



original reports

Survey of Third-Party Parenting Options Associated With Fertility Preservation Available to Patients With Cancer Around the Globe

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abstract

PURPOSE In the accompanying article, “Survey of Fertility Preservation Options Available to Patients With Cancer Around the Globe,” we showed that specific fertility preservation services may not be offered at various sites around the world because of cultural and legal barriers. We assessed global and regional experiences as well as the legal status of third-party reproduction and adoption to serve as a comprehensive international data set and resource for groups that wish to begin oncofertility interventions.

METHODS We provide data on the legalities of third-party assisted reproductive technologies and other family-building options in the 28 oncofertility-practicing countries surveyed.

RESULTS We found regional and country differences that will be important in the development of tailored resources for physicians and for patient brochures that are sensitive to these local restrictions and cultural norms.

CONCLUSION Because many patients first consult Web-based materials, the formal assessment of the availability of these options provides members of the global oncofertility community with data to which they might otherwise not have ready access to better serve their patients.

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INTRODUCTION

Fertility management in the cancer setting (ie, oncofertility) is challenging for a variety of technical reasons that are associated with timing of cancer treatment, the invasive nature of some options, and the required links between cancer and fertility care.¹ In addition to these practice management and biologic hurdles, we identified the legal status of adoption and third-party reproduction as a barrier. We then assessed the specific roadblocks that exist in surveyed countries. The goal of this analysis is to deliver authoritative information to emerging practices that may receive information about the field from a variety of Web resources and that may be unaware of local barriers to the spectrum of options.

METHODS

The survey design, data collection, and analysis are described in the accompanying article.¹ Survey

respondents were asked about barriers to counseling patients on and providing them with all existing parenting options in the face of a cancer diagnosis, gonadotoxic treatment, and possible consequent infertility. Answers provided specifics on challenges faced at their center and/or within their country, which motivated us to conduct additional research and present detailed data about the legality of surrogacy; adoption; and egg, sperm, and embryo donation. We listed the information in tables and conducted a literature search to fill in the gaps in the original data and to validate the information provided. All authors approved the information presented in the Data Supplement.

RESULTS

A significant barrier to oncofertility care noted in the survey responses¹ was the presence of legal, cultural, and regulatory restrictions. Adoption and third-party

ASSOCIATED CONTENT

Data Supplement

Author affiliations and support information (if applicable) appear at the end of this article.

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assisted reproductive technology (ART), including surrogacy and egg, sperm, and embryo donation, were consistently identified as associated with these restrictions. We assessed the prevailing laws in each country with regard to surrogacy; adoption; and egg, sperm, and embryo donation (Data Supplement).

Surrogacy (Gestational)

Of the 28 countries surveyed, altruistic surrogacy is explicitly legal in 12, whereas nine outlaw it. Specific restrictions apply to whom may access surrogacy in six countries, whereas in six other countries, all people may access it no matter their sexual orientation or marital status. Surrogacy is unregulated by law in 19 countries (Data Supplement), and altruistic surrogacy arrangements occur in nine of these countries without regulation. Commercial surrogacy is explicitly prohibited in 11 countries. In Iran, for example, both altruistic and commercial surrogacy are practiced, but no regulation of these arrangements exists. In the United Kingdom and Australia, advertisement for surrogacy is illegal, which is also true in Canada where brokers and advertisement are illegal. In four countries, surrogacy is accessible to both citizens and foreigners (Iran, Belgium, Russia, and Canada). The laws that govern the practice of surrogacy greatly differ among states in Mexico, the United States, and Australia.

Adoption

In almost all countries surveyed, adoption is explicitly legal, except in Egypt, where it is prohibited (Data Supplement). In six of these countries, legislation allows homosexual married couples to adopt. In other countries, such as Chile, adoption for homosexual couples is illegal; however, because single persons may adopt, homosexual couples may apply, but only one person is recognized as the legal parent. In India, Iran, Turkey, Denmark, Portugal, the Netherlands, and Argentina, couples (either heterosexual or homosexual) must have lived together for a certain number of years at the time of adoption. In four countries, adoption is only available to heterosexual married couples. In some countries, adoption is highly restricted; in Iran, for example, neither person in a couple who seeks to adopt can have a chronic, contagious, or terminal disease.

Egg, Sperm, and Embryo Donation

Egg donation is legal in 19 of the 28 countries surveyed (Data Supplement). In four countries, egg donation is illegal, and in five countries, it is unregulated. In a majority of countries ($n = 22$), egg donation is accessible to heterosexual married couples. In 12 countries, it is also accessible to homosexual married couples, and in 17 countries, it is accessible to unmarried persons.

Similar results are reported for sperm donation, which is legal in 20 of the countries surveyed, illegal in three, and unregulated in five. Sperm donation is accessible to heterosexual married couples in 23 countries, to homosexual

married couples in 12, and to unmarried couples in 18. In some countries, such as Iran, sperm donation is only available when medically necessary (in cases of infertility).

Embryo donation is explicitly legal in 13 countries surveyed but is illegal in nine and unregulated in six. Embryo donation is accessible to heterosexual couples in 17 countries, to homosexual married couples in seven, and to unmarried couples in 12. In 10 countries, anonymous gamete or embryo donation is permitted. In South Korea, embryo donation is only permitted for research purposes, and such research studies must be approved by the institutional review board and related to certain disease categories, such as infertility, contraception, and certain rare or incurable diseases. In Belgium and Denmark, both anonymous and nonanonymous donations of gametes and embryos are legal, but nonanonymous embryo donation is illegal in Belgium.

DISCUSSION

The survey responses indicated various legal challenges about specific procedures. One notable cultural and legal barrier to oncofertility care was related to the use of surrogacy. The survey findings agree with those reported in a study by Wennberg et al² in Sweden in which women's attitudes toward ARTs were neutral or favorable, except for surrogacy. In addition, we found significant hurdles to third-party procedures, such as age restrictions and requirements of medical indications to allow treatment, which also proves consistent with previous studies.³ These data highlight the importance of more-explicit investigations into these questions, particularly their sociologic etiologies, legal implications, and variations among world countries and regions.

During the development of the survey questions, we believed it crucial to ask about third-party ARTs, namely surrogacy and adoption, along with egg, sperm, and embryo donation.^{4,5} The rationale for including surrogacy early in the initial fertility consultation is that women who are sterile as a result of cancer may also have uterine dysfunction and a higher risk of recurrent miscarriage.^{4,7} Thus, providers should consider a conversation with patients about their ability to carry offspring after cancer treatment, including the possibility that third-party alternatives might be necessary in the setting of uterine dysfunction.^{4,7} The mention of surrogacy and adoption options provides patients with full knowledge of all possibilities that they may pursue after treatment, regardless of their remaining fertility function.⁶ For patients who did not preserve fertility before treatment, adoption is another option for family building.

India is a prime example of the potential negative impact of regional differences in laws and social restrictions with regard to surrogacy, particularly with surrogacy tourism. Before commercial surrogacy was banned countrywide for foreigners in 2016,⁸ profits often were collected by middle men and agencies rather than by the women who worked

as surrogates,⁹ which supports the argument for a standard set of policies to favor altruistic surrogacy and adoption and to prevent exploitation of surrogates. Such a policy might be recommended by global health organizations, such as the WHO. In addition, surrogacy customs and laws should be made comprehensive, easily interpretable, and translational to avoid exploitive surrogacy tourism in poorer communities where women may be willing to compromise their beliefs and health for monetary gain or are pressured to do so by others.^{9,10}

Adoption is another service the survey identified to be associated with cultural and legal barriers. At first glance, adoption is legal in most countries, but couples do not often pursue it, as indicated in the open-ended survey responses. The Hague Adoption Convention, an international agreement that established the ethics and proper practices for intercountry adoption, has been upheld by 98 countries since its founding in 1993.¹¹ This agreement provides the legal precedent for providers to begin the conversation with young patients or families. A similar convention was recently convened by the Hague Conference on Private International Law on the private international legal issues that surround the status of children, including issues that arise from international surrogacy arrangements. This meeting established that contemporary global standards should be developed to avoid the exploitation of vulnerable populations and will reconvene to discuss the development of these standards.^{12,13}

Individuals who survive cancer are not specifically legally prohibited from adoption; however, patients with cancer have documented difficulty in adopting.¹⁴ When evaluating this issue formally, we found that adoption services were not up to date on the latest survivorship data. Thus, perception rather than legal issues may remain the greatest barrier to adoption for this cohort.

Although fertility preservation procedures were not as commonly identified as being associated with cultural barriers over third-party assisted reproduction options, we identified unique regional instances. Specifically, the Banco de Sêmen do Rio de Janeiro stated that the lack of compensation for sperm donors is a huge barrier to providing this service to patients. Cultural customs play a significant role in the regulation of third-party ARTs, which are explicitly observed in two of the surveyed countries, Egypt and Tunisia. Both countries completely outlaw egg, sperm, and embryo donation. In addition, Tunisian representatives from the ART center at the Aziza Othmana Hospital of Tunis cited the perceived loss of virginity as a great factor in female patients' hesitance to undergo transvaginal procedures, such as oocyte retrieval, a procedure required for oocyte cryopreservation. Such cultural barriers likely will be more challenging to surmount because of the ingrained quality of these conventions. Fortunately, the repurposing of a technique abandoned in the 1980s for this new indication, the perurethral transvesical route where oocytes are retrieved through the bladder,¹⁵ allows oncofertility to advance as a field and improves access for patients in a world where these barriers are the current reality and may take decades to overcome.

In conclusion, tremendous differences in cultural norms; legislation; and accessibility of surrogacy, adoption, and ART options exist around the world. Even between neighboring countries, differences are apparent. These variations point to the need for consolidating this information; clarification of the governing laws and attitudes in oncofertility-practicing countries thereby will help both providers and patients to provide global understanding about third-party parenting options for patients who have undergone gonadotoxic cancer treatment and have compromised fertility as a result.

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