existence(days)	Governing body or agency
Albania	No		
Algeria	No		
Argentina	No		
Armenia	No		
Australia	No		
Austria	Unknown		
Bangladesh	No		
Barbados	Unknown		
Belarus	No		
Benin	Unknown		
Bolivia	No		
Bosnia and Herzegovina	No		
Brazil	Yes	7	Federal/National Laws/Statutes/Ordinances
Bulgaria	Unknown		
Burkina Faso	No		
Cambodia	Unknown		
Cameroun	No		
Chile	No		
China	Unknown		
Colombia	Yes	168	Federal/National Laws/Statutes/Ordinances
Costa Rica	No		
Côte d'Ivoire	Unknown		
Croatia	Unknown		
Cyprus	Unknown		
Czech Republic	No		
Democratic Republic of the Congo	No		
Denmark	Yes	182	Federal/National Laws/Statutes/Ordinances
Dominican Republic	No		
Ecuador	Yes	1	Religious decree
Egypt	Yes	14	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines Cultural practice Religious decree
El Salvador	Unknown		
Equatorial Guinea	Unknown		
Estonia	No		
Ethiopia	Unknown		
Finland	No		
France	Unknown		
Georgia	Unknown		
Germany	No		
Ghana	No		
Greece	No		
Guatemala	No		
Hungary	No		
Iceland	No		
India	Unknown		
Indonesia	Unknown		
Iran	Yes	112	Federal/National Laws/Statutes/Ordinances Cultural practice Religious decree
Iraq	Unknown		
Israel	No		
Jamaica	No		
Japan	No		
Jordan	No		
Kazakhstan	No		
Kenya	No		
Kuwait	Unknown		
Latvia	Unknown		
Libya	Unknown		
Lithuania	No		

Chapter 16. Table 2

(*Continued*)

Country	Recognized point in time	Recognized time of non-existence(days)	Governing body or agency
Malaysia	Unknown		
Mali	Unknown		
Malta	No		
Mexico	Unknown		
Moldova	Unknown		
Montenegro	No		
Morocco	No		
Myanmar	Unknown		
Namibia	Unknown		
Nepal	Unknown		
New Zealand	No		
Nigeria	No		
Norway	Unknown		
Oman	Unknown		
Pakistan	Unknown		
Panamá	No		
Paraguay	No		
Perú	No		
Philippines	No		
Portugal	No		
Qatar	Unknown		
Republic of the Congo	Unknown		
Romania	No		
Russia	No		
Serbia	Unknown		
Singapore	Yes	21	Federal/National Laws/Statutes/Ordinances Professional Organization Standards/Guidelines
Slovenia	No		
South Africa	No		
South Korea	Unknown		
Sudan	No		
Sweden	Unknown		
Switzerland	Unknown		
Tajikistan	No		
Tanzania	Unknown		
Trinidad & Tobago	No		
Tunisia	No		
Turkey	No		
Uganda	No		
Ukraine	Unknown		
United Arab Emirates	Unknown		
United Kingdom	No		
United States of America	Yes	154	State/Provincial/Regional Laws/Statutes/Ordinances Professional Organization Standards/Guidelines Cultural practice
Uruguay	No		
Uzbekistan	No		
Venezuela	No		
Vietnam	Unknown		
Zambia	Unknown		

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CHAPTER 16: STATUS OF THE EMBRYO

Introduction

The status awarded to a fetus has been a topic of debate since antiquity and has included treatises by Aristotle (hominization), references in Sanskrit texts (Dharmaśāstra) and the teachings of Confucius. The early literature addressed when life began, specifically ensoulment, and the legal rights conferred to the fetus, primarily pertaining to the right to life and inheritance. Many of these ancient concepts have been enshrined in current law and have been expanded to protect embryos, in addition to fetuses. This remains the reality even though they predated our current understanding of embryonic and fetal development by centuries and the timing and process of ensoulment remains unknown. While universal ethical principles such as autonomy, beneficence, non-maleficence, and social justice have been incorporated into governance, the unique intersection of the interests of the

stakeholders, including mothers, children and society, have created conflicts unique to this field. The moral and legal status of the embryo continues to be the focus of intense interest by biologists, ethicists, theologians and legislatures and each has emphasized a different facet of the quandary. The pre- ART considerations did not anticipate the unique qualities of an in vitro embryo and governing practices implemented to address the rights of the fetus have limited applicability to the embryo. The existence of such laws initially determined the availability of ART services and, by extension, stem cell research. However, the rapid evolution of the latter has created additional formidable challenges in defining and protecting the embryo. In essence, the debate has centered around whether there is a point in time in which embryonic or fetal development merits the status of personhood and when that time begins. Some countries have approached it conversely denoting a point before which personhood does not exist. The data submitted for this chapter reflects great variations among the participating countries that have addressed the topic with widely differing approaches to the conference of human status and its implications.

The 2024 questionnaire posed the following questions:

(1) Is there a recognized point in time during human development in which a human exists and thus provided human rights?
(2) Through which governing bodies or agencies is this time of human existence determined?
(3) Is there a recognized point in time during human development before which a human person is considered not to exist and thus not provided human rights?
(4) Through which governing bodies or agencies is this time of human non-existence determined?

Analysis of the Survey

1. *For your country, is there a recognized point in time during human development at which a human person is considered to exist and thus provided human rights?(*Table 1)
   For the 2024 survey, 105 national respondents submitted responses to the first question. Only 22 (21%) note the existence of a recognized point at which a human is acknowledged to exist, 46 (43.4%) cited the absence of recognizing such a point and 37 (34.9%) replied "unknown". In 2021, 72 countries responded and 18 (25%) reported that such a time was recognized. This year, two countries, Peru and El Salvador, confer rights prior to fertilization of the oocyte (day 0) and ten countries; the Dominican Republic, Ecuador, Germany, Guatemala, Hungary, Malta, Paraguay, Singapore, the United States and Venezuela recognize immediate post-fertilization (day 1) as the beginning point of human existence. In 2021 no countries cited day 0 as the beginning of existence but in 2018, five different counties did. In 2024, the remaining ten countries each recognized a different day between post-fertilization day 6 and 182, except Egypt and Malaysia, both of which recognize day 120 as the demarcation for existence.
2. *Through which governing bodies or agencies, is this time of human existence determined?(*Table 1)
   Of the 22 countries recognizing a point at which human existence is said to exist, 22 addressed the follow-up question regarding which agency provided oversight. The vast majority, 20 (90.9%), depend on Federal/National Laws, Statutes or Ordinances for implementation. Six (54.5%) countries rely on Professional Organization Standards or Guidelines; two countries on State/Provincial/Regional Laws, Statutes or Ordinances and one country each cited Municipal Laws, Statutes or Ordinances, Agency Regulations, cultural practice and religious decree for guidance.
3. *For your country, is there a recognized point in time during human development before which a human person is considered not to exist, and thus not provided human rights?(*Table 2)
   Conversely, some countries define a point before which a human does not exist and of the 63 countries that provided definitive responses, only eight; Brazil (day 7), Colombia (day 168), Denmark (day 182), Ecuador (day 1), Egypt (day 14), Iran (day 112), Singapore (day 121) and the United States (day 154); recognize such a time. All of these countries except Singapore expressly recognize points both before and after human existence is established and essentially rely on the same bodies for oversight. Of the 104 countries responding to this question, 55 (52.9%) do not recognize such a point and 41 (39.4%) respondents replied "unknown". In 2021, five countries reported using this convention.
4. *Through which governing bodies or agencies is this time frame of non-existence determined?(*Table 2)
   Of the eight countries that responded to this question, six relied on federal laws, statutes or ordinances for the determination; one depended on state or provincial laws or ordinances; none had relevant municipal laws or statutes; one cited agency oversight; three had relevant professional organization standards or guidelines in place; and three each deferred to cultural practices and religious decrees.

Discussion

In 2018, 2021 and 2024, a total of 74,72 and 106 national respondents addressed the first question, respectively. The reported number of countries that confer recognition of personhood at a specific point in development has fluctuated from 31 to 18 to 23 over the same interval, despite the absence of new legislation identified to account for a change. The proportion of "unknown" responses has ranged from 27% to 29% to 35% over the same period. Although the total number of affirmative responses has continued to fluctuate, a relatively small proportion (22% in 2024; ranging from 25% in 2021 to 42% in 2018) confer personhood at a specific time prior to birth.

In 2024, eight countries recognize a point before which a human does not exist compared to five making that acknowledgment in 2021.Currently, only Singapore uniquely utilizes a point before to denote absence of personhood; the other seven have criteria to recognize times both before and after personhood is considered to exist.

In any event, all countries ultimately confer human rights at birth or before. The Triennial Report data continue to reflect significant variability in addressing prenatal rights and when those rights are conferred. This has relevance to access and denial of abortion services and regulation of research involving embryonic stem cells.

To date, most of the discussion regarding the status of the embryo have addressed the moral status and its implicit legal rights. The biologic concept of an embryo is diverging from its legal considerations. For most of the past thirty years, an accepted

definition of an embryo has been, "a group of cells resulting from fertilization whose completion was signaled by the first cell division or the expulsion of the polar bodies"[1]. Limitations of this definition have recently been highlighted since it includes two structures that could potentially develop into a fetus or not, if, for example, mutations in the cellular or mitochondrial DNA occurred. With the advent of somatic cell nuclear transfer (SCNT), and more recently, the ability to initiate embryogenesis without fertilization utilizing opposite cell gametes, a debate has ensued regarding an operational definition of an embryo. The cloning of Dolly, the sheep in 1996, in which a mammal was produced without fertilization, is emblematic of this technology. In 2023, Rivron et al proposed a new definition, "a group of human cells supported by elements fulfilling extra-embryonic and uterine functions that, combined, have the potential to form a fetus"[1]. Their requirement that the cells have sufficient potential "to form a fetus" is problematic and has subsequently undergone scrutiny by legal scholars. The criticism with this definition is that it does not distinguish between potential embryos that have the capacity to develop into a human and survive outside the uterus and those that do not[2]. The term "embryoid" has been used to refer to those that lack this capacity and to withhold legal standing otherwise accorded embryos[3]. Earlier decisions of the Court of Justice of the European Union (CJUE) and others implicitly assumed that a cell or group of cells that began development like an embryo following fertilization had equal legal protection. The debate and refining of the nomenclature is ongoing and will have greatest relevance for those countries seeking to regulate Human Pre-Implantation Embryo Research (see Chapter 14).

Summary

The 2024 Triennial Report reflects little change in the proportion and attitudes of countries that recognize a point in human development that personhood is considered to exist and is eligible for human rights. Only 23 (22%) of 106 countries acknowledge the practice. Of the countries that do, two countries confer rights prior to fertilization of the oocyte (day 0), ten countries utilize post fertilization (day one), and the remaining ten rely on demarcations between 6 – 182 days. One country, Singapore relies solely on recognizing a point before which a human person is not considered to exist (21 days). Over 90% of countries that do identify a point that a human exists rely on Federal/National Laws, Statutes or Ordinances for implementation.

References

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CHAPTER 17: CONCLUSIONS

The *2025 Triennial Report* chronicles a vigorous recovery from the SARS-CoV-2 (COVID-19) pandemic which had so profoundly impacted all reporting countries in 2022. Most countries have returned to their pre-COVID-19 activity levels with over 1000 new ART centres reported globally and only 13 countries reporting a decline in the number of centres. ART services are believed to be offered in 141 countries and the private practice or group ownership model is most prevalent. Private equity ownership was reported to exist in 65 countries and the same number of countries acknowledged the existence of a national fertility society. Both were new queries in the 2024 survey.

Almost 70% of national respondents (80 countries) reported the existence of regulations governing the practice of ART, most commonly in the form of federal (national) laws, statutes, ordinances, and policies. In 2022, 62 countries noted the presence of such requirements and 77 countries in 2019. Specific licensing and credentialing criteria were reported by the majority of respondents, and most noted the presence of multiple licensing requirements. Most countries noted that no regulatory violations had been reported, but over the past three surveys 18-20% of respondents reported that some violations had occurred.

The proportion of countries that provide either government funding or private insurance support for infertility services has increased slightly over the past three Triennial Reports, now with 62 (55%) responding countries noting their existence. The extent of support, sources of aid, specific inclusion requirements and restrictions, and qualifications for reimbursement vary widely among countries. In 2021, it was noted for the first time that a majority of countries limited access to ART services to couples in recognized and/or stable relationships and this trend was noted again in 2024. Access to ART services was more widely accepted for single women than single men and female same-sex couples than male same-sex couples. The legal parent status of the partner in a same-sex relationship was *not* recognized in most countries for either female same-sex couples (66% of 110 countries) or male same-sex couples, 78%.

The Triennial Report has monitored several ART measures pertaining to safety since its inception. Single embryo transfer (SET) remains the most effective way to reduce multiple births and its sequelae and is preferable whenever more than one embryo is available for transfer. Only about 50% of countries have guidelines addressing the maximum number of embryos recommended for transfer and only 16 countries (15%) have policies making single embryo transfer for women <35 mandatory. These responses suggest that no significant change occurred over the past three years. A majority of countries, 64% of 107 responding countries, now have processes in place to assess child welfare prior to initiation of fertility care but only 24 countries have a formal process to accomplish this. Three years ago, only 40% of countries had child welfare assessment processes in place.

The 2025 Triennial Report confirms the continued advancement and adoption of new ART techniques. ICSI is almost universally accepted and performed. Trophectoderm biopsy for various types of preimplantation genetic testing (PGT) and assisted hatching (AH) are broadly permitted and their application has spread to more countries over the past three years. Novel findings in this survey pertain to *in-vitro* maturation (IVM); more countries are permitting and using it. For the first time, the 2024 questionnaire contained queries about artificial intelligence (AI). Forty countries are using it for at least one application, usually embryo selection. Other laboratory techniques such as mitochondrial transfer remain investigative, and their study and use continue to grow slowly.

The practice of all forms of PGT is more prevalent with the number of countries performing PGT increasing from 46 to 74 for PGT-M and 43 to 72 for PGT-A over the past three years. Most of these applications have been for selection of euploid embryos and to exclude those carrying heritable diseases but a more controversial and less widely practiced use is to employ PGT-A for sex selection. Embryo biopsy has been widely adopted by ART laboratories of varying sizes and is being offered and performed more frequently. Regulation of PGT is present in 71 (90%) countries and oversight is primarily accomplished by government, including federal, national, state, provincial, and regional agencies.

The 2024 Triennial Report survey noted a significant increase, from 22 to 39 countries, in the countries that allow experimentation on human preimplantation embryos. Most, 90%, require permission from a national oversight body. Human embryo experimentation is explicitly prohibited in 43 countries and the 27 countries that do permit it have restrictions in place. The new activity primarily pertains to stem cell research. The number of countries allowing it has increased from 11 to 29 (27.6%) of 105 countries, over the triennium.

Cryopreservation of gametes is widely permitted and practiced but, a distinction is often made for regulatory considerations, between freezing as part of *fertility* treatment and *medical* indications when it is performed to preserve future fertility. The survey responses indicate that cryopreservation of sperm, oocytes, and pre-implantation embryos is permitted for fertility treatment (80.5%, 84.3% and 78.5%, respectively) and medical indications (80%, 78.7% and 73.8%, respectively). Fewer, although still a majority, permit cryopreservation of sperm, oocytes and pre-implantation embryos for non-medical indications (66.4%, 67% and 57.5%, respectively).

Eighty countries, 50 more than in 2021, submitted data regarding third party reproduction in 2024. Thirty-four (42.5%) countries noted that sperm donation, oocyte donation, and embryo donation from previous IVF cycles were performed in their countries, compared to 15 countries in 2021. This may indicate a trend toward greater acceptance of third-party reproduction but also reflects capture of data from more Triennial Report participants. The privacy and anonymity once considered essential for donor conception, continues to undergo reappraisal. Most of the recent changes in regulation have promoted greater amounts of information to be shared with both offspring and donors.

Little change in practice or oversight was noted for some of the more contentious topics. Only 15 countries reported the existence of regulations pertaining to posthumous reproduction, compared to 20 countries three years ago. Over 60% of countries reported the absence of such regulations and over 70% did so in 2021. Some countries have relevant comprehensive legal frameworks, others lack any guidelines which has led to ethical and legal dilemmas.

Cross-border reproductive care (CBRC) continues to be prevalent with few significant changes reflected over the past three surveys. Residents of comparable numbers of countries appear to be seeking CBRC for perceived lower cost, higher quality, and greater access to specific services, as in the past. The current findings noted that fewer countries found that patients sought CBRC specifically for sperm, egg, or embryo donation, and even fewer for any type of surrogacy arrangement. The finding, first noted in the 2022 Triennial Report, that a smaller proportion of patients were seeking oocyte, sperm, and embryo donation in *other* countries (outbound) than the proportion of those traveling to *their* countries (inbound) for these services was reconfirmed in the 2024 survey.

With 122 countries responding, 36 countries now acknowledge providing surrogacy services, including 26 offering only gestational and ten gestational and traditional surrogacy treatment. It is regulated in 33 of these countries, most often by federal statutes. In 2021, eight countries of 29 national responses noted that gestational surrogacy was performed and eleven noted that both were performed or practiced. The current data likely reflects a broader sampling but may also suggest that gestational surrogacy is more prevalent than previously reported. The data confirm that gestational surrogacy is much more common than traditional surrogacy and very few countries permit compensation for surrogates beyond reimbursement for expenses. Surrogacy continues to be a very controversial topic with increased concerns about exploitation and the rights of surrogates and donors. In the past three years there have been prosecutions for human trafficking arising from surrogacy arrangements.

The number of countries allowing and performing **Selective Fetal Reduction (SFR)** has remained relatively stable over the past three years. A majority of respondents, **46 out of 79 (58%),** report that SFR is legally permitted. Of these, **44 countries (96%)** confirm that the procedure is actively performed. Approximately **49% (23 of 47 responding countries)** have a regulatory framework governing SFR, with **96% of these regulations** falling under federal statutes or ordinances. While regulatory oversight remains inconsistent across jurisdictions, the overall legal landscape surrounding SFR has not changed significantly in recent years.

The 2022 Dobbs v. Jackson Women's Health Organization decision of the United States Supreme Court struck down the federal constitutional protection to abortion previously afforded by the 1973 Roe v. Wade decision. Access to abortion, including SFR, in the United States is now determined by individual states. At the end of 2024, 13 states have complete abortion bans and over 20 additional states have some restrictions in place.

Perhaps the broadest range of cultural attitudes to ART is suggested by the variations in the national approaches to the status of the embryo. *The 2025 Triennial Report* notes little change in the proportion and attitudes of countries that recognize a point in human development that personhood is conferred, and an embryo or fetus is eligible for human rights. Only 23 (22%) of the 106 countries responding formally recognize such a point but the times range from fertilization day 0 (prior to fertilization) to day 182 post fertilization. One country solely recognizes a point *before* which a human person is *not* considered to exist (21 days), but several countries recognize both points before and after personhood is recognized.

The *2025 Triennial Report: Global Trends in Reproductive Policy and Practice* documents an expanding global role for ART services with some data included from 122 of the 141 countries believed to be ART providers in early 2024. The tenth edition provides the most complete assessment of the status of global ART yet presented by the IFFS and depicts expanding geographic access to services and rapid adoption of proven technologies such as ICSI, cryopreservation and PGT. It also reveals significant regional and cultural differences in the acceptance and application of some ART technologies which have not changed appreciably over the past nine years.