Fertility Preservation Legislation in the United States: Potential Implications for Transgender Individuals

Moira A. Kyweluk, PhD, MPH,^{1,2} Joyce Reinecke, JD,³ and Diane Chen, PhD^{4–7}

Abstract

Gender-affirming hormones may compromise gonadal function leading to subfertility or infertility. Fertility preservation (FP; i.e., egg and sperm “freezing”) before starting hormones offers future options to transgender individuals. In the United States, FP is extremely expensive and rarely covered by medical insurance; state-specific laws govern required benefits. Recent changes in insurance mandates in Connecticut, Delaware, Illinois, Maryland, New Hampshire, New York, and Rhode Island have expanded FP coverage, but implications of these changes for transgender individuals are unclear. State-by-state advocacy to expand insurance coverage for FP in individuals whose medically necessary treatments compromise fertility should consider the needs of transgender individuals desiring biological parenthood.

Keywords: biological parenthood, egg freezing, medical insurance, sperm freezing

Introduction

THE WORLD PROFESSIONAL Association for Transgender Health (WPATH), the Endocrine Society, and the American Society for Reproductive Medicine (ASRM) all recommend that transgender individuals receive counseling regarding potential loss of fertility and future reproductive options before initiating gender-affirming hormone (GAH) therapy.^{1–3} Research into the effects of long-term GAH therapy (i.e., estrogen and testosterone) on testicular and ovarian function is limited and shows mixed results.⁴ For example, estrogen therapy is associated with testicular atrophy and impaired spermatogenesis in some studies; in contrast, complete reversibility of these effects upon discontinuing estrogen also has been reported.⁴ The effect of long-term testosterone therapy on ovarian function and egg quality is also unclear, although some reports indicate that trans masculine individuals can experience unintended pregnancies while on testosterone⁵ and regain fertility after discontinuing testosterone treatment.⁶

Iatrogenic fertility impairment has been studied most widely in oncology and has been demonstrated to have a negative impact on quality of life and psychosocial well-being.⁷

Survivors of pediatric cancers who received fertility-compromising treatments report regret about missed opportunities for fertility preservation (FP; i.e., egg and sperm “freezing”).⁸ Similar research efforts have been made to understand the psychosocial impact of infertility in other populations, including transgender individuals. Limited research suggests that some transgender adults may desire biological children^{9–13}; fertility impairment may thus have similar negative psychosocial consequences. Lack of access to FP specialists and high initial and associated long-term costs to retrieve, store, and use preserved gametes (i.e., eggs or sperm) are considered the primary barriers to FP by oncology medical providers.¹⁴ Similar barriers have been identified by transgender adolescents and young adults,¹⁵ and by medical and mental health care providers who care for transgender individuals.^{16,17} Recent research suggests that health care providers’ fertility counseling and FP referral practices are affected by procedure costs and patients’ access to care.^{16,17}

FP Costs

FP is now widely available in the United States, but procedures are costly. In the United States, the average out-of-

¹Department of Anthropology, Northwestern University, Evanston, Illinois.

²Program in Public Health, Feinberg School of Medicine, Northwestern University, Chicago, Illinois.

³Alliance for Fertility Preservation, Lafayette, California.

⁴The Potocsnak Family Division of Adolescent and Young Adult Medicine, Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, Illinois.

⁵Pritzker Department of Psychiatry and Behavioral Health, Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, Illinois.

⁶Department of Psychiatry and Behavioral Sciences, Feinberg School of Medicine, Northwestern University, Chicago, Illinois.

⁷Department of Pediatrics, Feinberg School of Medicine, Northwestern University, Chicago, Illinois.

pocket cost without medical insurance of one cycle of oocyte retrieval and cryopreservation (typical for otherwise healthy patients) was \$9253 in 2016.¹⁸ These costs include laboratory testing, medications to stimulate egg maturation, retrieval procedure costs, initial freezing, nursing, anesthesia and office physician charges, and 1 year of storage. In the United States, the average out-of-pocket cost without medical insurance for sperm retrieval by masturbatory emission was \$745 in 2017, which includes semen analysis, infectious disease screening, initial processing and freezing costs, and 1 year of storage.¹⁹

Long-term storage costs for frozen eggs and sperm vary by clinic and geographic location, averaging \$343 per year.¹⁹ Using cryopreserved gametes in the future incurs further expenses. Preserved eggs and sperm must be thawed, requiring an additional fee, and are typically used in costly *in vitro* fertilization (IVF) procedures. Individuals may also require donor gametes and/or a gestational surrogate, further increasing total costs. Financial relief offered by nonprofit and charitable organizations to patients with cancer seeking FP is typically not extended to transgender individuals.²⁰

State-Specific Insurance Coverage for FP

FP procedures are rarely covered by employment-linked medical insurance or by federal government health insurance plans including those for federal employees and military members, veterans and their families, or Medicaid recipients.²¹ Only 11 states mandate that insurers provide coverage for IVF procedures; an additional 6 states have a mandate to offer infertility-related medical care but do not cover IVF.²² Seven states (Connecticut, Delaware, Illinois, Maryland, New Hampshire, New York, and Rhode Island) recently enacted state laws requiring certain insurers in the state to subsidize the costs associated with FP, including ovarian stimulating medications, egg and sperm retrieval procedures, and initial freezing.²³ These state-specific laws have expanded coverage greatly; however, coinsurance and copays vary widely, and comprehensive coverage is not guaranteed as state mandates apply only to certain types of insurers and policy plans. The coverage for the expensive medications required for ovarian stimulation may also be limited as many patients have separate deductibles or other cost-sharing for prescription drugs.

Coverage Considerations for Transgender Populations

In the United States, the coverage for fertility-related medical care is predicated on varying definitions of “infertility” housed within each state’s insurance legislation. The ASRM defines infertility as: “the failure to achieve a successful pregnancy after 12 months or more of appropriate, timed unprotected intercourse or therapeutic donor insemination. Earlier evaluation and treatment may be justified based on medical history and physical findings and is warranted after 6 months for women over age 35 years.”²⁴ This definition does not explicitly consider medically necessary treatments that may affect fertility. Furthermore, most working definitions of “infertility” prioritize heterosexual sex between cisgender individuals as the basis for achieving a pregnancy. As a result, some states extend infertility medical care coverage only to married or partnered heterosexual, cisgender women within certain age brackets.²² These limitations, on the basis of sex, age, gender, and marital status often exclude prospective parents from qualifying for fertility medical care and those facing infertility secondary to medically necessary treatment from qualifying for FP coverage.²⁵

States with FP coverage legislation have taken an important step in preserving the option for biological parenthood among individuals whose medically necessary treatments impact fertility. However, in all seven states that have passed FP coverage laws, advocacy efforts have focused on the specific needs of patients with cancer, supported by patient and physician testimonies and burgeoning literature and professional guidelines on cancer-related fertility care.^{18,19,25} Thus, despite broad legislative language, how new legislation will be implemented with respect to transgender individuals seeking FP remains unclear.

GAH treatment may not be deemed “medically necessary” in contrast to fertility-compromising care for other medical conditions, such as cancer. Although this concern is valid, given the varying specificity of each state’s laws requiring FP coverage, changes will likely apply to transgender patients, despite legislation not being written with these individuals in mind. Table 1 provides a brief summary of active legislation in three U.S. states to mandate medical insurance coverage for FP in patients with iatrogenic infertility.²³ If the bills pass, these three states will join Connecticut, Delaware, Illinois, Maryland, New Hampshire, New York, and Rhode Island.²³

TABLE 1. ACTIVE STATE FERTILITY PRESERVATION LEGISLATION IN THE UNITED STATES, AUGUST 2019

State	Bill	Coverage	Details
California	SB 600	FP (iatrogenic)	Coverage for standard FP when a necessary medical treatment may directly or indirectly cause iatrogenic infertility.
Massachusetts	S 560	FP (iatrogenic and medical)	Coverage for standard FP for an enrollee with a diagnosed medical or genetic condition that may directly or indirectly cause impairment of fertility by affecting reproductive organs or processes. Includes coverage for frozen gamete storage costs.
New Jersey	A3150 and S2133	FP (iatrogenic)	Update to existing IVF mandate to include FP for iatrogenic infertility.

Source: Alliance for Fertility Preservation.²³

FP, fertility preservation; IVF, *in vitro* fertilization.

In one case study, 2017 changes to the Rhode Island state insurance code require “standard fertility-preservation services when a medically necessary medical treatment may directly or indirectly cause iatrogenic infertility to a covered person.”²⁶ The code further specifies that “‘iatrogenic infertility’ means an impairment of fertility by surgery, radiation, chemotherapy, or other medical treatment affecting reproductive organs or processes.”²⁶ The Rhode Island Office of the Health Insurance Commissioner confirmed to the American Civil Liberties Union of Rhode Island that the new language will be interpreted to provide coverage to transgender individuals.²⁷ FP will be covered for adults who progressed through their endogenous puberty and are initiating GAH treatment and/or gender confirmation surgeries.²⁷

The Connecticut, Delaware, Illinois, New Hampshire, New York, and Maryland laws use similarly broad language, providing medical insurance coverage for FP for patients without delineating specific qualifying diagnoses; all bills that passed include coverage for prospective iatrogenic infertility, language that should be inclusive of transgender individuals initiating GAH treatment. Age restrictions on coverage will be important to monitor as many insurance providers do not include fertility care coverage for individuals younger than 18 years, and transgender adolescents and young adults initiating potentially fertility-impairing treatment may desire FP before age 18.

Conclusion

WPATh firmly supports parenthood options, biological or otherwise, for transgender individuals declaring, “transsexual, transgender, and gender nonconforming people should not be refused reproductive options for any reason.”¹ In an editorial review detailing the impact of recent FP legislation in Connecticut and Rhode Island, Cardozo et al. emphasized that there is no free market-based solution to extend FP insurance coverage.²⁵ Individuals who complete FP may require future costly fertility treatments (such as IVF) covered by medical insurance. Thus, insurers have no incentive to offer FP coverage earlier in life, or to more people.

As with comprehensive gender-affirming medical care,^{28,29} disparities in access to FP services are likely to persist even with increased insurance coverage. Nationwide, transgender people are less likely to have access to gender-affirming medical care,^{28,29} and more likely to be from lower income backgrounds^{28,29} and uninsured or underinsured.^{28,29} Without widespread legislation, FP for transgender individuals will continue to be limited only to those who can pay out of pocket for costly procedures upfront and for long-term storage of frozen gametes. As state-level policies on insurance coverage for FP evolve, it is imperative for providers of transgender health care and for advocates to remain aware of FP options and medical insurance coverage in their specific state to better serve the transgender community.

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Address correspondence to:
 Moira A. Kyweluk, PhD, MPH
 Department of Anthropology
 Northwestern University
 1810 Hinman Avenue
 Evanston, IL 60208

E-mail: moira.kyweluk@northwestern.edu