COMMERCE DEPARTMENT

Evaluation of HF 3465: Infertility Treatment Insurance Coverage Required

Report to the Minnesota Legislature Pursuant to Minn. Stat. § 62J.26

JANUARY 2023

This report was prepared by the American Institutes for Research (AIR), with actuarial analysis by Actuarial Research Corporation (ARC), at the request of the Minnesota Department of Commerce. AIR and ARC created this document for internal use by the Minnesota Department of Commerce pursuant to Contract No. 216732. The document assumes reader familiarity with the proposed mandated health benefits currently under consideration by the Minnesota State Legislature. The document was prepared solely to assist the Minnesota Department of Commerce. No other use of this document or the information or conclusions contained herein is authorized.

Defrayal analysis completed by the Minnesota Department of Commerce is independent of AIR's evaluation.

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The report is printed on recycled paper. A 508 compliant version of this report is forthcoming.

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Executive Summary

House File 3465 would require all health plans operating in Minnesota that provide maternity coverage to also cover infertility diagnosis and treatment. The proposed mandate would also prohibit health plans from requiring higher cost-sharing for infertility services than for maternity coverage. This mandate would not apply to Minnesota Medicaid or to MinnesotaCare, the state's basic health plan.

The World Health Organization classifies infertility as a recognized disability, affecting nearly 12% of women aged 15–44. Black and Hispanic women are disproportionately affected by infertility compared to White women. In addition, individuals who identify as lesbian, gay, bisexual, transgender, or queer (LGBTQ) may also face reduced access to infertility services.

An increasing number of states have implemented coverage mandates for the diagnosis and/or treatment of infertility in commercial plans. However, states vary in the types of infertility treatments that must be covered, with some states mandating coverage of both in vitro fertilization (IVF) and non-IVF procedures. Insurance coverage for infertility treatment may be linked to the potential efficacy of IVF, but more research is needed in this area.

For plans, the cost associated with IVF is variable, depending on the causes of an individual's infertility and the required trajectory. Most data suggest that the increase in total monthly premiums for an infertility coverage mandate would be less than 1%.

Actuarial analysis concluded that if the proposed mandate were enacted, statewide IVF expenditures for the non-public insured population would be $59.0 million in Year 1, increasing to $104.9 million in the 10th year of implementation. The average additional monthly cost of this mandate would be $1.30 per member in Year 1 and would increase to $2.20 per member in the 10th year of implementation. A comprehensive actuarial analysis and modeling of all services associated with infertility and a full picture of what current coverage and expenditures are for Minnesota were not possible with the available data.

The potential fiscal impact of this mandate is as follows:

- There is no estimated cost for the State Employee Group Insurance Program because the plan currently covers testing, diagnosis, and treatment of infertility and the plan will begin a pilot program in 2023 that adds coverage of infertility treatment.
- Commerce has determined that this proposed mandate would likely require partial defrayal under the Affordable Care Act, with an estimated cost of up to $18,143,000 in the first year.
- There is no estimated cost for public programs, as the bill expressly excludes them.

Pursuant to Minn. Stat. § 62J.26, subd. 3, the Minnesota Department of Commerce (Commerce) is required to perform an evaluation of the first engrossment of House File 3465 on insurance coverage requirements for infertility treatment from the 92nd Legislature (2021–2022). The purpose of the evaluation is to provide the legislature with a detailed analysis of the potential impacts of any mandated health benefit proposal.

House File 3465 meets the definition of a mandated health benefit proposal under Minn. Stat. § 62J.26, which indicates the following criteria:

A “mandated health benefit proposal" or "proposal" means a proposal that would statutorily require a health plan company to do the following:

(i) provide coverage or increase the amount of coverage for the treatment of a particular disease, condition, or other health care need;

(ii) provide coverage or increase the amount of coverage of a particular type of health care treatment or service or of equipment, supplies, or drugs used in connection with a health care treatment or service;

(iii) provide coverage for care delivered by a specific type of provider;

(iv) require a particular benefit design or impose conditions on cost-sharing for:

  (A) the treatment of a particular disease, condition, or other health care need;

  (B) a particular type of health care treatment or service; or

  (C) the provision of medical equipment, supplies, or a prescription drug used in connection with treating a particular disease, condition, or other health care need; or

(v) impose limits or conditions on a contract between a health plan company and a health care provider.

"Mandated health benefit proposal" does not include health benefit proposals amending the scope of practice of a licensed health care professional.

Introduction

In accordance with § 62J.26, Commerce performs, in consultation with the Minnesota Department of Health (MDH) and Minnesota Management and Budget (MMB), a detailed evaluation of all relevant benefit mandate proposals.

a. Evaluations must focus on the following areas:
    i. Scientific and medical information regarding the proposal, including the potential for benefit and harm
    ii. Overall public health and economic impact
    iii. Background on the extent to which services/items in the proposal are utilized by the population
    iv. Information on the extent to which services/items in the proposal are already covered by health plans and which health plans the proposal would impact
    v. Cost considerations regarding the potential of the proposal to increase cost of care as well as its potential to increase enrollee premiums in impacted health plans
    vi. The cost to the state if the proposal is determined to be a mandated benefit under the Affordable Care Act (ACA)
b. As part of these evaluations, Commerce also seeks public feedback on the proposed benefit mandates. This public feedback is summarized and incorporated into the analysis.
c. The following analysis describes the proposed benefit mandate's impact on the health care industry and the population health of Minnesotans.

Evaluation Components

For the purposes of this evaluation, we used the following terms to describe the impact of the proposed mandate:

Public health. The science and practice of protecting and improving the health and well-being of people and their communities. The field of public health includes many disciplines, such as medicine, public policy, biology, sociology, psychology and behavioral sciences, and economics and business.

Economic impact. The general financial impact of a drug, service, or item on the population prescribing or utilizing the drug, service, or item for a particular health condition.

Fiscal impact. The quantifiable cost to the state associated with implementation of the mandated health benefit proposal. The areas of potential fiscal impact that Commerce reviews for are the cost of defrayal of benefit mandates under the ACA, the cost to the State Employee Group Insurance Program (SEGIP), and the cost to other state public programs.

Bill Requirements

House File 3465 is sponsored by Representative Long and was introduced in the 92nd Legislature (2021–22) on February 15, 2022.

If enacted, this bill would require all health plans operating in Minnesota and providing maternity coverage to provide coverage for infertility diagnosis and treatment. The bill would also require that the cost-sharing for infertility services be no greater than the cost-sharing for maternity coverage. Diagnosis and treatment procedures related to infertility are defined as those considered medically necessary by a health care provider and recognized by either the American Society for Reproductive Medicine or the American College of Obstetrics and Gynecologists. Procedures that must be covered include but are not limited to ovulation induction, procedures and devices to monitor ovulation, artificial insemination (non-IVF), oocyte retrieval procedures, in vitro fertilization (IVF), gamete intrafallopian transfer, oocyte replacement, cryopreservation techniques, and micromanipulation of gametes. Coverage for surgical reversal of elective sterilization and expenses related to purchase of donor gametes is not required under this proposed mandate.

For the purpose of this bill and evaluation, "infertility" is defined as a disease that affects the reproductive system and interferes with an individual's ability to achieve a pregnancy or decreases an individual's ability to carry a pregnancy to a live birth. This mandate would not apply to health plans offered under chapter 256B or 256L.[1]

Related Health Conditions

Infertility has the following prevalence for women in the United States: Among women aged 15–49 with no prior births, 1 in 5 (19%) are unable to get pregnant after 1 year of trying, and 1 in 4 (26%) have difficulty getting pregnant or carrying pregnancy to a live birth.[2]

Related State and Federal Laws

This section provides an overview of state and federal laws related to the proposed mandate and any external factors that provide context on current policy trends related to this topic. The review of current state and federal laws considers how implementation of the proposed mandate may be affected by federal and Minnesota state health care laws and provides examples of similar legislation or policies in other states.

[1] The proposed mandate would apply to all health plans issued or renewed on or after the effective date defined in the final text. The mandate states an effective date of August 1, 2022, which may not be accurate as written.
[2] Centers for Disease Control and Prevention. (2022, December 6). *Infertility FAQs*. https://www.cdc.gov/reproductivehealth/infertility/index.htm#:~:text=In%20the%20United%20States%2C%20among,to%20term%20(impaired%20fecundity)

Federal Laws Relevant to the Proposed Mandate

There are no federal laws pertaining to infertility diagnosis and treatment. The ACA includes maternity and newborn care as essential health benefits (EHBs) but does not require coverage of infertility treatment. States have discretion as to whether to cover infertility diagnosis and treatment through the Medicaid program.

Minnesota State Laws Relevant to the Proposed Mandate

The proposed mandate introduces infertility coverage for the first time in Minnesota. Coverage of infertility diagnosis and treatment is excluded under Minn. Stat. § 256B.0625, the state's Medicaid program.[3]

State Comparison

As of 2021, seventeen states have passed laws that offer coverage for infertility diagnosis and treatment: Arkansas, Connecticut, Delaware, Hawaii, Illinois, Louisiana, Maryland, Massachusetts, Montana, New Hampshire, New Jersey, New York, Ohio, Rhode Island, West Virginia, California, and Texas.[4] The main provisions that vary from Minnesota's proposed mandate include adoption security benefits, excluded coverage for IVF procedures, and prohibited exclusion of coverage for treatment that could result in infertility. As of January 2020, only one state specifically requires Medicaid coverage of fertility treatment (New York).[5]

Public Comments Summary

To assess the public health, economic, and fiscal impact of HF 3465, Commerce solicited stakeholder engagement on the potential health benefit mandate. The public submitted comments in response to Minnesota's RFI process, which enabled the state to collect information from consumers, health plans, advocacy organizations, and other stakeholders. This process helped Commerce gather opinions, identify special considerations, and secure additional resources to support the evaluation. This section summarizes the key themes collected from stakeholders that submitted comments.

Any studies, laws, and other resources identified by stakeholders through public comment were evaluated based on criteria used for the literature scan. Please refer to the Methodology section for analysis of the reviewed literature. Responses to the RFI may not be fully representative of all stakeholders or of the opinions of those impacted by the proposed mandate.

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[3] Medical Assistance for Needy Persons: Covered Services, Minnesota Statutes § 256B.0625 (2022). https://www.revisor.mn.gov/statutes/cite/256b.0625

[4] American Society for Reproductive Medicine. (2022, December 6). *State and territory infertility insurance laws*. https://www.reproductivefacts.org/resources/state-infertility-insurance-laws/

[5] Weigel, G., Ranji, U., Long, M., & Salganicoff, A. (2020, September 15). *Coverage and use of fertility services in the U.S.* Kaiser Family Foundation. https://www.kff.org/womens-health-policy/issue-brief/coverage-and-use-of-fertility-services-in-the-u-s/

Stakeholder Engagement Analysis

For this proposed mandate, Commerce received three stakeholder comments. One comment was in support of this bill, and two comments expressed no opinion but provided cost estimates. Stakeholder groups that submitted responses included industry experts and state and commercial health insurance plans.

One instance of stakeholder feedback in support of the bill also advocated for coverage of acupuncture in infertility treatment. The stakeholder noted that acupuncture services can improve quality of life for women suffering from infertility/menstrual disorders and can alleviate stress related to the treatment of infertility/menstrual disorders. Notably, the stakeholder cited a study that found "acupuncture [given with embryo transfer] increased the odds of clinical pregnancy by 65% compared with the control groups [women who received only embryo transfer]."[6] The stakeholder also mentioned that current coverage of infertility treatment is limited to Western medicine and may not meet the needs of people of color. The stakeholder believes that allowing access to Chinese medicine alongside Western medicine is imperative when providing culturally supportive care to individuals and that the proposed mandate should include coverage for acupuncture services related to infertility.

Another stakeholder noted that if infertility treatment becomes an EHB for Minnesota through the proposed health benefit, then the number of individuals covered would expand to those seeking treatment without a diagnosis of infertility. In addition, expansion of infertility coverage as an EHB would increase the overall health expenditures and infertility treatment utilization. The stakeholder also pointed out that as the benefit is not one of the 10 EHBs included in the ACA, it would be subject to state defrayal of the cost for qualified health plans.

One stakeholder commented that because the proposed health benefit mandates only apply to fully insured plans, they may have the potential to drive more employer groups to switch to self-insured coverage to avoid potential costs associated with benefit mandates. This stakeholder referenced a source that showed enrollment changes in self-insured and fully insured plans since 2011. This source indicated that, while enrollment has increased for self-insured private health care plans and decreased in fully insured private health care plans, enrollment in public health care plans has also increased. The source does not provide data indicating whether a causal relationship exists between the state insurance mandates and employer selection of self-insured plans given other variables that may account for changes in enrollment.[7,8]

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[6] Manheimer, E., Zhang, G., Udoff, L., Haramati, A., Langenberg, P., Berman, B. M., & Bouter, L. M. (2008). Effects of acupuncture on rates of pregnancy and live birth among women undergoing in vitro fertilisation: Systematic review and meta-analysis. *BMJ (Clinical Research Ed.), 336*(7643), 545–549. https://doi.org/10.1136/bmj.39471.430451.BE

[7] Minnesota Department of Health. (2022, July). *Trends and variation in health insurance coverage* (Chartbook Section 2). https://www.health.state.mn.us/data/economics/chartbook/docs/section2.pdf

[8] The federal Employee Retirement Income Security Act of 1974 (ERISA) preempts state laws that "relate to" a covered employee benefit plan. Under ERISA, a state cannot deem a self-funded employee benefit plan as insurance for the purpose of imposing state regulation. Therefore, self-funded (or self-insured) plans may be exempt from abiding by a state-imposed health benefit mandate.

Cost Estimates Provided in Stakeholder Comments

Stakeholders and MMB provided the following cost estimates related to the proposed benefit mandate:

- MMB provided Commerce with SEGIP's estimate. SEGIP does not estimate any fiscal impact to the state plan from this legislation based on current and upcoming coverage of infertility treatment (see the Fiscal Impact section).
- According to a commercial health insurance carrier, the coverage of female infertility treatment, specific to this bill and dependent on coverage type, would result in an estimated increase of costs ranging from $0.50 per member per month (PMPM) to $6.25 PMPM.
- Lastly, one stakeholder noted there could be a significant impact on cost because determination of medical necessity is up to the treating provider rather than the health carrier.

Cost estimates shared in RFI responses may reflect different methodologies, data sources, and assumptions than those used in the actuarial analysis for this evaluation. Therefore, stakeholders' results may or may not reflect generalizable estimates for the mandate.

Evaluation of Mandated Health Benefit Proposal

The methodology for relevant sections of these evaluations is described in the corresponding evaluation below and consisted of a three-pronged approach:

- Medical/scientific review
- Actuarial analysis to assess economic impact
- Defrayal analysis to assess fiscal impact

Methodology

This evaluation used critical review of research databases to identify scientific, medical, and regulatory sources relevant to the mandate. The literature scan utilized

I. key scientific, medical, and regulatory terms that emerged from the initial review of the proposed mandate;
II. additional key terms that were identified and reviewed by AIR's technical and subject matter experts, Commerce, and MDH; and
III. additional terms and research questions following public comment and stakeholder engagement interviews.

The key terms guided the search for relevant literature in PubMed and the National Bureau of Economic Research (NBER). PubMed was used to identify relevant biomedical literature and NBER to identify relevant literature that might address the potential public health, economic, and fiscal impacts

of the mandate. The inclusion factors prioritized peer-reviewed literature and independently conducted research on any articles or databases identified through public comment. In addition, criteria included publication within the last 10 years, relevance to the proposed health benefit mandate, generalizability of the findings, and quality of the research, as guided by the Joanna Briggs Institute Clinical Appraisal Tools. The analysis included identified key themes and shared patterns related to the medical, economic, or legal impact of the proposed health benefit mandate.

Public Health Impact

The World Health Organization classifies infertility as a recognized disability.[9,10] Coverage for infertility treatments is limited in commercial insurance, and public insurance programs typically only include coverage of diagnostic services. As shown in this report's Policy Context section, an increasing number of states have implemented coverage mandates for the diagnosis and/or treatment of infertility in commercial plans.[9] In states with insurance mandates for infertility treatment, use of these services has increased,[11] and nine of the states with these mandates have utilization of infertility services above the national average.[9] State mandates vary in the types of infertility treatments covered, with some states mandating IVF, known as comprehensive coverage, in addition to non-IVF fertilization (i.e., artificial insemination). Some states with comprehensive coverage cap the number of treatment cycles or impose dollar coverage limits (e.g., up to $100,000) for IVF coverage.[11]

There are racial and ethnic disparities in infertility prevalence, treatment utilization, and outcomes.[11] For example, Black women face worse clinical outcomes than their White counterparts, including lower rates of live birth and higher rates of spontaneous abortion. Black and Hispanic women also may be disproportionately affected by infertility compared to White women, with higher rates of infertility prevalence.[9] Conversely, states with comprehensive coverage mandates for IVF services have shown improvements in clinical outcomes, such as more live births and fewer embryo transfers.[12] In addition, individuals who identify as lesbian, gay, bisexual, transgender, or queer (LGBTQ) may similarly face reduced access to infertility services.[11]

Increased utilization of infertility services in states with insurance mandates shows that the main barrier to treatment is financial burden resulting from lack of coverage, which disproportionately

[9] Insogna, I. G., & Ginsburg, E. S. (2018). Infertility, inequality, and how lack of insurance coverage compromises reproductive autonomy. *AMA Journal of Ethics*, *20*(12), 1152–1159. https://doi.org/10.1001/amajethics.2018.1152

[10] Ho, J. R., Aghajanova, L., Mok-Lin, E., Hoffman, J. R., Smith, J. F., & Herndon, C. N. (2022). Public attitudes in the United States toward insurance coverage for in vitro fertilization and the provision of infertility services to lower income patients. *F&S Reports*, *3*(2), 122–129. https://doi.org/10.1016/j.xfre.2021.09.002

[11] Peipert, B. J., Montoya, M. N., Bedrick, B. S., Seifer, D. B., & Jain, T. (2022). Impact of in vitro fertilization state mandates for third party insurance coverage in the United States: A review and critical assessment. *Reproductive Biology and Endocrinology*, *20*, Article 111. https://doi.org/10.1186/s12958-022-00984-5

[12] Weigel, G., Ranji, U., Long, M., & Salganicoff, A. (2020, September 15). *Coverage and use of fertility services in the U.S*. Kaiser Family Foundation. https://www.kff.org/womens-health-policy/issue-brief/coverage-and-use-of-fertility-services-in-the-u-s/

impacts low-income individuals and other underserved populations.[13] Therefore, the increase in utilization is more likely to be seen in those most impacted by financial barriers.[14,15]

Individuals facing infertility secondary to another pathology, such as breast cancer, typically do not have insurance coverage for procedures to preserve embryos (oocyte or embryo cryopreservation). Costs for these procedures can range between $10,000 and $13,000, and those in high-income brackets have the highest rates of utilization of this procedure. Currently, only four states that mandate infertility treatment include this type of coverage.[16]

Efficacy for infertility treatments varies according to diagnosis and treatment type. High-risk events (e.g., hospitalization, multiple births, and fetal morbidity) associated with both IVF and non-IVF treatments have decreased overall.[17] Multiple births are less common in states with comprehensive infertility mandates; however, these states show a decrease in live births associated with IVF.[18] Insurance coverage for infertility treatment can be linked to the treatment efficacy of IVF. Outcomes for patients who self-pay for IVF suggest that they are less likely to receive evidence-based standard-of-care treatments, which are the most effective.[18] However, the literature is not consistent as to whether insurance coverage has a positive or negative effect on the outcomes from fertility treatments. The public health or economic impact of infertility coverage mandates may be mediated by the percentage of the population who have commercial plan coverage as opposed to employer-sponsored self-insured plans.[19]

Economic Impact

A single IVF cycle is estimated to cost $12,400, although more recent studies suggest this cost could be significantly underestimated.[20] While this mandate may increase premiums, which is an increased cost to enrollees, total out-of-pocket spending for individuals requiring infertility treatment with

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[13] Peipert, B. J., Montoya, M. N., Bedrick, B. S., Seifer, D. B., & Jain, T. (2022). Impact of in vitro fertilization state mandates for third party insurance coverage in the United States: A review and critical assessment. *Reproductive Biology and Endocrinology*, *20*, Article 111. https://doi.org/10.1186/s12958-022-00984-5

[14] Lai, J. D., Fantus, R. J., Cohen, A. J., Wan, V., Hudnall, M. T., Pham, M., Brannigan, R. E., & Halpern, J. A. (2021). Unmet financial burden of infertility care and the impact of state insurance mandates in the United States: Analysis from a popular crowdfunding platform. *Fertility and Sterility*, *116*(4), 1119–1125. https://doi.org/10.1016/j.fertnstert.2021.05.111

[15] Kessler, L. M., Craig, B. M., Plosker, S. M., Reed, D. R., & Quinn, G. P. (2013). Infertility evaluation and treatment among women in the United States. *Fertility and Sterility*, *100*(4), 1025–1032. https://doi.org/10.1016/j.fertnstert.2013.05.040

[16] Insogna, I. G., & Ginsburg, E. S. (2018). Infertility, inequality, and how lack of insurance coverage compromises reproductive autonomy. *AMA Journal of Ethics*, *20*(12), 1152–1159. https://doi.org/10.1001/amajethics.2018.1152

[17] Luke, B. (2017). Pregnancy and birth outcomes in couples with infertility with and without assisted reproductive technology: With an emphasis on US population-based studies. *American Journal of Obstetrics and Gynecology*, *217*(3), 270–281. https://doi.org/10.1016/j.ajog.2017.03.012

[18] Insurance coverage of infertility treatment may be linked to treatment efficacy. Patients who pursue self-pay are less likely to receive evidence-based standard-of-care regimens that are recommended for their efficacy.

[19] Koniares, K., Penzias, A. S., & Adashi, E. (2019). Has the Massachusetts infertility mandate lived up to its promise? *Fertility and Sterility*, *112*(3), e41–e42. https://doi.org/10.1016/j.fertnstert.2019.07.238

[20] Weigel, G., Ranji, U., Long, M., & Salganicoff, A. (2020, September 15). *Coverage and use of fertility services in the U.S.* Kaiser Family Foundation. https://www.kff.org/womens-health-policy/issue-brief/coverage-and-use-of-fertility-services-in-the-u-s/

commercial insurance is expected to drop after implementation of a comprehensive infertility coverage mandate given the cost of infertility treatments such as IVF.[21]

For plans, the cost of IVF is variable, depending on the associated infertility disease and treatment trajectory. Data from other states suggest that the cost that plans incur for infertility treatments would result in an estimated increase in premiums of $0.67 to $14.00 PMPM.[22] Most data suggest that the increase in total monthly premiums for an infertility coverage mandate would be less than 1%.[23]

Actuarial Analysis[24]

Objective

This actuarial analysis includes an analysis of the current prevalence of diagnosis, current levels of coverage and utilization, and potential effects of increased utilization with expanded coverage on cost-sharing, premiums, and overall expenditures.

Assumptions and Approach

MDH provided ARC with tabulations of the Minnesota All-Payer Claims Databases (MN APCD) for all female infertility diagnoses and claims for associated codes of the National Drug Code (NDC) Directory, Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS), and International Classification of Diseases 10th Revision (ICD-10) for 2017–2019 as a snapshot of current prevalence and drug and procedure utilization, expenditures, and beneficiary cost-sharing for female infertility treatment for Minnesota commercial health plan beneficiaries.

The following criteria were used by MDH to identify beneficiaries with an infertility diagnosis and claims for associated drugs and/or procedures:

- Beneficiaries were identified as having an infertility diagnosis if they had one of the ICD-10 diagnosis codes in Appendix C.
- The NDC codes in Appendix C were used to identify prescription drug claims related to female infertility treatment.
- The CPT/HCPCS procedure codes in Appendix C were used to identify procedures associated with female infertility treatment.

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[21] Koniares, K., Penzias, A. S., & Adashi, E. (2019). Has the Massachusetts infertility mandate lived up to its promise? *Fertility and Sterility*, *112*(3), e41–e42. https://doi.org/10.1016/j.fertnstert.2019.07.238

[22] Omurtag, K. R., Styer, A. K., Session, D., & Toth, T. L. (2021). Economic implications of insurance coverage for in vitro fertilization in the United States: A review. *Journal of Reproductive Medicine*, *54*(11-12), 661–668. https://pubmed.ncbi.nlm.nih.gov/20120898/

[23] Weigel, G., Ranji, U., Long, M., & Salganicoff, A. (2020, September 15). *Coverage and use of fertility services in the U.S.* Kaiser Family Foundation. https://www.kff.org/womens-health-policy/issue-brief/coverage-and-use-of-fertility-services-in-the-u-s/

[24] Michael Sandler and Anthony Simms are actuaries for Actuarial Research Corporation (ARC). They are members of the American Academy of Actuaries and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

For the period 2017–2019, the number of beneficiaries who had a qualifying infertility diagnosis and the number of beneficiaries utilizing prescription drugs and related procedures in treatment of female infertility as well as expenditures and beneficiary cost-sharing amounts for the professional component of such procedures (facility claims were not included) were tabulated separately by age cohorts 15–34 and 35–49 by MDH. There were four procedure categories related to infertility for which MDH was able to tabulate utilization, expenditures, and beneficiary cost-sharing: Introduction Procedures on the Corpus Uteri, Surgical Procedures for IVF, Reproductive Medicine Procedures, and Management of Ovulation Induction per Cycle. Despite limitations of the available data, the analysis used historical Minnesota data to anchor the prevalence of diagnosis and utilization, but absent facility claims, which make up the vast majority of expenditures for more advanced infertility treatment, the unit costs and projections of expenditures had to be sourced externally. Additionally, data limitations precluded the development of a comprehensive picture of the Minnesota historical expenditures related to infertility, including current level of coverage, average plan expenditures, and total beneficiary cost-sharing.

As tabulated by MDH, in each year of the 2017–2019 period, of the commercial market population of females aged 15–49 in the MN APCD (which per MDH includes approximately 40% of the total commercial market in Minnesota), 4.19% of females aged 15–34 and 3.80% of females aged 35–49 received a diagnosis of infertility. Based on the historical data for Minnesota, of the beneficiaries receiving an infertility diagnosis, 11.54% of females aged 15–34 and 13.02% of females aged 35–49 utilized professional services for one of the procedures, including 2.13% of females aged 15–34 and 2.45% of females aged 35–49 who received services related to IVF each year. Of those beneficiaries receiving services related to IVF, females aged 15–34 averaged 2.48 cycles in a given year and females aged 35–49 averaged 2.46 cycles in a given year.

An EMD Serono study published by Resolve.org in 2015, *Employers and Evidence-Based Infertility Benefits*, found that one third of women receiving infertility services require treatment beyond basic medical advice and consultation. The same study found that 7% seek intrauterine insemination and ultimately 3% seek IVF. A Kaiser Family Foundation study, *Coverage and Use of Fertility Services in the US*, published in September 2020, estimated that IVF utilization in states with mandated comprehensive coverage of IVF (coverage of at least four oocyte retrievals) was 1.5 times the national rate, per 2016 CDC data. Overall, in Minnesota during the historical data period, 2.27% of females aged 15–49 with an infertility diagnosis utilized IVF services, and a 50% increase in that utilization rate would result in about 3.41% utilization.

Coverage levels for IVF, which is by far the largest non-health-related driver of infertility treatment utilization, vary widely depending on what is required to be covered in different states and by plan within a given state that requires certain coverage. The same Kaiser Family Foundation study cited above looked at health carriers offering coverage in New York following a 2019 coverage mandate. They found that for IVF, about 50% of policies had a lifetime limit (ranging from $10,000 to $50,000),

20% had a three-cycle limit (either $30,000 or no dollar limit), 6% had a four-cycle limit, and 6% were unlimited, with no cycle or dollar maximums.

The proposed Minnesota mandate requires that the cost-sharing, including copayments, deductibles, and coinsurance for infertility coverage, must not be greater than the cost-sharing for maternity coverage under the enrollee's health plan. However, the proposed mandate does not specify any requirements or limits on lifetime maximums or number of cycles covered. For the purposes of this analysis, the analysis assumed a baseline 2022 total unit cost of $18,000 per IVF cycle trended forward to the projection period 2024–2033 using projection factors derived from the National Health Expenditure data compiled by CMS as well as the 2022 Medicare Trustees' Report. The analysis assumed that there was no explicit limit on the number of cycles covered and that the average number of cycles per beneficiary who received services related to IVF in the historical data would persist.

Overall Minnesota population projections for 2024–2033 are based on figures published by the Minnesota State Demographic Center and on the historical levels of non-public health insurance coverage from Minnesota Public Health Data Access. Sixty-five percent of the total state population is assumed to be included in the non-public insured population. The proportion of females aged 15–34 and females aged 35–49 relative to the total MN APCD population is assumed to be representative of the entire non-public insured population in the state.

Results

This analysis projects total infertility diagnosis prevalence in Minnesota for the total non-public insured population. The current law projected utilization of all infertility services beyond basic consultation, as well as IVF specifically, and then focused on the projection of potential utilization and total expenditures under the mandate's expanded coverage.

Table 1 shows the results of the total projected infertility prevalence, projected current law utilization based on historical claims, and projected potential utilization of IVF under the mandate.

Table 2 shows the total projected utilization of IVF, the total projected expenditures related to IVF, and the projected potential PMPM effect of IVF coverage on the total non-public insured population over the 10-year projection period.

The total statewide non-public insured population expenditures for IVF are projected to be $59.0 million in Year 1 and to increase to $104.9 million in the 10th and final year of the projection period. These expenditures are projected to contribute to $1.30 PMPM for the total non-public insured population in the first year, increasing to $2.20 PMPM in Year 10.

A more comprehensive actuarial analysis and modeling of all services associated with infertility and a full picture of what current coverage and expenditures are for Minnesota were not possible with the available data. A literature review was conducted to assess the broader marketplace of coverage and

expenditures, look at the effects of similar mandates in other states, and check against the areas that could be evaluated more quantitatively.

Table 1. Total Projected Infertility Prevalence and Utilization of Infertility Services[25]

	Population				Infertility prevalence		Beneficiaries using services beyond basic consultation based on historical claims		Beneficiaries utilizing in vitro fertilization: historical		Beneficiaries utilizing in vitro fertilization: projected	
	Total MN pop	Non-public insured pop	Female 15–34	Female 35–49	Female 15–34	Female 35–49	Female 15–34	Female 35–49	Female 15–34	Female 35–49	Female 15–34	Female 35–49
2024	5,834,936	3,792,708	519,587	451,183	21,795	17,139	2,516	2,231	465	420	698	631
2025	5,870,258	3,815,668	522,733	453,914	21,927	17,243	2,531	2,244	468	423	702	635
2026	5,904,930	3,838,205	525,820	456,595	22,057	17,344	2,546	2,257	471	426	706	638
2027	5,938,797	3,860,218	528,836	459,214	22,183	17,444	2,561	2,270	473	428	710	642
2028	5,971,790	3,881,664	531,774	461,765	22,306	17,541	2,575	2,283	476	430	714	645
2029	6,003,838	3,902,495	534,628	464,243	22,426	17,635	2,589	2,295	479	433	718	649
2030	6,034,892	3,922,680	537,393	466,644	22,542	17,726	2,602	2,307	481	435	721	652
2031	6,064,909	3,942,191	540,066	468,965	22,654	17,814	2,615	2,319	483	437	725	656
2032	6,093,866	3,961,013	542,644	471,204	22,762	17,899	2,628	2,330	486	439	729	659
2033	6,121,752	3,979,139	545,128	473,361	22,867	17,981	2,640	2,340	488	441	732	662

[25] The state health benefit mandates only apply to fully insured individual and small group health plans regulated in Minnesota, except where explicitly indicated. However, the actuarial analysis is based on gross expenditures for all non-public insurance in Minnesota. Although the analysis was not limited to individual and small group data, this does not affect the accuracy of the PMPM estimates. Using all non-public claims improves the robustness and accuracy of the PMPM estimates because the analyses rely on a larger, more representative set of data.

Table 2. Total Projected Expenditures for IVF and Total Non-Public Insured PMPM[26]

	Population		Beneficiaries utilizing in vitro fertilization: projected		Total cycles utilization of in vitro fertilization: projected		Total in vitro fertilization expenditures: projected			
	Total MN pop	Non-public insured pop	Female 15–34	Female 35–49	Female 15–34	Female 35–49	Female 15–34	Female 35–49	Total	Total non-public insured pop PMPM
2024	5,834,936	3,792,708	698	631	1,730	1,552	$31,139,262.47	$27,927,342.67	$59,066,605	$1.30
2025	5,870,258	3,815,668	702	635	1,740	1,561	$33,301,414.35	$29,866,475.19	$63,167,890	$1.38
2026	5,904,930	3,838,205	706	638	1,751	1,570	$35,474,493.51	$31,815,407.88	$67,289,901	$1.46
2027	5,938,797	3,860,218	710	642	1,761	1,579	$37,854,308.25	$33,949,751.99	$71,804,060	$1.55
2028	5,971,790	3,881,664	714	645	1,771	1,588	$40,614,936.68	$36,425,630.03	$77,040,567	$1.65
2029	6,003,838	3,902,495	718	649	1,780	1,596	$43,282,873.34	$38,818,377.18	$82,101,251	$1.75
2030	6,034,892	3,922,680	721	652	1,789	1,605	$46,073,645.99	$41,321,290.15	$87,394,936	$1.86
2031	6,064,909	3,942,191	725	656	1,798	1,613	$49,219,889.24	$44,143,008.02	$93,362,897	$1.97
2032	6,093,866	3,961,013	729	659	1,807	1,620	$52,075,999.54	$46,704,519.27	$98,780,519	$2.08
2033	6,121,752	3,979,139	732	662	1,815	1,628	$55,296,218.61	$49,592,582.58	$104,888,801	$2.20

[26] The state health benefit mandates only apply to fully insured individual and small group health plans regulated in Minnesota, except where explicitly indicated. However, the actuarial analysis is based on gross expenditures for all non-public insurance in Minnesota. Although the analysis was not limited to individual and small group data, this does not affect the accuracy of the PMPM estimates. Using all non-public claims improves the robustness and accuracy of the PMPM estimates because the analyses rely on a larger, more representative set of data.

- A Kaiser Family Foundation study found that the New York state coverage mandate projected a 0.5% to 1.1% premium increase for IVF coverage. Additionally, for California, the same study cited a 0.54% increase for Medi-Cal managed care plans and a 0.79% increase in the DHMC-regulated individual market. Further, the study noted that Massachusetts, Connecticut, and Rhode Island were all early adopters in this area, having mandated coverage more than 30 years ago. In those three states, less than 1% of total premium costs is estimated to be attributable to infertility coverage.[27]
- The Kaiser Family Foundation annually compiles average premiums for both the individual marketplace as well as employer-based health insurance plans. For 2023, the Minnesota average individual marketplace benchmark premium is $335 per month, and the average premium per enrolled employee for employer-based health insurance plans is $624 per month. Based on these figures, the projected comprehensive IVF coverage would account for about 0.2%–0.4% of total premium costs for Minnesota.
- Coverage of infertility services, including IVF, has been trending up in recent years. According to a Mercer-sponsored study, 24% of employers with 500+ employees and 36% of employers with 20,000+ employees offered IVF coverage in 2015, and those numbers had increased to 27% and 42%, respectively, by 2020. However, only 32% of small employers (those with 50–499 employees) offered coverage for any infertility services, and only 14% had any coverage of IVF.[28]

Data Sources

- Minnesota state population projections are from Long-Term Population Projections for Minnesota, published by the Minnesota State Demographic Center.[29]
- Minnesota non-public health insurance coverage levels are from Minnesota Public Health Data Access.[30]
- Trends and projection factors are derived from National Health Expenditure data compiled by the Centers for Medicare & Medicaid Services as well as the 2022 Medicare Trustees Report.[31]
- MDH tabulations of the MN APCD from 2017–2019 were used for the estimation of infertility diagnosis prevalence and for historical utilization, expenditures, and beneficiary cost-sharing for procedures related to female infertility.

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[27] Weigel, G., Ranji, U., Long, M., & Salganicoff, A. (2020, September 15). *Coverage and use of fertility services in the U.S.* Kaiser Family Foundation. https://www.kff.org/womens-health-policy/issue-brief/coverage-and-use-of-fertility-services-in-the-u-s/

[28] Dowling, E. (2021, May 6). *New survey finds employers adding fertility benefits to promote DEI*. Mercer. https://www.mercer.us/our-thinking/healthcare/new-survey-finds-employers-adding-fertility-benefits-to-promote-dei.html

[29] https://mn.gov/admin/assets/Long-Term-Population-Projections-for-Minnesota-DATA-feb2021_tcm36-469204.xlsx

[30] https://data.web.health.state.mn.us/insurance_basic

[31] https://www.cms.gov/files/zip/nhe-historical-and-projections-data.zip and https://www.cms.gov/files/document/2022-medicare-trustees-report.pdf

Fiscal Impact

The potential fiscal impact of this legislation for the state includes the estimated cost to SEGIP as assessed by SEGIP in consultation with health plan administrators, the cost of defrayal of benefit mandates as understood under the ACA, and the estimated cost to public programs.

- This mandate is estimated to have no fiscal impact on SEGIP.
- The defrayal cost assessed by Commerce under the ACA is estimated to be up to $18,143,000 in the first year.
- There is no estimated cost for public programs.

Fiscal Impact Estimate for SEGIP

As previously stated, MMB does not estimate any fiscal impact to the state plan from this legislation. SEGIP currently provides coverage in its medical benefit package for testing, diagnosis, and treatment of infertility up to the formal diagnosis of infertility but does not include any treatment for infertility using artificial insemination or assisted reproductive technology (ART). However, in consultation with its labor union partners, SEGIP has elected to begin a pilot program that will add infertility treatment coverage beginning January 1, 2023. SEGIP believes infertility treatments and procedures outlined in this legislation will already be covered by the new benefits.

ACA Mandate Impact and Analysis

The ACA defined 10 EHBs that must be included in non-grandfathered plans in the individual and small-group markets. Pursuant to section 1311(d)(3)(b) of the ACA, states may require qualified health plan issuers to cover benefits in addition to the 10 EHBs but must defray the costs of requiring issuers to cover such benefits by making payments either to individual enrollees or directly to qualified health plan issuers on behalf of the enrollees.

Any state-required benefits enacted after December 31, 2011, other than for purposes of compliance with federal requirements, would be considered in addition to EHBs even if embedded in the state's selected benchmark plan.[32] States must identify the state-required benefits that are in addition to EHBs, and qualified health plan issuers must quantify the cost attributable to each additional required benefit based on an analysis performed in accordance with generally accepted actuarial principles and methodologies conducted by a member of the American Academy of Actuaries and must report this to the state.[33]

Commerce has determined that this bill would constitute a partial benefit mandate as defined under the Affordable Care Act, requiring state defrayal of some of the required services. Infertility services are not part of EHB and are not generally covered by the state's benchmark plan, apart from coverage

[32] See 45 CFR §155.170(a)(2).
[33] See 45 CFR §155.170(a)(3) and §155.170(c).

for initial diagnosis. Thus, all services apart from initial infertility diagnosis would require defrayal from the state for QHP costs.

The cost of defrayal associated with HF 3465 is estimated to between $5,443,000 and $18,143,000 in the first year. Commerce based this assumption on the most recent MNsure enrollment data as well as indicators of infertility prevalence and expected uptake of infertility treatment.

Specifically, Commerce assumed that 21% of QHP enrollees were women aged 15-49. Based on CDC statistics, 12% of women aged 15-49 will use infertility services. The cost for these interventions was estimated to be as low as $1,000 and as high as $24,000 per enrollee. For the purposes of the defrayal estimate, Commerce assumed an average cost between $3,000 and $10,000 per enrollee.

Fiscal Impact for Public Programs

There is no estimated cost for public programs. Exclusion of public programs is expressly indicated in the bill text (see Appendix A).

Appendix A. Bill Text

A bill for an act relating to insurance; requiring the coverage for infertility treatment; proposing coding for new law in Minn. Stat. chapter 62A.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA: Section 1. **[62A.0412] COVERAGE OF INFERTILITY TREATMENT.**

Subdivision 1. **Scope.**

This section applies to all health plans that provide maternity benefits to Minnesota residents. Subd. 2. **Required coverage.**

(a) Every health plan under subdivision 1 must provide coverage for procedures related to infertility diagnosis and treatment that are (1) considered medically necessary by the enrollee's treating health care provider, and (2) recognized by either the American Society for Reproductive Medicine or the American College of Obstetrics and Gynecologists.

(b) Coverage must include but is not limited to ovulation induction, procedures and devices to monitor ovulation, artificial insemination, oocyte retrieval procedures, in vitro fertilization, gamete intrafallopian transfer, oocyte replacement, cryopreservation techniques, and micromanipulation of gametes.

(c) Coverage for surgical reversal of elective sterilization and expenses related to purchase of donor gametes is not required under this section.

(d) Cost-sharing requirements, including co-payments, deductibles, and coinsurance for infertility coverage, must not be greater than the cost-sharing requirements for maternity coverage under the enrollee's health plan.

Subd. 3. **Definitions.**

For the purpose of this section, "infertility" means a disease affecting the reproductive system that (1) interferes with an individual's ability to achieve a pregnancy, or (2) decreases a woman's ability to carry a pregnancy to a live birth. Subd. 4.

Exclusion.

This section does not apply to health plans offered under chapter 256B or 256L.

EFFECTIVE DATE.

This section is effective August 1, 2022, and applies to all health plans issued or renewed on or after that date.

Appendix B. Key Search Terms for Literature Scan

Artificial insemination

Cryopreservation techniques

Female infertility

Gamete intrafallopian transfer

In vitro fertilization

Micromanipulation of gametes

Oocyte replacement

Oocyte retrieval

Ovulation induction

Reproductive system disease

Appendix C. Associated Codes

Diagnosis (ICD-10) Code(s)

Name	Code
Female infertility of hypothalamic pituitary origin	E23.0
Female infertility associated with Stein-Leventhal syndrome	E28.2
Female infertility associated with anovulation	N97
Complications associated with artificial fertilization	N98
Encounter for procreative management	Z31

CPT/HPSCS Code(s)

Name	Code(s)
Introduction procedures on the corpus uteri	58321–58323
Surgical procedures for in vitro fertilization	58970, 58974, 58976
Reproductive medicine procedures	89255, 89258, 89259, 89264, 89268, 89335, 89337, 89342, 89343, 89346, 89352-89354, 89356
Proprietary laboratory analyses	0254U

HCPCS Code(s)

Name	Code
Management of ovulation induction	S4042
Sperm procurement and cryopreservation services initial visit	S4030
Sperm procurement and cryopreservation services subsequent visit	S4031
Complete cycle, gamete intrafallopian transfer (GIFT), case rate	S4013
Documentation of medical reason(s) for not on a statin	G9940
In vitro fertilization including but not limited to identification and incubation of mature oocytes	S4011
Complete in vitro fertilization cycle, not otherwise specified, case rate	S4015
Frozen in vitro fertilization cycle, case rate	S4016
In vitro fertilization procedure cancelled before aspiration, case rate	S4020
In vitro fertilization procedure cancelled after aspiration, case rate	S4021
Donor services for in vitro fertilization (sperm or embryo), case rate	S4025

NDC Code(s)

Drug name	NDC
Cabergoline	00093542088
Cabergoline	49884067314
Cabergoline	50742011808
Cabergoline	59762100501
Cetrotide	44087122501
Crinone	00023615108
Crinone	52544025612
Endometrin	55566650003
Femara	00078024915
Follistim AQ	00052031301
Follistim AQ	00052031601
Follistim AQ	00052032601
Gonal-f	44087903001
Gonal-f RFF	44087900501

Drug name	NDC
Gonal-f RFF	44087900506
Gonal-f RFF Redi-ject	44087111501
Gonal-f RFF Redi-ject	44087111601
Gonal-f RFF Redi-ject	44087111701
Letrozole	00093762056
Letrozole	16729003410
Letrozole	16729003415
Letrozole	51991075910
Letrozole	51991075933
Letrozole	59651018030
Letrozole	60505325503
Letrozole	62756051183
Clomiphene citrate	49884070154
Clomiphene citrate	49884070155