New Hampshire Insurance Department
Mandated Benefit Review
SB 198
Expanded Access to Assisted Reproductive Treatments

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Freedman HEALTHCARE

SB 198 Cost Study

Providing Coverage for Certain Reproductive Health Care

I. Executive Summary

This analysis is presented in response to SB 198, "An Act directing the insurance department to conduct a cost study of providing coverage for certain reproductive health care." This study examines the costs and benefits of expanding access to Assisted Reproductive Treatments (ART).

ARTs are well-established medical procedures to assist in attaining pregnancy and related processes pertaining to fertility preservation. New Hampshire's health plans are required to provide care to those who have a diagnosis of medical infertility or who are likely to become infertile due to a medical condition or treatment such as chemotherapy.

The bill specifically intends to expand access to ART to same-sex couples and single individuals. This group of people is considered socially infertile, that is, requiring ART to attain pregnancy due to the impairment of a person's capacity to reproduce either as an individual or with his/her partner.

The expanded benefit would cover all ART medical services, related procedures, and medications as well as the costs of accessing donor eggs or sperm. The most common ARTs are intra-uterine insemination (IUI) and in vitro fertilization (IVF). In addition to services related to attaining pregnancy, SB 198 also creates a mandate to cover any adult's personal decision to access fertility preservation services such as egg retrieval and storage (commonly called "egg freezing") and sperm banking.

This study considers the impact of this new mandate on New Hampshire's Large Group plans. This is consistent with current fertility mandates in RSA 417 and avoids defrayal under the Affordable Care Act, which would otherwise require the state to fund the additional benefits in small group and individual market plans.

Estimating the number of Large Group plan members who would use these services points to broad inclusion criteria. While SB 198 focuses on same-sex couples and single individuals, under non-discrimination provisions established at RSA 417-G:3,I (c) and RSA 417:4,VIII(b), the expanded benefit applies to any adult Large Group plan member. Certain groups (such as same-sex couples) may be more likely to use the benefit, but there is no reliable basis for an estimate. Available data does not identify whether Large Group plan members are in opposite-sex or same-sex relationships. Public health data does not suggest how many people might want to access fertility preservation services. For these reasons, the estimates consider all adults enrolled in Large Group plans.

In calendar year 2022, NH Large Group plans enrolled 90,000 women ages 18-45 and 147,000 men ages 18-64. While there is no official upper age limit for women using ART, US data reports lower ART success rates for women ages 42 and over compared to younger women[i]. Using these enrollment numbers as a starting point, we estimated a range of utilization uptake for both attaining pregnancy and fertility preservation. We estimate that the additional medical expense could range from $132M to $524M for both ART achieve pregnancy and for fertility preservation services.

As written, the proposed language creates a benefit that extends well beyond an intent to provide equitable access to ART for same-sex couples and single individuals. Suggested clarifications include:

- In lieu of expanding access to those without a diagnosis of infertility, expand the definition of medical infertility at RSA 417:G,II to address social infertility to recognize both female and male same-sex couples' and individuals' barriers to attaining pregnancy.
- Narrowing the definition of ART to exclude coverage for voluntary, non-medically necessary fertility preservation procedures that are not associated with initiating or continuing an effort to attain pregnancy within a defined timeframe.

II. Introduction

New Hampshire state law RSA 417-G:1 mandates coverage for those experiencing medically diagnosed infertility and medically necessary fertility preservation services. The law generally describes the extent of such benefits, including evaluations, laboratory assessments, medications, and treatments associated with the procurement of donor eggs, sperm, and embryos. Similar coverage is required for medically necessary fertility preservation services, including cryopreservation through the duration of the policy term. RSA 417- G:2,IV notes that these provisions do not apply to plans operating in the Small Group and Individual Markets. Therefore, consistent with the fertility mandates in RSA 417-G, the provisions of SB198 apply only to the Large Group market. The limits established in RSA 417-G:2-IV avoid defrayal, meaning the state does not assume responsibility for the cost of the expanded benefit in the Small Group and Individual Markets due to requirements under the federal Affordable Care Act.

SB 198 calls for a study to examine the costs of coverage for these services for same-sex couples and individuals when the covered individual does not have a diagnosis of infertility. The study is to include an estimate of the number of individuals being covered, the total costs of the treatment, cost savings through the application of best practices recommended by the American Society of Reproductive Medicine, and all treatment costs.

This study examines the social, medical, and financial implications of expanding ART benefits in New Hampshire's Large Group plans. First, the analysis examines the use of ART to attain pregnancy without a medical diagnosis of infertility. Second, the analysis considers the use of ART for fertility preservation without a medical diagnosis of infertility. For each topic, the potential user group is defined and a cost per user is derived. Recognizing that the entire potential user pool is unlikely to access these services, we estimated low, medium, and high levels of use. Per member, per month (PMPM) costs are estimated based on calendar year 2022 New Hampshire Large Group plans' claims experience (allowed amounts) and enrollment data.

III. Definitions

"American Society for Reproductive Medicine" or "ASRM" is a professional membership organization dedicated to the advancement of the science and practice of reproductive medicine.

"Assisted Reproduction Treatment(s)" or "ART(s)" as used in this report includes medical services, procedures, and medications to assist individuals in attaining pregnancy and preserving fertility.

"Fertility Preservation" means a subset of ART medical procedures and services that include retrieval and preservation of oocytes and sperm for use at a later date. For the purposes of this report, and unless otherwise noted, an individual seeks to access this care without a diagnosis that would indicate a disease or treatment that would otherwise preclude continued fertility.

"Per Member Per Month" or "PMPM" is the total dollar value of services divided by the number of months that members are enrolled in the health plan and used in this report to show the estimated average additional monthly increase in medical expenditures.

"Social infertility" means individuals who do not have a diagnosis of medical infertility and seek to attain pregnancy. This often applies to same-sex couples and individuals.

IV. Provisions and Applicability

A. Limitations of the Proposed Language and Scope of Analysis

SB 198 directs NHID to conduct a study of the costs of expanding group health insurance coverage for same-sex couples and single individuals undergoing ART when the covered individual does not have a diagnosis of infertility, as defined in RSA 417-G:1, V. The study is to include:

- The eligible population;
- The total medical costs of coverage for ARTs from the beginning of preconception diagnostic assessments and testing and the relative cost;
- Cost savings obtained from adherence to best practices as recommended by the American Society for Reproductive Medicine; and
- Coverage that includes
  - Diagnosis of any conditions that may impact the efficacy of the contemplated assisted reproduction treatment; and
  - Medically necessary fertility treatment, including coverage for evaluations, laboratory assessments, medications, and medical costs associated with the procurement of eggs, sperm, and embryos., as well as cryopreservation ("freezing") storage costs.

Although the legislation intends to focus on same sex couples or single individuals, it would be discriminatory and an unfair insurance trade practice to provide different benefits to individuals of the same class and essentially the same hazard.[ii] This analysis therefore assumes that the proposed benefits would be available to all members regardless of medical necessity. The analysis also assumes that given the broad language of the bill and lack of defined terms, the proposed mandate would expand access to ART, including fertility preservation, to all covered persons in the Large Group market regardless of medical necessity.

This study examines the cost of the bill as it applies only to plans operating in the Large Group Market, consistent with New Hampshire's current fertility mandates found in RSA 417-G. The analysis is to consider the expansion of available benefits to include any individual undergoing assisted reproduction treatment without a diagnosis of infertility.

The bill directs carriers to continue medical management consistent with best practices recommended by the American Society for Reproductive Medicine (ASRM). This organization offers opinions and practice guidance on a variety of topics related to fertility and ART.

The bill's broad language and lack of defined terms would expand the benefit to include fertility preservation services at personal option.

Costs associated with a confirmed pregnancy are excluded from this analysis as it is assumed that the benefits would fall under the maternity benefits for the individual who is pregnant regardless of the circumstances surrounding the pregnancy.

B. Discussion of Assisted Reproduction Treatment

1. National Overview

Most research and reporting focus on medical definitions of infertility. The Centers for Disease Control and Prevention (CDC) defines infertility as being unable to conceive after one year or more of unprotected sex. About 19% of married women aged 15 to 49 are unable to attain pregnancy.[iii] Male partners may also contribute to infertility.

ART describes a wide range of diagnostic, treatment, medication, and lab procedures that assist in attaining pregnancy or preserving fertility. Less invasive ART procedures such as prescription medications and intrauterine insemination (IUI) typically include an initial course of treatment before treatments generally known as in vitro fertilization (IVF). IVF with oocyte (egg) retrieval, external fertilization, and implantation is considered the most effective form of ART[iv] but is also cost-prohibitive for many without insurance coverage. Other types of ART include gamete intrafallopian transfer (GIFT), zygote intrafallopian transfer (ZIFT), and frozen embryo transfer (FET). Related services include pre-implantation genetic screening, infertility diagnosis procedures, and counseling services.

Fertility assistance may be needed for a variety of reasons, such as unexplained infertility, male infertility, single parenting, LGBTQ individuals, or Iatrogenic infertility (infertility due to medical treatment/procedure). National data suggest that eligibility criteria for access to ART vary widely[v] including detailed protocols to document a couple's infertility issues, variation in the duration of unprotected intercourse without conception, considerations of male factor infertility, and bans on using third-party gametes. Studies on the use of ART do not explicitly identify utilization by same-sex couples or single individuals. One study of two California fertility practices in 2016-17 reported that 393 of 11,870 IUI cycles (3.3%) were for lesbian women using donor sperm.

Maryland's expanded coverage of all outpatient expenses related to IVF (Insurance Article 15-810) was effective in October 2020.[vi] The law includes a medical necessity criterion that plans must cover IVF for married opposite-sex and same-sex couples after two years of failing to attain pregnancy through intercourse or IUI absent some other previously diagnosed medical condition or inability to attain a successful pregnancy through a less costly infertility treatment. Coverage excludes costs of donor sperm.[vii]

2. New Hampshire Law and Coverage

New Hampshire insurance law at RSA 417 G:1, V. defines infertility as "a disease caused by an illness, injury, underlying disease, or condition where an individual's ability to become pregnant or to carry a pregnancy to live birth is impaired, or where an individual's ability to cause pregnancy and live birth in the individual's partner is impaired."

Carriers provide coverage for infertility services for an individual with a medical diagnosis of infertility. RSA 417-G:3, I(c) and II require that "Limitations on coverage shall be based on clinical guidelines and the enrollee's medical history." ASRM defines infertility as failure to attain pregnancy after one year of unprotected intercourse for people under the age of 35 and six months over the age of 35[viii]. CIGNA defines infertility as "*the inability of a woman, with or without an opposite-sex partner, to attain conception after at least six trials of medically supervised artificial insemination over one year or the inability of a woman, with or without an opposite-sex partner, after at least three trials of medically supervised artificial insemination over six months when the female partner trying to conceive is age 35 or older*." Harvard Pilgrim creates the following eligibility requirements: the member must be the intended recipient of the intended services, coverage for assisted reproduction technology/infertility treatment is based on the member's individual medical history and should demonstrate > 5% chance of live birth, and the member must expect fertility as a natural state or must be experiencing menopause at a premature age. Hormone levels and medical history, among other factors, may be considered in this evaluation. The requirements also include a diagnosis of infertility defined as "*the condition of a presumably healthy individual who has been unable to conceive or produce conception with exposure to sperm (e.g., at home insemination, sexual intercourse) during a period of six months, if the biological female is over the age of 35, and a period of one year if the biological female is age 35 or younger, as represented in the medical record. An otherwise healthy member, who has completed four cycles of intrauterine inseminations (IUIs) with or without medication and has not been able to conceive*."[ix]

3. Scope of ASRM Recommendations for Best Practices

ASRM is a professional organization comprising clinicians who practice in infertility clinics around the country. ASRM issues guidelines on minimal standards for ART, informed consent, and the number of embryos to be transferred in IVF procedures. Their website features advocacy, links to continuing education, and advocacy news. A practice committee issues periodic guidance on condition-specific recommendations (e.g., polycystic ovary syndrome, assisted hatching in IVF), committee opinions (e.g., genetic testing, use of gestational carriers), and guidance (e.g., use of text, email, and video). Documents related to same-sex couples include a reference in an ethics committee opinion, advice on counseling same-sex couples, and use of certain procedure codes. Overall, the guidance is clinical, focusing on medical infertility and its treatments, rather than social factors as are contemplated in SB198, and may offer little additional guidance to health plans on social infertility.

C. Limitations of the Analysis

1. Factors Affecting Reported Cost of Services

The reported cost of ART services varies with the patient's specific medical issues, the type of procedure, the number of cycles required, and the duration of treatment. When initial procedures are unsuccessful,

patients may progress to more intensive and complex treatments. The full cycle of treatments also means that all office visits, diagnostic imaging, testing, and fertility monitoring may extend across calendar years.

This analysis reviewed NH Comprehensive Healthcare Information System (CHIS) data showing claims experience for Calendar Year 2022 for all adults enrolled in Large Group plans. CHIS claims and member data were not reviewed for marital status. Due to the nature of the treatment, the full cost of treatment cycles that began before or ended after Calendar Year 2022 may not be fully represented. The historical cost of attaining a pregnancy or identifying egg retrieval as part of an IVF treatment would require further and deeper analysis into CHIS claims before and after a single year. Average costs derived from CHIS data were compared to estimates provided on public websites. The CHIS data may therefore understate the cost of care for an entire episode of ART.

As this study examines spending on a population basis, there is no assumption about the number of rounds of ART to attain pregnancy or fertility preservation for women will be needed. No assumptions about the number of cycles or treatment plans should be inferred.

2. Number of Potential Service Users

To develop estimates of the potential service users, this analysis reviewed CHIS data on member demographics, US census data, and CDC reports. This analysis considers that the mandate would apply to all adults, male and female, enrolled in Large Group plans, regardless of marital status. Statewide, same-sex couples occupy about 5500 of New Hampshire's 1.38M households. About half of New Hampshire's adult population ages 18-44 is single. Since the eligibility for services will align with ASRM practice guidelines and plans' medical management techniques, the age range for potential female service users will be limited to those who are 18-45, and males 18-64. The percentage of potential service users is presented in low, medium, and high ranges to acknowledge the uncertainty around how many individuals might seek these services.

V. ART to Achieve Pregnancy

A. Social Impact of ART

1. Social Infertility

Increasingly, equal access to reproduction services considers the individual's need for assistance in attaining pregnancy, regardless of medical diagnosis for infertility for same-sex couples or single individuals regardless of sexual orientation. Single individuals and same-sex couples who wish to conceive biological children are "socially infertile" due to their relationship status. According to the ASRM,

> "As a matter of ethics, this Committee believes that the ethical duty to treat persons with equal respect requires that fertility programs treat single individuals, unmarried couples, and [diverse sexuality and gender] individuals and couples in the same manner as cisgender heterosexual married couples in determining which services to provide. [The European Society of Human Reproduction and Embryology] has also concluded that the categorical denial of services to these patients cannot be reconciled with a human rights perspective. Programs may deny services to single individuals, unmarried persons, and DSG individuals or couples on the same basis that they

> would deny services to cisgender heterosexual married couples, such as serious and substantiated doubts about whether they will be fit or responsible child-rearers.[xxi]"

Medical infertility affects approximately 19% of opposite-sex couples. Current prevalence estimates for infertility do not account for same-sex couples or single individuals, thus excluding access to infertility treatments. There are multiple reasons someone may seek fertility assistance, such as unexplained infertility, male infertility, single parenting, non-heterosexual individuals and same-sex couples, or Iatrogenic infertility (infertility due to medical treatment/procedure).[xii]

The CDC reports that there were 326,468 ART cycles performed in the US in 2020 and approximately 2% of all infant births are conceived with the use of ART. The New Hampshire rate of 3.1% of births using ART is slightly higher than the national average. This data does not report marital status.

2. Availability of the service

The following providers have locations in New Hampshire to provide some of the monitoring and evaluation services. Data from the CDC's ART monitoring program does not report on activity at any NH location, which suggests that services provided at these offices are aggregated into out-of-state providers' statistics.

- Boston IVF: The Bedford, NH Fertility Center
- Fertility Centers of New England & The Seacoast NH Fertility Center
- Manchester OB/GYN Associates
- Fertility Solutions
- Center for Reproductive Care of Exeter Hospital
- WHP OB/GYN & Infertility

3. Barriers to access

The cost of ART to attain pregnancy presents a barrier to those seeking these services without insurance coverage. Service estimates posted on providers' websites range from $20,400 to $25,000, without medication. In contrast, the 2021 median NH household income was $83,500,[xiii] putting ART out of reach for many residents who do not have a diagnosis of infertility.

B. Medical Efficacy

SB 198 would eliminate a medical diagnosis of infertility diagnosis as a prerequisite for ART treatment and retain plans' ability to provide medical management for all services according to ASRM recommended best practices. In 2020, the ASRM Task Force on Diversity, Equity, and Inclusion supported refining the definition of infertility for same-sex couples and single individuals (see Ethics).

The use of ART to attain pregnancy has increased since 1981 when IVF became available in the US. In 2020, the CDC reported that ART contributed to 2% of all births in the US. The rate of ART procedures in the US for women aged 15–49 years was 2,650 per 1 million women or 2.0% of all births.[xiv] In NH, the ART rate was 3,820 per one million women and accounted for 3.1% of all births to NH residents. Nationally,

39% of ART procedures (excluding egg banking procedures) resulted in births, compared to 35% for NH residents.[xv] ASRM notes declining rates of ART success for women over 40 compared to younger women.

In keeping with ASRM guidance, New Hampshire's infertility treatment coverage allows physicians and patients to make medically appropriate decisions, especially around the transfer of embryos, and reduce costs associated with multiple births.[xvi] Carriers such as CIGNA[xvii] and United reference ASRM in their infertility coverage statements.

Treatment of medical infertility is highly variable, with the specific array of ART services determined by clinicians. Treatment may include or exclude certain components based on the patient's medical needs. A partial list of examples include:

- Full infertility workups.
- Genetic testing and counseling.
- Medications, including hormones, to stimulate ovaries and prepare for IVF.
- Purchase of frozen sperm, defrosting, and in-office insemination/IUI.
- Purchase of donor eggs for use by a patient or a surrogate.
- Determination to use IVF with related egg retrieval, including preparatory medications, and lab procedures.

SB 198 does not affect a clinician's determination of the scope or type of treatment and services needed for an individual who is socially infertile and seeks to attain pregnancy.

C. Financial Implications

1. Assumptions and Parameters of the Cost Estimate

- This study estimates the potential uses of care in addition to those who seek infertility treatment under existing law and coverage provisions.
- New benefits and costs are those incurred before a confirmed pregnancy. Once there is a confirmed pregnancy, the benefits would fall under the maternity benefits for the individual who is pregnant regardless of the circumstances surrounding the pregnancy.
- The analysis includes costs related to medical and pharmacy expenses; it does not include compensation to gestational carriers.
- This analysis reviewed claims incurred in Calendar Year 2022. Infertility treatment cycles may extend over many months. As a result, available data may be incomplete. Estimates have been supplemented with information from other sources.
- The financial analysis and cost estimates assume that all paid amounts reflect relevant ASRM practice guidelines.

2. Estimated Number of Eligible Members and Potential Service Users

There is limited data to quantify SB 198's focus on same-sex couples and single individuals. According to US census data, more than half of New Hampshire households are occupied by married couples, and less than 1% of NH households, or about 11,000 adults, are occupied by same-sex couples.[xviii] No data are available to estimate the number of members of same-sex couples who are enrolled in Large Group plans.

As written, SB 198 would effectively expand access to benefits to any covered member pursuant to ASRM best practices, including guidance for clinicians about success rates for various procedures.[xix] This analysis considers women between the ages of 18-45 and men between the ages of 18-64 who were enrolled for at least one month in Large Group Plans in Calendar Year 2022.

Research and existing data collection models offer little guidance on the prevalence of or interest in using such services by those affected by social infertility. While SB 198 may extend this benefit to all adults, the likelihood of broad uptake is low. To create an impact range, we use the following percentages of service users per year to illustrate the impact of different rates of uptake.

Low: 2.5% of the Potential Service User Group
Medium: 5% of the Potential Service User Group
High: 10% of the Potential Service User Group

Table 1: Estimated Number of Eligible Members and Potential Service Users --Large Group Plans, Calendar Year 2022

	Women 18-45	Men 18-64	Total
Eligible Members	90,000	147,000	237,000
Potential Service Users			
Low: 2.5% of the Potential Service User Group	2,250	3,700	5,950
Medium: 5% of the Potential Service User Group	4,500	7,400	11,900
High: 10% of the Potential Service User Group	9,000	14,700	23,700

Note: Reflecting the uncertainty of these estimates, this table shows rounded numbers that may not sum or multiply to totals shown.

3. Medical Infertility Services and Costs Observed in CHIS Data

ART services provided to members with medical infertility are the same as those that would be provided to members with social infertility. As a starting point, this study examined NH Large Group claims experience to understand the average cost per service user during Calendar Year 2022. This provided average costs of $20,500 for each female service user and $2,200 for each male service user, as shown in Table 2.

Note that this data is limited to treatments received in Calendar Year 2022 and therefore may not represent the full array of services or all costs related to diagnosis and treatment of medical infertility. Costs are based on allowed amounts, the plan's contracted amount with providers, and treatment is authorized in accordance with the plans' medical management processes. Certain services are generally excluded, such as the cost of donor eggs and donor sperm.

With health plan management techniques reflecting ART best practices, it seems reasonable to assume that socially infertile service individuals may need less intensive treatment to attain a pregnancy than medically infertile individuals. For the purposes of this analysis, the total average cost per service user per year was reduced by 25% to recognize plans' medical management and the likelihood of patients' less intensive treatment needs.

Table 2: Calendar Year 2022 Average Cost per Service Use for Medical Infertility Services

	Women 18-45	Men 18-64
Medical Services	$5,150	$135
Prescription Medications	$15,350	$2,100
Total Average Service User Cost, Calendar Year 2022	$20,500	$2,200
Total Average Service Cost Reduced by 25% to Reflect Less Intensive Treatment Needs	**$15,400**	**$1,700**

Note: Reflecting the uncertainty of these estimates, this table shows rounded numbers that may not sum or multiply to totals shown.

4. Estimated Cost of Expanded Coverage

In addition to the base costs of fertility treatment noted in Table 2, covered services would include the cost of donor eggs and donor sperm. CHIS data does not reflect these costs. Published data suggest that the cost of donor sperm ranges from $300 to $1,500; donor eggs are estimated at $13,500.

CHIS data showing the cost of care for medically infertile men cannot be used as the basis for treating socially infertile men who seek assisted reproduction. Socially infertile men will need to identify a gestational carrier and may also need to obtain donor eggs. Although there may be costs associated with pre-pregnancy assessment and treatments for the gestational carrier, those are not included here. The cost of maternity care for the gestational carrier is a covered service. Fees to the gestational carrier would not be covered.

To estimate the post-mandate average cost per service user, the mid-point of these ranges is added to the Average Cost per Service User in Table 3. These costs assume that the health plans apply appropriate and applicable medical management techniques and that the lowest level of care has been provided.

Table 3: Estimated Average Cost per Service User Post-Mandate, Calendar Year 2022 Dollars

	Women	Men
Average Cost per Service User, Calendar Year2022	$15,400	$1,700
Estimated Cost of Sperm or Eggs	$900	$13,500
Estimated Average Cost per Service User	$16,300	$15,200

Note: Reflecting the uncertainty of these estimates, this table shows rounded numbers that may not sum or multiply to totals shown.

5. Estimated Medical Expense

Using the estimated average costs per service with estimated numbers of service users, the total additional medical expense ("allowed amount") across all Large Group plans could range from $97M to $386M per year, or $25.25 PMPM to $100.30 PMPM. These estimates acknowledge uncertainty in several dimensions:

- The number of people who might be interested in accessing ART to attain a pregnancy is entirely unknown. Access to IVF and other services without insurance coverage is financially out of reach for many people. Even with coverage, ART is a physically and emotionally intensive process that may or may not be of interest to New Hampshire adults.

- The cost of donor eggs and sperm is generally not covered under current infertility mandates. Whether, and how, health plans will be able to negotiate with donor banks was not considered.
- This cost estimate is based on allowed amounts and does not consider the amount of patient share (co-pay and deductibles).

Table 4 summarizes this analysis.

Table 4: Estimated Medical Expense of ART for Pregnancy, Calendar Year2022

	Women	Men	Total
Estimated Average Cost per Service User	$16,300	$15,200	
			-
Estimated Total Allowed Medical Expenses			0
Low: 2.5% of the Potential User Group	$36,675,000	$60,310,000	$96,985,000
Medium: 5% of the Potential User Group	$73,350,000	$120,620,000	$193,970,000
High: 10% of the Potential User Group	$146,700,000	$239,610,000	$386,310,000
Member Months – All Large Group Plans	3,851,614	3,851,614	3,851,614
PMPM Estimated Medical Expense			
Low:	$9.50	$15.75	$25.25
Medium:	$19.00	$31.25	$50.25
High: `	$38.00	$62.25	$100.30

Note: Reflecting the uncertainty of these estimates, this table shows rounded numbers that may not sum or multiply to totals shown.

D. ART to Achieve Pregnancy: Combined Effects

Expanding ART to include services for individuals with social infertility allows equitable treatment for those wishing to attain pregnancy and eliminates embedded requirements for a heterosexual relationship to access these benefits. The medical protocols are well-established, and health plans have well-developed medical management protocols.

Estimates of the potential service user pool and a post-mandate cost of services are based on assumptions about potential service users, combined with publicly reported costs for genetic material and procedures. The health status of the potential user population with respect to fertility is unknown, as are any other health conditions that might preclude access to care and affect the course of treatment. The usual standard of providing services after six or 12 months of unprotected intercourse will need some careful definition by health plans to recognize that same-sex couples or individuals may take different paths to pregnancy.

In the absence of data on the number of same-sex couples or single persons who are socially infertile, the sensitivity of the estimates is entirely dependent on the number of potential service users. Even a modest uptake rate of 2.5% among all adult men and women ages 18-45 could result in nearly 6,000 additional ART service users at a significant additional cost to total medical expenses.

In lieu of such broad expansion, an alternative approach would be to direct plans to include social infertility as one component of medical infertility at RSA 417 G:1, V and clarify the intent for same-sex couples and individuals to have access to ART services.

VI. ART for Fertility Preservation

Fertility preservation is a subset of ART that removes genetic material from an individual's body and stores it for use at a later date. SB 198 creates a pathway for covered individuals to access fertility preservation services at personal option. Current coverage mandates coverage only when an individual is likely to become infertile due to medical treatment or procedure and wishes to preserve eggs or sperm for future use. The techniques and processes are the same when medically necessary or accessed at personal option.

A. Social Benefit of the Mandate

1. Female Fertility Preservation: Egg Retrieval and Storage

Egg retrieval and cryopreservation ("freezing") describes a series of procedures and medication protocols that result in removing oocytes ("eggs") from a woman's body and subsequent storage over time. With ASRM's determination in 2012 that cryopreservation techniques had advanced and are no longer experimental, healthy women with sufficient financial resources are able to access this service in greater numbers.

Fertility preservation for women under age 35 has received increasing media attention, [xx] notably that younger women opt to undergo this procedure based on personal factors related to lifestyle choices. Fertility preservation when medically indicated due to medical treatment is not affected by SB 198's expanded benefit.

The Society for Assisted Reproductive Technology (SART) collects and reports on the number of ART procedures across the country. In 2020, during COVID-19, SART reported a total of 16,787 ART cycles for fertility preservation. In 2021, the total number grew by 46% to 24,560. Data for Calendar Year 2022 may help illuminate whether this increase reflects pent-up demand or actual growing interest. Note however that national reporting models do not distinguish between ART egg retrieval as part of a medical infertility regimen vs. egg retrieval for fertility preservation.

The following providers have locations in New Hampshire. Similar to services associated with attaining pregnancy, data from the CDC's ART monitoring program suggest that activity at these offices is aggregated into out-of-state providers' statistics.

- Boston IVF: The Bedford, NH Fertility Center
- Fertility Centers of New England &The Seacoast NH Fertility Center
- Manchester OB/GYN Associates
- Fertility Solutions
- Center for Reproductive Care of Exeter Hospital
- WHP OB/GYN & Infertility

Coverage for fertility preservation without a diagnosis of medical infertility is not a covered service under RSA 417: G. Some large employers, such as Apple, Microsoft, and Google, offer free or subsidized egg-freezing services. Otherwise, individuals may pay out of pocket for these services. Many ART provider websites offer links to financing and loan organizations to assist prospective users. Fertility preservation services for women range from $6,000 to $10,000, excluding prescription medication costs[xxi], placing this out of reach for many people. In comparison, the 2021 NH median household income was 83,500.[xxii]

2. Male Fertility Preservation: Sperm Banking

Literature on male fertility preservation focuses on medical reasons for preservation, typically cancer patients facing treatment that could impair future fertility. Reasons for elective sperm banking include preserving sperm quality while young, military deployment, or pre-vasectomy.[xxiii] In contrast to invasive egg retrieval procedures required for women's fertility preservation, sperm donation does not require advance medication or preparation. Although male fertility declines with age, there is no centralized data collection source on the number of men opting for sperm banking without medical necessity.

B. Medical Efficacy

Per RSA 417 G:1,2, fertility preservation services are covered "*when a person is expected to undergo surgery, radiation, chemotherapy, or other medical treatment that is recognized by medical professionals to cause a risk of impairment of fertility.*" SB 198 would not change any access to these services for medically indicated reasons, such as chemotherapy and radiation, treatment of systemic diseases (e.g., lupus) or reproductive health conditions, or transgender care.

Medical protocols for fertility preservation are well established. Women follow a multi-week course of hormones, followed by a surgical process to retrieve the eggs from the ovaries. The eggs are then prepared for storage and frozen. Medical professionals report that the procedure is relatively well tolerated. Depending on age and other factors, women may need to undergo more than one round of treatment to collect enough eggs.

Medical protocols for fertility preservation at one's personal option are similar to those applied to IVF and other ART procedures intended to attain pregnancy. ASRM notes that fertility preservation for women is more successful when egg retrieval is completed before age 35. Guidelines are directed at egg donors and maximum age for in-vitro fertilization (IVF) candidates. An ASRM Patient Information booklet published in 2012[xxiv] notes fertility declines after age 35 and echoed more recently in mainstream media (NY Times[xxv], Washington Post[xxvi]) suggesting that egg retrieval to preserve fertility should occur before age 35.

Male sperm donation does not require advanced medication or invasive procedures for collection.[xxvii] Research suggests that male fertility also declines with age and limits participation in sperm donor programs. Sperm banks suggest preservation before the age of 45.[xxviii],[xxix]

Based on a review of existing literature, the medical benefits of fertility preservation services at personal option have yet to be well documented. If such services become more widely available, longitudinal studies could help demonstrate the outcomes of attaining pregnancy with personal genetic material.

C. Financial Impact

1. Assumptions

- This analysis looks at voluntary fertility preservation that is not medically indicated.
- If a member is using these services, he or she is paying out of pocket; therefore, CHIS claims data cannot be used to estimate costs.
- This analysis does not affect the analysis of costs associated with ART for attaining pregnancy as described in the previous section of this report. While the service user groups could overlap, users of fertility preservation services at personal option are less likely to be seeking to attain pregnancy in the near term.

2. Estimated Number of Eligible Members and Potential Service Users

SB 198 would maintain the plans' ability to apply medical management criteria and to adhere to ASRM best practices. For women, ASRM practice materials note that "there are insufficient data to advise women on the optimal age to undergo planned [oocyte cryopreservation]."[xxx] Although commercial fertility preservation sites suggest better odds of success before the age of 35, SB 198 directs alignment with ASRM best practices. Given ASRM's general guidance, this analysis estimates the number of users as the number of women ages 18-45 and all men ages 18-64 who were enrolled in Large Group plans in Calendar Year 2022 for at least one month.

Media coverage of trends may or may not be a true reflection of the interest in accessing fertilization services and not definitive sources to support estimates of the number of potential service users. The invasiveness of the procedure for women may also restrain access as well as patient cost-share obligations. Barriers for men to access fertility preservation services are lower.

Given limited data on interest in fertility preservation, for this analysis, the additional number of service users is estimated as follows:

Low: 2.5% of the Potential User Group
Medium: 5% of the Potential User Group
High: 10% of the Potential User Group

Table 5: Potential Service User Pool --Large Group Plans Members, Calendar Year 2022

	Women 18-45	Men 18-64	Total
Eligible Members	90,000	147,000	237,000
Potential Service Users			
Low: 2.5% of the Potential Service User Group	2,250	3,700	6,000
Medium: 5% of the Potential Service User Group	4,500	7,400	11,900
High: 10% of the Potential Service User Group	9,000	14,700	23,700

Note: Reflecting the uncertainty of these estimates, this table shows rounded numbers that may not sum or multiply to totals shown.

3. Estimated Cost of Services

Women who seek fertility preservation services at personal option, that is, without a medically necessary diagnosis, are currently responsible for the full cost of treatments, services, prescription medications, and subsequent ongoing preservation costs. The resultant out-of-pocket costs are listed on some commercial websites (often with links to financial services companies).

For women, the cost of egg retrieval, office visits, imaging, and medications is reported as ranging from $7,000 to $10,000. The extent to which health plans will be able to negotiate more favorable rates after the procedure becomes a covered service. Often, provider fees increase by 30% to 50% after a mandate is implemented. This analysis uses a cost per oocyte retrieval and preservation of $12,000 and assumes one cycle per person per year.

For men, the cost of collection and preservation is estimated at $2,000.

4. Financial Impact of ART for Fertility Preservation

As shown in Table 6, using the estimated number of potential service users and the cost per procedure, the estimated additional medical expense for ART Fertility Preservation services ranges from $34.4M to $137.4M per year, or $9.00 PM to $35.50PMPM, depending on the number of service users who access these services. These costs assume that the health plans apply appropriate and applicable medical management techniques and that the lowest level of care has been provided.

Table 6: Estimated Cost of ART for Fertility Preservation

	Fertility Preservation		
	Women 18-45	**Men 18-64**	**Total**
Estimated Pool of Potential Service Users	90,000	147,000	237,000
Range of Potential Service Users			
Low: 2.5% of Potential Service Users	2,250	3,700	6,000
Medium: 5% of Potential Service Users	4,500	7,400	11,900
High: 10% of Potential Service Users	9,000	14,700	23,700
Estimated Cost Per Cycle or Procedure	$12,000	$2,000	
Estimated Additional Medical Expense			
Low	$27,000,000	$7,400,000	$35,000,000
Medium	$54,000,000	$14,800,000	$68,800,000
High	$108,000,000	$29,400,000	$137,400,000
Member Months	3,851,614	3,851,614	3,851,614
PMPM Calendar Year2022			
Low	$7.00	$2.00	$9.00
Medium	$14.00	$4.00	$18.00
High	$28.00	$8.00	$35.50

Note: Reflecting the uncertainty of these estimates, this table shows rounded numbers that may not sum or multiply to totals shown.

D. ART for Fertility Preservation: Combined Impact

ART encompasses a wide range of procedures, treatments, and medications that affect reproductive capacity, usually with an active intent to attain pregnancy. Unlike users of ART services to attain pregnancy, fertility preservation service users seek to defer pregnancy by storing genetic material. SB 198 would expand coverage for fertility preservation services at personal option (i.e., when not dictated by a medical diagnosis). This difference seems contradictory to SB 198's intent to equalize same-sex couples' and individuals' access to ART to attain pregnancy.

Medical fertility preservation processes for women and men are well established. The cost of such services for women is quite high and out of reach to many. At the same time, it is unclear how many women would want this service. It is unclear whether recent increases in egg retrieval trends reflect increased popular interest, pent-up demand post-COVID, or both. The medical process and cost impact are both much lower for men; it is also unclear as to how many would take advantage of fertility preservation services. Yet, there is little published evidence of the medical benefits of fertility preservation as a personal option and how it affects rates of attaining pregnancy at a later date.

Estimates of the number of potential service users provided here are intended to show the effect on medical costs. Increased utilization of fertility preservation services, especially for women, could have a large effect on PMPMs, possibly adding anywhere from $9 to over $35 PMPM.

Together, the social, medical, and financial impacts of expanded coverage for fertility preservation suggest that the services will not contribute to the intended purpose of supporting same-sex couples and single individuals in attaining pregnancy. This points to a recommendation to consider language changes that do not limit access to fertility preservation for those with a medical need and to defer coverage for fertility preservation for those without a diagnosis of infertility, i.e., service access at personal option.

VII. Carrier Comments

"We do not see a need for this study. For infertility, this is a benefit that applies regardless of "social infertility." Any person can have access to infertility benefits when pregnancy is not attained after one year of effort to become pregnant (only 6 months for age over 35). For a single person or same-sex couple, documentation of failure to become pregnant can easily be attained with a physician's note explaining the failure to become pregnant by other methods like artificial insemination. This is the same documentation as heterosexual couples showing failure of pregnancy."
-- Anthem

VIII. Combined Impact of SB 198's Provisions

This study reviewed the provisions of SB 198, which intends to create more equitable access to Assisted Reproductive Technology (ART) services to attain pregnancy for same-sex couples and individuals. The bill eliminates the requirement of a medical infertility diagnosis for same-sex couples and single individuals to access these services.

This study reviewed the legislation, existing New Hampshire laws and coverage requirements for infertility services, carrier documentation, and research materials for relevant information on reproductive challenges experienced by same-sex couples. However, we found no US studies or surveys of same-sex couples that might support a more nuanced estimate of service users.

There is growing interest in addressing the barriers experienced by same-sex couples and single individuals who desire to attain pregnancy. The ASRM ethics committee, service providers' websites, and popular media use the term "social infertility" to recognize the issues that same-sex couples encounter in seeking ART.

SB 198's elimination of a medical diagnosis of infertility affects two major types of services:

> **Attaining Pregnancy:** Same-sex couples and individuals seeking to attain pregnancy may need genetic material (eggs or sperm), medications as part of fertility treatment, and coverage for a gestational carrier. Services are widely available in New Hampshire and surrounding states. Social benefits include equitable access to care regardless of marital status or sexual orientation. SB 198 intends to ensure that this access is clearly stated and like that provided to opposite-sex couples.

Fertility Preservation: Another aspect of ART is fertility preservation services, including egg freezing and sperm banking. These procedures are no longer considered experimental and are provided by clinicians in New Hampshire and surrounding states. While there is increasing popular media coverage of women's use of these services, national reporting does not distinguish between egg retrieval for infertility vs. fertility preservation. SB 198 eliminates a medical diagnosis of infertility for these services as well.

SB 198 directs carriers to continue medical management consistent with best practices recommended by the American Society for Reproductive Medicine (ASRM). This organization issues practice guidance on a variety of topics related to fertility and ART. However, its guidance is primarily clinical, focusing on medical infertility and its treatments, rather than social factors contemplated in SB198, and does not speak directly to social infertility.

Financial Implications

The assessment of the financial implications of SB 198 depends on the number of potential service users and the estimated cost per service user.

Potential Users: The bill points to same-sex couples and single individuals as needing access to ART without a diagnosis of medical infertility. New Hampshire insurance law prohibits discrimination,[xxxi] so married couples would also be able to access ART without a medical diagnosis of infertility. Other than anecdotal media stories, there is little US data about the prevalence of same-sex couples seeking pregnancy[xxxii]. Also as reported in national media, women's access to fertility preservation has been limited by out-of-pocket costs for medications and procedures, followed by annual storage costs.

Given that the potential user pool needed to be inclusive of all members, this analysis included Large Group plan members enrolled in Calendar Year 2022: men ages 18-64 and women, ages 18-45, reflecting guidelines for ART access, for a total of 236,700 members who would have access to both ART for attaining pregnancy and for fertility preservation.

Understanding that only a subset of members is seeking to access any kind of ART service, a sensitivity analysis was created using the following parameters applied to the total number of members for both components of ART, as follows:

Low:	2.5% of the Potential User Group
Medium:	5% of the Potential User Group
High:	10% of the Potential User Group

Cost per service user: Cost data were developed from claims data and public price lists. We reviewed ART medical and prescription medication claims for services provided in Calendar Year 2022 to New Hampshire's Large Group members. In addition, service pricing posted on providers' websites was used to estimate the cost of services that would be newly covered under SB 198, such as the acquisition of donor eggs, fertility preservation procedures, and storage costs, and do not currently appear in claims data.

Cost experience data as reported in CHIS pertains to individuals with a diagnosis of medical infertility, which may not represent the experience of this population. To reflect a lower prevalence of infertility in the overall population, the average cost per year for those seeking to attain pregnancy was reduced by 25%. The costs for women include procedures and medications, and sperm; the cost for men includes the

price of donor eggs and related services. The cost of services for fertility preservation for women is much greater than the cost of men's sperm banking. Due to the high cost of ART and broad access, we note that even at a take up rate of 2.5% of all eligibles, total medical expense could grow by an estimated $97 million across all health plans. Table 7 summarizes the estimated cost implications at the lowest level of estimated service use per year.

Table 7: Combined Estimated Cost of SB 198 at Low Rates of Service Use based on Calendar Year 2022 Claims Costs, Female and Male

Estimates at Low Rates of Service Use	Estimated Medical Expense	Estimated PMPM
ART to Attain Pregnancy:	$96,985,000	$25.25
Fertility Preservation	$34,400,000	$9.00
Total	$131,385,000	$34.25

Note: Reflecting the uncertainty of these estimates, this table shows rounded numbers that may not sum or multiply to totals shown.

Discussion

Access to ART services should be equitable, and SB 198 seeks to ensure that this requirement is clearly articulated in health plan coverage requirements. As written, the bill creates an expansive access requirement that extends well beyond the intended beneficiaries. Recognizing that certain individuals (e.g., same-sex couples) may be more likely to use the benefit, as written any individual could seek ART without a diagnosis of infertility.

Any legislation resulting from this study might consider the limitations of the current definitions of medical infertility, which seek to remediate biological functions. Social infertility is not a disease. It results from a different set of circumstances than medical infertility and therefore may need a different pathway to coverage. This might include clarification that RSA 417-G:3,II and IV recognizes the condition of social infertility, which must be reflected in carrier coverage.

The proposed expansion of access to ART has the possibly unintended effect of providing coverage for fertility preservation services as a personal option for those opting to delay pregnancy until a later time. These services appear to be unrelated to SB 198's primary intent of providing equitable access to services to attain pregnancy. With such significant financial implications, the definition of ART should be reviewed and clarified to focus impact on those who might otherwise lack access to this care.

Bibliography and End Notes

American Society for Reproductive Medicine, "Diversity, Equity and Inclusion Recommendations," https://www.asrm.org/globalassets/_asrm/about-us/committees/asrm-dei-task-force-report-11-30-2020.pdf

Bai CF, Cui NX, Xu X, Mi GL, Sun JW, Shao D, Li J, Jiang YZ, Yang QQ, Zhang X, Cao FL. Effectiveness of two guided self-administered interventions for psychological distress among women with infertility: a three-armed, randomized controlled trial. Hum Reprod. 2019 Jul 8;34(7):1235-1248. doi: 10.1093/humrep/dez066. PMID: 31242506.

Karaca N, Karabulut A, Ozkan S, Aktun H, Orengul F, Yilmaz R, Ates S, Batmaz G. Effect of IVF failure on quality of life and emotional status in infertile couples. Eur J Obstet Gynecol Reprod Biol. 2016 Nov;206:158-163. doi: 10.1016/j.ejogrb.2016.09.017. Epub 2016 Sep 20. PMID: 27693938.

Massarotti C, Gentile G, Ferreccio C, Scaruffi P, Remorgida V, Anserini P. Impact of infertility and infertility treatments on quality of life and levels of anxiety and depression in women undergoing in vitro fertilization. Gynecol Endocrinol. 2019 Jun;35(6):485-489. doi: 10.1080/09513590.2018.1540575. Epub 2019 Jan 7. PMID: 30612477.

Ni Y, Shen H, Yao H, Zhang E, Tong C, Qian W, Huang L, Wu X, Feng Q. Differences in Fertility-Related Quality of Life and Emotional Status Among Women Undergoing Different IVF Treatment Cycles. Psychol Res Behav Manag. 2023 May 22;16:1873-1882. doi: 10.2147/PRBM.S411740. PMID: 37250753; PMCID: PMC10216870.

Rooney KL, Domar AD. The relationship between stress and infertility. Dialogues Clin Neurosci. 2018 Mar;20(1):41-47. doi: 10.31887/DCNS.2018.20.1/klrooney. PMID: 29946210; PMCID: PMC6016043.

IX. Annotated Bibliography

ART Success Rates. (2023). Centers for Disease Control and Prevention. https://www.cdc.gov/art/artdata/index.html

- ART includes all fertility treatments in which either eggs or embryos are handled. The main type of ART is in vitro fertilization (IVF). IVF involves extracting a woman's eggs, fertilizing the eggs in the laboratory, and then transferring the resulting embryos into the woman's uterus through the cervix.
- Based on CDC's 2020 Fertility Clinic Success Rates Report, there were 326,468* ART cycles performed
- Approximately 2.0% of all infants born in the US every year are conceived using ART.

Ethics Committee of the American Society for Reproductive Medicine. (2021). Access to fertility treatment irrespective of marital status, sexual orientation, or gender identity: an Ethics Committee opinion. *Fertility and Sterility*, *116*(2), 326-330.

- Regardless of sexual orientation, gender identity, or marital status, single individuals or couples may wish to have children and raise them, either alone or with a partner
- Single individuals and DSG individuals or couples wishing to have children who are biologically related to them will usually require assistance in reproduction.
- Unmarried cisgender heterosexual couples may also require fertility assistance.
- When faced with physiological constraints to reproduction, individuals and couples who seek to have a child may employ nonmedically assisted reproduction methods?
    - These methods may involve both medical and legal risks.

Ethics Committee of the American Society for Reproductive Medicine. (2015). Disparities in access to effective treatment for infertility in the US: an Ethics Committee opinion. *Fertility and Sterility*, *104*(5), 1104-1110. https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/

- The majority of patients who undergo IVF in the US pay out of pocket for their medical treatment because.
    - they lack health insurance or their insurance policies exclude fertility care
    - cover infertility diagnosis only
    - exclude IVF
- One report places the median price of a cycle of IVF in the US, including medications, at $19,200
- The financial burden is likely to be particularly high for single men and gay couples who often need to compensate both an egg donor and a gestational carrier to build their families
- most state insurance laws incorporated a definition of infertility that relied on 6–12 months of unprotected heterosexual intercourse, thus excluding same-sex couples and single individuals from mandated coverage

Gabriela Weigel, G., Ranji, U., Long, M., & Salganicoff, A. (2020). Coverage and Use of Fertility Services in the U.S. - Issue Brief. (2020). https://www.kff.org/report-section/coverage-and-use-of-fertility-services-in-the-u-s-issue-brief/

- Many people require fertility assistance, including men and women with infertility, many LGBTQ individuals, and single individuals who desire to raise children.
- fertility care in the U.S. is inaccessible to many due to the cost

- Most patients pay out of pocket for fertility treatment, which can amount to well over $10,000 depending on the services received.
- LGBTQ individuals also face heightened barriers to accessing fertility care, as they often do not meet definitions of "infertility" that would qualify them for covered services
    - Transgender individuals undergoing gender-affirming care may also not meet criteria for "iatrogenic infertility" that would qualify them for covered fertility preservation.
    - Research studies on family building are often not designed to include LGBTQ respondents' fertility needs.
- Infertility estimates do not account for LGBTQ or single individuals who may also need fertility assistance for family building.
- There Are Multiple Reasons Someone May seek Fertility Assistance
    - Unexplained infertility
    - Male infertility
    - Single parenting
    - LGBTQ individuals
    - Iatrogenic infertility (infertility due to medical treatment/procedure)
- Fifteen states have laws in effect requiring certain health plans to cover at least some infertility treatments
    - However, in states with "mandate to cover" laws, these only apply to certain insurers, for certain treatment services and for certain patients, and in some states have monetary caps on costs they must cover
    - Even in states with coverage laws, not all patients are eligible for infertility treatment (e.g. only qualifies for IVF after five years of infertility, age limits, restrictions based on marital status, no diagnosis of infertility)
- Single persons are often excluded from access to infertility treatment
    - IVF laws that require the couple's own sperm and egg exclude single individuals, as they cannot use donors

Harwood, K. (2015). On the ethics of social egg freezing and fertility preservation for nonmedical reasons. *Medicolegal and Bioethics*. 2015;5:59-67. https://doi.org/10.2147/MB.S66444

- The most frequently cited reason for nonmedical egg freezing is lack of a suitable partner, sometimes combined with concern about advancing age.
    - Other reasons include a desire to postpone childbearing while completing one's education or while focusing on career advancement
- egg freezing can play a role in enabling childbearing for gays, lesbians, and unmarried persons

State-Specific Assisted Reproductive Technology Surveillance. (2021). Centers for Disease Prevention. https://www.cdc.gov/art/state-specific-surveillance/index.html.

- In 2019, 2.1% of all infants born in the US were conceived with the use of assisted reproductive technology (ART).

What is Assisted Reproductive Technology? (2019). Centers for Disease Prevention. https://www.cdc.gov/art/whatis.html#

- According to this definition, ART includes all fertility treatments in which either eggs or embryos are handled. In general, ART procedures involve surgically removing eggs from a

woman's ovaries, combining them with sperm in the laboratory, and returning them to the woman's body or donating them to another woman

- ART can alleviate the burden of infertility on individuals and families

Appendix 1: SB198

SB 198 - AS INTRODUCED

2023 SESSION

23-0957
05/04

SENATE BILL ***198***

AN ACT directing the insurance department to conduct a cost study of providing coverage for certain reproductive health care.

SPONSORS: Sen. Perkins Kwoka, Dist 21; Sen. Soucy, Dist 18; Sen. D'Allesandro, Dist 20; Sen. Rosenwald, Dist 13; Sen. Fenton, Dist 10; Sen. Altschiller, Dist 24; Sen. Watters, Dist 4; Sen. Whitley, Dist 15; Sen. Prentiss, Dist 5; Rep. Simpson, Rock. 33; Rep. Grote, Rock. 24

COMMITTEE: Commerce

ANALYSIS

This bill directs the insurance department to conduct a study of the costs of expanding group health insurance coverage for same-sex couples and single individuals undergoing assisted reproduction treatment when the covered individual does not have a diagnosis of infertility.

- -

Explanation: Matter added to current law appears in ***bold italics.***
Matter removed from current law appears ~~[in brackets and struckthrough.]~~
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

SB 198 - AS INTRODUCED

23-0957
05/04

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Twenty Three

AN ACT directing the insurance department to conduct a cost study of providing coverage for certain reproductive health care.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 1 Insurance Department; Cost Study; Reproductive Health Care. The insurance department
2 shall conduct a study of the costs of expanding group health insurance coverage for same-sex couples
3 and single individuals undergoing assisted reproduction treatment when the covered individual does
4 not have a diagnosis of infertility, as defined in RSA 417-G:1, V.
5 I. The cost study shall consider, but not be limited to:
6 (a) The potential number of individuals being covered;
7 (b) The total costs of coverage for assisted reproduction treatment from the beginning of
8 preconception diagnostic assessments and testing;
9 (c) Cost savings obtained from adherence to best practices as recommended by the
10 American Society for Reproductive Medicine; and
11 (d) Coverage that includes:
12 (1) Diagnosis of any conditions that may impact the efficacy of the contemplated
13 assisted reproduction treatment; and
14 (2) Medically necessary fertility treatment, including coverage for evaluations,
15 laboratory assessments, medications, and medical costs associated with the procurement of eggs,
16 sperm, and embryos.
17 II. The study shall be completed no later than December 31, 2023, and the results of the
18 study shall be submitted to the governor, the president of the senate, the speaker of the house of
19 representatives, and the chairpersons of the senate and house policy committees with relevant
20 jurisdiction. The study also shall be posted on the department's website for public review.
21 2 Effective Date. This act shall take effect upon its passage.

Appendix 2: ART CPT Codes

Code	Code Description
49322	Laparoscopy, surgical; with aspiration of cavity or cyst
55870	Electroejaculation
58321	Artificial Insemination; Intra-cervical
58322	Artificial Insemination; - IntraUterine
58323	Sperm Washing for Artificial Insemination
58340	Catheterization and introduction of saline or contrast material for saline infusion sonohysterography (SIS) or hysterosalpingography
58555	Hysteroscopy, Diagnostic (separate procedure)
58558	Hysteroscopy, surgical; with sampling (biopsy) of endometrium and/or polypectomy, with or without D & C
58559	with lysis of intrauterine adhesions (any method)
58560	Hysteroscopy, surgical; with division or resection of intrauterine septum (any method)
58561	with removal of leiomyomata
58562	with removal of impacted foreign body
58970	Follicle puncture for oocyte retrieval, any method
58974	Embryo transfer, intrauterine
58976	Gamete, zygote, or emplyro intrafallopian transfer, any method
76831	Hysterosalpingography, radiological supervision and interpretation
76948	Ultrasonic guidance for aspiration of ova, imaging supervision and interpretation
89250	Culture of oocytes/embryos, <4 days
89251	with co-culture of oocytes/embryos
89252	Identifying sperm and does not include the work of assisted oocyte fertilization, microtechnique (any method)
89253	Assisted embryo hatching, microtechniques (any method)
89254	Oocyte identification from follicular fluid
89255	Preparation of embryo for transfer
89257	Sperm identification from aspiration (other than seminal fluid)
89258	Cryopreservation, embryos
89259	Cryopreservation, sperm
89260	Sperm isolation; simple prep for insemination or dx w semen analysis
89261	complex prep
89264	Sperm identification from testis tissue, fresh or cryopreserved
89268	Insemination of oocytes
89272	Extended culture of oocytes/embryos, 4-7 days
89280	Assisted oocyte fertilization, micro technique; less than or equal to 10 oocytes
89281	Assisted oocyte fertilization, micro technique; greater than 10 oocytes
89290	Biopsy, oocyte polar body or embryo blastomere, micro technique, less than or equal to 5 embryos
89291	greater than 5 embryos

89300	Semen analysis; presence and/or motility of sperm including Huhner test (postcoital)
89310	Semen analysis: motility and count (not including Huhner test)
89320	Semen analysis; volume, count, motility, and differential
89321	Semen analysis, presence and/or motility of sperm
89322	Semen analysis; volume, count, motility, and differential using strict morphologic criteria (e.g., Kruger)
89325	Sperm antibodies
89329	Sperm evaluation, hamster penetration test
89331	Sperm evaluation, for retrograde ejaculation, urine
89335	Cryopreservation, reproductive tissue, testicular
89337	Cryopreservation, mature oocytes
89342	Storage (per year), embryos
89343	sperm/semen
89344	reproductive tissue, testicular/ovarian
89346	oocytes
89352	Thawing of cryopreserved, embryos
89353	sperm/semen, each aliquot
89354	reproductive tissue, testicular/ovarian
89356	oocytes, each aliquot
89398	Unlisted reproductive medicine laboratory procedure
98330	cervical mucus penetration test, with or without spinnbarkeit test
0664T	Donor hysterectomy (including cold preservation); open, from cadaver donor
0665T	Donor hysterectomy (including cold preservation); open, from living donor
0666T	Donor hysterectomy (including cold preservation); laparoscopic or robotic, from living donor
0667T	Recipient uterus allograft transplantation from cadaver or living donor
0668T	Backbench standard preparation of cadaver or living donor uterine allograft prior to transplantation, including dissection and removal of surrounding soft tissues and preparation of uterine vein(s) and uterine artery(ies), as necessary
0669T	Backbench reconstruction of cadaver or living donor uterus allograft prior to transplantation; venous anastomosis, each
0670T	Backbench reconstruction of cadaver or living donor uterus allograft prior to transplantation; arterial anastomosis, each
G0027	Semen analysis; presence and/or motility of sperm excluding Huhner
J0725	Injection, chorionic gonadotropin, per 1,000 USP units
J3355	Injection, urofollitropin, 75 IU
Q0115	Postcoital direct, qualitative examinations of vaginal or cervical mucous
S0122	Injection, menotropins, 75 IU
S0126	Injection, follitropin alfa, 75 IU
S0128	Injection, follitropin beta, 75 IU
S0132	Injection, ganirelix acetate, 250 mcg
S3655	Antisperm antibodies test (immunobead)

S4011	In vitro fertilization; including but not limited to identification and incubation of mature oocytes, fertilization with sperm, incubation of embryo(s), and subsequent visualization for determination of development
S4013	Complete cycle, gamete intrafallopian transfer (GIFT), case rate
S4014	Complete cycle, zygote intrafallopian transfer (ZIFT), case rate
S4015	Complete in vitro fertilization cycle, not otherwise specified, case rate
S4016	Frozen in vitro fertilization cycle, case rate
S4017	Incomplete cycle, treatment cancelled prior to stimulation, case rate
S4018	Frozen embryo transfer procedure cancelled before transfer, case rate
S4020	In vitro fertilization procedure cancelled before aspiration, case rate
S4021	In vitro fertilization procedure cancelled after aspiration, case rate
S4022	Assisted oocyte fertilization, case rate
S4023	Donor egg cycle, incomplete, case rate
S4025	Donor services for in vitro fertilization (sperm or embryo), case rate
S4026	Procurement of donor sperm from sperm bank
S4027	Storage of previously frozen embryos
S4028	Microsurgical epididymal sperm aspiration (MESA)
S4030	Sperm procurement and cryopreservation services; initial visit
S4031	Sperm procurement and cryopreservation services; subsequent visit
S4035	Stimulated intrauterine insemination (IUI), case rate
S4037	Cryopreserved embryo transfer, case rate
S4040	Monitoring and storage of cryopreserved embryos, per 30 days
S4042	Management of ovulation induction (interpretation of diagnostic tests and studies, non-face-to-face medical management of the patient), per cycle
0357T	Cryopreservation; immature oocyte(s)
0058T	Cryopreservation; reproductive tissue, ovarian

Appendix 3: ART Prescription Medications

NDC	APCD_Name	Drug_Name	First Databank Drug Class	USP Category
00052032601	FOLLISTIM AQ	Follistim Aq	Hormones	Infertility Agents
00052031601	FOLLISTIM AQ 600 UNIT CARTRIDG	Follistim Aq	Hormones	Infertility Agents
00052031301	FOLLISTIM AQ	Follistim Aq	Hormones	Infertility Agents
44087903001	GONAL F INJ 450UNIT	Gonal-F	Hormones	Infertility Agents
44087907001	GONAL F INJ 1050UNIT	Gonal-F	Hormones	Infertility Agents
44087900506	GONAL-F RFF	Gonal-F Rff	Hormones	Infertility Agents
44087900501	GONAL F RFF INJ 75UNIT	Gonal-F Rff	Hormones	Infertility Agents
44087111701	GONALF RFF REDIJECT 900 UNIT	Gonal-F Rff Redi-Ject	Hormones	Infertility Agents
44087111601	GONALF RFF INJ 450075	Gonal-F Rff Redi-Ject	Hormones	Infertility Agents
44087111501	GONALF RFF REDIJECT	Gonal-F Rff Redi-Ject	Hormones	Infertility Agents
55566750102	MENOPUR	Menopur	Hormones	Infertility Agents
00169770521	NORDITROPIN FLEXPRO	Norditropin Flexpro	Hormones	Infertility Agents
00169770821		Norditropin Flexpro	Hormones	Infertility Agents
00169770421	NORDITROPIN FLEXPRO	Norditropin Flexpro	Hormones	Infertility Agents
00169770321	NORDITROPIN INJ 30 3ML	Norditropin Flexpro	Hormones	Infertility Agents
50242007401		Nutropin Aq Nuspin	Hormones	Infertility Agents
50242007601	NUTROPIN AQ INJ 20MG2ML	Nutropin Aq Nuspin	Hormones	Infertility Agents
50242007501	SOMATROPIN	Nutropin Aq Nuspin	Hormones	Infertility Agents
44087115001	CHORIOGONADOTROPIN ALFA	Ovidrel	Hormones	Infertility Agents
00052031510	PREGNYL WDILUENT BENZYL	Pregnyl	Hormones	Infertility Agents
49884070155	CLOMIPHENE 50 MG	Clomiphene Citrate	Hormones	Hormonal Agents, Stimulant/Replacement/Modifying (Sex Hormones/Modifiers)
49884070154	CLOMIPHENE CITRATE	Clomiphene Citrate	Hormones	Hormonal Agents, Stimulant/Replacement/Modifying (Sex Hormones/Modifiers)
00093004165	CLOMIPHENE CITRATE	Clomiphene Citrate	Hormones	Hormonal Agents, Stimulant/Replacement/Modifying (Sex Hormones/Modifiers)
44087122501	CETROTIDE 025 MG KIT	Cetrotide	Hormones	Hormonal Agents, Stimulant/Replacement/Modifying (Pituitary)
55566100001	GANIRELIX AC INJ 25005	Ganirelix Acetate	Hormones	Hormonal Agents, Suppressant (Pituitary)
00052030151	GANIRELIX 250.000	Ganirelix Acetate	Hormones	Hormonal Agents, Suppressant (Pituitary)
55566150101	NOVAREL	Novarel	Hormones	
55566150201	NOVAREL	Novarel	Hormones	
00025016608	SYNAREL 2 MGML NASAL SPRAY	Synarel	Hormones	Hormonal Agents, Suppressant (Pituitary)
55566650003	PROGESTERONE (VAGINAL)	Endometrin	Hormones	Hormonal Agents, Stimulant/Replacement/Modifying (Sex Hormones/Modifiers)
55566650002		Endometrin	Hormones	

End Notes

[i] Society for Assisted Reproductive Technology, National Summary Report for 2021, https://sartcorsonline.com/CSR/PublicSnapshotReport?ClinicPKID=&reportingYear=2021&fromDisclaimer=true

[ii] See RSA 417-G:3, I(c) and RSA 417:4,VIII(b).

[iii] https://www.cdc.gov/reproductivehealth/infertility/index.htm#:~:text=Yes.,to%20term%20(impaired%20fecundity).

iv Peipert BJ, Montoya MN, Bedrick BS, Seifer DB, Jain T. Impact of in vitro fertilization state mandates for third party insurance coverage in the United States: a review and critical assessment. Reprod Biol Endocrinol. 2022 Aug 4;20(1):111. doi: 10.1186/s12958-022-00984-5. PMID: 35927756; PMCID: PMC9351254.

v Peipert.

viMaryland Health Care Commission, "Evaluation of Proposed Legislative Revisions to House Bill 142: Coverage of In Vitro Fertilization," 11/22/2022, accessed 7/15/2023 https://mhcc.maryland.gov/mhcc/pages/plr/plr/documents/Revisions_to_HB_142_Health%20Ins_Coverage_of_In_Vitro_Fertilization.pdf

vii Maryland Insurance Administration, MARYLAND'S MANDATED BENEFITS FOR LARGE GROUP PLANS AND GRANDFATHERED PLANS s of January 1, 2019," accessed 8/3/2023 https://insurance.maryland.gov/Consumer/Documents/publicnew/mandatedbenefits.pdf

[viii] American Society for Reproductive Medicine, "Optimizing Natural Fertility: A Committee Opinion (2022), accessed 9/9/2023 at https://www.asrm.org/practice-guidance/practice-committee-documents/optimizing-natural-fertility-a-committee-opinion-2021/#:~:text=Infertility%20is%20a%20disease%2C%20de%EF%AC%81ned,unprotected%20vaginal%20intercourse%20(12).

ix Harvard Pilgrim Health Care, Medically Necessary Guidelines: Assisted Reproductive Technology Services -- New Hampshire Products" accessed 8/10/2023, https://www.harvardpilgrim.org/provider/wp-content/uploads/sites/7/2022/10/P32-ART-MNG-NH-MP.pdf

xi American Society for Reproductive Medicine, "Disparities in access to effective treatment for infertility in the United States: an Ethics Committee opinion", July 2021, accessed https://www.asrm.org/globalassets/_asrm/practice-guidance/ethics-opinions/pdf/disparities_in_access_to_effective_treatment_for_infertility_in_the_us-pdfmembers.pdf

xii Lo, W., Campo-Engelstein, L. (2018). Expanding the Clinical Definition of Infertility to Include Socially Infertile Individuals and Couples. In: Campo-Engelstein, L., Burcher, P. (eds) Reproductive Ethics II. Springer, Cham. https://doi.org/10.1007/978-3-319-89429-4_6

[xiii] US Census Quick Facts New Hampshire, accessed 9/3/2023, https://www.census.gov/quickfacts/fact/table/NH/PST045222

xiv Centers for Disease Control and Prevention, State-Specific Assisted Reproductive Technology Surveillance, United States: 2020 Data Brief, accessed 7/20/2023, https://www.cdc.gov/art/state-specific-surveillance/2020/table1.html

xv Centers for Disease Control and Prevention, State-Specific Assisted Reproductive Technology Surveillance, United States: 2020 Data Brief, accessed 7/20/2023, https://www.cdc.gov/art/state-specific-surveillance/2020/table1.html

xvi ASRM, "Oversight Of Assisted Reproductive Technology," 2010, accessed 7/15/2023 https://www.asrm.org/advocacy-and-policy/media-and-public-affairs/oversite-of-art/

xviiCIGNA, Medical Coverage Policy, "Infertility Services," accessed 9/3/23, https://static.cigna.com/assets/chcp/pdf/coveragePolicies/medical/mm_0089_coveragepositioncriteria_infertility_diagnostic_and_treatment_services.pdf

xviii Wise Voter, "Gay Population by State", accessed 9/3/2023, https://wisevoter.com/state-rankings/gay-population-by-state/

[xix] ReproductiveFacts.org, "Age and Fertility", accessed 9/3/2023, https://www.reproductivefacts.org/globalassets/_rf/news-and-publications/bookletsfact-sheets/english-fact-sheets-and-info-booklets/Age_and_Fertility.pdf

xx Markovitz, Netana, "What you need to know about freezing your eggs" Washington Post, published 7/1/2023, accessed 9/3/2023, https://www.washingtonpost.com/wellness/2023/07/01/egg-freezing-process-cost-success-rate/; Kolata, Gina, "'Sobering' Study Shows Challenges of Egg Freezing," New York Times, published 9/22/2023, accessed 9/3/2023, https://www.nytimes.com/2022/09/23/health/egg-freezing-age-pregnancy.html

Jeong Perry, Alyssa & Audrey Nguyen, How to decide if freezing your eggs is right for you — and where to get started " NPR, published 12/21/22, accessed 9/3/2023 https://www.npr.org/2021/11/18/1056834875/egg-freezing-process-how-much-does-it-cost

xxi Fertility Solutions, "Egg Freezing Options from $7000," accessed 9/3/2023 https://fertilitysolutionsne.com/affordable-care/egg-freezing-options-from-7000/

xxii US Census Quick Facts New Hampshire, accessed 9/3/2023, https://www.census.gov/quickfacts/fact/table/NH/PST045222

[xxiii] Cleveland Clinic, "Sperm Banking," accessed 9/3/2023 https://my.clevelandclinic.org/health/articles/17493-sperm-banking

xxiv ReproductiveFacts.org, "Age and Fertility", accessed 9/3/2023, https://www.reproductivefacts.org/globalassets/_rf/news-and-publications/bookletsfact-sheets/english-fact-sheets-and-info-booklets/Age_and_Fertility.pdf

xxv NY Times, see above

xxvi Washington Post, see above

[xxvii] Borate GM, Meshram A. Cryopreservation of Sperm: A Review. Cureus. 2022 Nov 12;14(11):e31402. doi: 10.7759/cureus.31402. PMID: 36523734; PMCID: PMC9744399.

[xxviii] Health, "How Much It Costs to Freeze Sperm—and Why You Should Freeze Yours Before 45" accessed 9/3/2023, https://www.health.com/condition/pregnancy/advanced-paternal-age-risks

[xxix] Johns Hopkins Medicine, "Sperm Banking," accessed 9/3/2023, https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/sperm-banking

[xxx] ASRM, Practice Committee, "Evidence-based outcomes after oocyte cryopreservation for donor oocyte in vitro fertilization and planned oocyte cryopreservation: a guideline", accessed 9/3/2023 https://www.asrm.org/globalassets/_asrm/practice-guidance/practice-guidelines/pdf/evidence-based_outcomes_after_oocyte_cryo.pdf

[xxxi] RSA 417-G:3, I(c) and RSA 417:4,VIII(b)

[xxxii] Monseur B, Lee JA, Qiu M, Liang A, Copperman AB, Leondires M. Pathways to fatherhood: clinical experiences with assisted reproductive technology in single and coupled intended fathers. F S Rep. 2022 Aug 5;3(4):317-323. doi: 10.1016/j.xfre.2022.07.009. PMID: 36568926; PMCID: PMC9783155.