COMMERCE DEPARTMENT

Evaluation of HF 5050 – Coverage for Genetic Testing and Imaging for Cancer

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

January 28, 2025

Report Prepared By

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. The period of data collection for any policies and literature analyzed for the proposed mandate ended on December 31, 2024.

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

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Upon request, this material will be made available in an alternative format such as large print, Braille or audio recording. Printed on recycled paper. A 508 compliant version of this report is forthcoming.

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Executive Summary

This proposed mandate would require a health issuer to provide coverage for clinical genetic testing and cancer imaging with no cost-sharing, except in the case of high deductible health plans (HDHPs). Coverage of clinical genetic testing services would apply to enrollees with a personal or family history of cancer, and imaging services would apply to enrollees with an increased risk of cancer, as determined by the National Comprehensive Cancer Network® (NCCN®).

The Patient Protection and Affordable Care Act includes coverage of preventive services as an essential health benefit with no cost-sharing. Preventive services under this requirement include cancer screening services for breast, cervical, colorectal, and lung cancer, and genetic testing services for breast cancer, following recommendations from the United States Preventive Services Task Force.

Minnesota has several laws related to coverage requirements for cancer screening and preventive services, including coverage requirements for diagnostic procedures for cancer, specifically routine screening procedures, preventive items and services without imposing cost-sharing requirements, and biomarker testing, including, but not limited to single gene tests and multigene panel tests. Seventeen other states have established or proposed health benefit mandates related to coverage for genetic testing and imaging for cancer, with variation in covered procedures, guideline requirements, and cost-sharing requirements.

Public comments on this mandate varied, with one respondent noting that this proposed coverage is critical for improving cancer outcomes and health equity. Other respondents noted concerns regarding the prohibition of prior authorization and cost-sharing, as well as anticipated increased costs from the proposed coverage that would be passed to consumers through premiums.

While there were no studies that evaluated the aggregate public health and economic impact of the proposed coverage, there is fairly robust evidence demonstrating the importance of early detection of cancer on health outcomes, particularly for individuals at higher risk of cancer. While the accuracy of tools available to screen for and diagnose cancer varies by imaging modality, cancer, and other factors, imaging and genetic testing recommendations set forth by the NCCN® are based on the most current evidence available related to cancer screening and outcomes. As cost is a significant barrier to receiving the recommended testing, there is evidence that reducing cost barriers for screening may increase adherence to physician-prescribed recommendations.

The proposed mandate is projected to result in a net increase of between $1.53 per member per month (PMPM) and $3.66 PMPM under for the non-public insured population in the first year and to potentially result in a net increase of between $5.18 and $9.21 PMPM in Year 10. Due to the broad nature of the mandate, the scope of the actuarial analysis was reduced to focus on specific cancer risks and associated tests for four of the most commonly diagnosed cancers in Minnesota (breast, lung, prostate, and colorectal).

The potential state fiscal impact of this mandate is as follows:

- Minnesota Management and Budget estimates the cost of this proposed mandate for the State Employee Group Insurance Program to be $460,200 for six months of Fiscal Year 2026 (FY 2026) and $966,420 for FY 2027.

- There are no estimated defrayal costs associated with this proposed mandate.
- There is no estimated impact for Minnesota Health Care Programs (e.g., Medical Assistance and MinnesotaCare), as the proposed health benefit mandate, as written, does not explicitly apply to these programs.

Introduction

In accordance with Minn. Stat. § 62J.26, the Minnesota Department of Commerce (Commerce), in consultation with the Minnesota Department of Health (MDH) and Minnesota Management and Budget (MMB), performs an evaluation of benefit mandate proposals. For evaluation criteria and required evaluation components, please review the Evaluation Report Methodology, available at https://mn.gov/commerce/insurance/industry/policy-data-reports/62j-reports/.

Bill Requirements

House File (HF) 5050 is sponsored by Representative Patty Acomb and was introduced in the 93rd Legislature (2023-2024) on March 20, 2024.

If enacted, this bill would require a health issuer to provide coverage for clinical genetic testing and cancer imaging at no cost-sharing (e.g., co-payment, deductible, or coinsurance), except in the case of high deductible health plans (HDHPs). Coverage of clinical genetic testing services would apply to enrollees with a personal or family history of cancer, and imaging services would apply to enrollees with an increased risk of cancer, as determined by the National Comprehensive Cancer Network® (NCCN®).

For HDHPs in conjunction with a health savings account, a health issuer may only apply cost-sharing at the minimum level necessary to preserve the enrollee's ability to maintain the health savings account as outlined in section 223 of the Internal Revenue Code of 1986.

This proposed mandate would apply to fully insured small and large group commercial health plans, individual market plans, and the State Employee Group Insurance Program (SEGIP). This would not apply to self-insured employer plans, grandfathered plans, and Medicare supplemental policies. While the proposed mandate, as written, doesn't explicitly apply to Minnesota Health Care Programs (e.g., Medical Assistance and MinnesotaCare), licensed health maintenance organizations (HMOs) that participate in the programs as managed care organizations (MCOs) are required to meet the requirements of coverage in chapter 62Q.

This bill would create Minn. Stat. § 62Q.452.

Key Terms

For the purpose of this bill and its evaluation:

- "Clinical genetic testing" means germline multigene testing for an inherited mutation associated with an increased risk of cancer performed in accordance with evidence-based clinical practice guidelines.
- "Imaging" means evidence-based cancer imaging modalities performed in accordance with the most recent version of the NCCN® clinical practice guidelines.

Related Health Conditions and Associated Services

Individuals at increased risk for cancer are defined as those with a personal and/or family history of cancer and those with a known inherited mutation associated with an increased cancer risk.[1] Clinical genetic testing is recommended for those with a personal or family history of cancer. There are some risk indicators, such as a personal and family history of Lynch Syndrome, Familial Adenomatous Polyposis (FAP), and Multiple Endocrine Neoplasia Type 1 and 2, that are associated with an increased risk of specific cancers.[2]

Clinical genetic testing covered by this proposed mandate refers to specific tests used to detect changes in genes, gene expression, or chromosomes in cells or tissues of an individual that may indicate a disease, condition or increased risk of developing a specific disease or condition.[1] Multigene testing may assess BRCA1 and BRCA2 for breast and ovarian cancer, APC for colorectal cancer, MLH1 and MSH2 for Lynch Syndrome, or other indicators for hereditary cancer syndrome genes. However, not all genetic testing is multigene testing, and some information contained in this evaluation may refer to the spectrum of genetic testing types. In those instances, we refer to "genetic testing" broadly.

Imaging services for cancer include, but are not limited to:

- Magnetic resonance imaging (MRI);
- Mammography;
- Computed tomography (CT) scans;
- Positron emission tomography (PET) scans; and
- Ultrasound.

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.

Relevant Federal Laws

The Patient Protection and Affordable Care Act (ACA) includes coverage of preventive services as an essential health benefit (EHB) requirement at no cost-sharing.[3] Preventive services must align with the United States Preventive Services Task Force (USPSTF) recommendations and include cancer screening services for breast, cervical, colorectal, and lung cancer, and genetic testing services for breast cancer.[4] At this time, the USPSTF finds that there is insufficient evidence to recommend genetic testing and imaging for all cancer types.

In 2023, a bill was introduced into Congress proposing to amend the Social Security Act to provide genetic testing for qualified Medicare enrollees with a family history of hereditary cancer.[5] The bill also aims to provide coverage for certain cancer screenings and preventive surgeries for individuals with a high risk of developing a preventable cancer due to a germline inherited mutation. If passed, this bill would establish federal requirements for coverage of genetic testing of hereditary cancers.

Medicare covers advanced genetic testing, specifically multigene testing, for hereditary cancer. This coverage is specific to patients with ovarian or breast cancer who have a clinical indication and risk factors for germline testing and have not been previously tested with the same germline test using next-generation sequencing.[6] This Medicare coverage does not include genetic testing for all types of cancer.

Relevant Minnesota Laws

Minnesota has several laws related to coverage requirements for cancer screening and preventive services. Minn. Stat. § 62A.30 requires coverage for diagnostic procedures for cancer, specifically routine screening procedures.[7] This does not include genetic testing or imaging used to detect cancer. Minn. Stat. § 62Q.46 requires that health plans provide coverage for preventive items and services without imposing cost-sharing requirements.[8] Genetic testing and cancer screening may fall under "preventive items and services" for individuals at high risk for cancer and therefore would be covered at no cost-sharing from existing requirements. Additionally, Minn. Stat. § 62Q.473 requires health plans to cover biomarker testing, including, but not limited to single-analyst tests, multigene panel tests, and whole genome sequencing.[9]

State Comparison

Seventeen states have established or proposed health benefit mandates related to coverage for genetic testing and imaging for cancer. However, these mandates vary in terms of cancer types and specific services covered. Table 1 outlines the differences between established or proposed mandates, as well as details on cost-sharing limits, whether a state follows NCCN® guidelines, or other noteworthy differences from Minnesota's proposed mandate.[10] Illinois, Kentucky, and Oklahoma are the only states with established or proposed mandates similar to the proposed Minnesota mandate. These states focus on genetic testing and screening for all types of cancer, adhere to the guidelines set by the NCCN®, and require either no cost-sharing or a maximum cost limit of $50 for enrollees.[11–14] There are four other states that have established or proposed mandates focused on coverage for genetic testing: one of the states proposes to cover all cancer types (Arizona), while three states only cover genetic testing for colorectal cancer (Louisiana, Vermont, and Virginia). Additionally, there are twelve states either requiring or proposing to require coverage for breast cancer imaging (Arizona, Delaware, Georgia, Iowa, Maryland, Montana, New Hampshire, New Mexico, Rhode Island, Tennessee, Vermont, and Washington).

Table 1. State Health Benefit Mandates on Genetic Testing and Imaging for Cancer

State(s)	Proposed vs. Passed	Cancer Types Covered	Coverage Type	Key Requirements Differences
Illinois[11]	Passed	All cancer types	Genetic testing and imaging	Co-pay for genetic testing is limited to no more than $50. Imaging is only covered if genetic test is positive. Follows NCCN® guidelines.
Arizona[15]	Proposed	All cancer types	Genetic testing	Coverage at no cost-sharing and follows NCCN® guidelines.
Kentucky[12,13]	Passed	All cancer types	Genetic testing and imaging (screening)	Coverage for screening does not apply if defrayal is required. Both mandates follow NCCN® guidelines and require coverage at no cost-sharing.
Oklahoma[14]	Proposed	All cancer types	Genetic testing and imaging (screening)	Coverage at no cost-sharing and follows NCCN® guidelines.
Louisiana,[16] Vermont,[17] Virginia[18]	Passed	Colorectal cancer	Genetic testing	Louisiana follows NCCN® guidelines; Vermont and Virginia require coverage at no cost-sharing and follows USPSTF guidelines
Delaware[19]	Proposed	Breast cancer	Imaging	Coverage for diagnostic breast exams and supplemental breast screening exams with cost-sharing requirements.
Arizona,[20] Georgia[21], Iowa,[22] Maryland,[23] Montana,[24] New Hampshire,[25] New Mexico,[26] Rhode Island,[27] Tennesse,[28] Vermont,[29] Washington[30]	Passed	Breast cancer	Imaging	Arizona follows NCCN® guidelines; Georgia removed the NCCN® requirement; Maryland conducted 62J equivalent evaluation;[31] Montana, New Hampshire, New Mexico, Vermont, and Washington require coverage at no cost-sharing

Public Comments Summary

Commerce solicited public input on the potential health benefit mandate through a request for information (RFI) posted to Commerce's website and the Minnesota State Register. The summary below represents only the opinions and input of the individuals and/or organizations who responded to the RFI.

Key Stakeholder Comment Themes

For this proposed mandate, Commerce received RFI responses from four commercial health issuers, one health care organization, and four advocacy organizations.

Access and Health Disparities. One respondent emphasized the importance of access to genetic testing and imaging for cancer, particularly for individuals with hereditary mutations, who may require additional imaging due to elevated lifetime risk. They stressed the importance of addressing disparities in access, referencing data from a 2020 American Association for Cancer Research report showing significantly lower prescription of genetic testing for young Black women with breast cancer compared to their white counterparts.

Financial Impact. One respondent pointed out that the financial impact of the proposed mandate is expected to be minimal, using an example from Kentucky where premium increases ranged from $0.04 to $0.78 per member per month (PMPM), with no additional state costs related to defrayal due to existing preventive care coverage requirements.[32]

General Comments. One of the respondents elaborated that Minnesota's implementation of Minn. Stat. § 62M.07, effective January 1, 2026, prohibits prior authorization for certain medical conditions, including outpatient mental health or substance use disorder treatment, antineoplastic cancer treatment per National Comprehensive Cancer Network® guidelines (excluding medications), preventive services, pediatric hospice care, neonatal abstinence program treatment by pediatric pain or palliative care specialists, and ongoing chronic condition treatment. Three respondents agreed that without prior authorization for genetic testing and cancer imaging services, the proposed mandate could increase health care costs and negatively affect health outcomes for Minnesotans.

Another respondent noted that all of the proposed health benefit mandates have the potential to broadly improve health outcomes for Minnesotans by enhancing their quality of life, supporting individuals, families, and caregivers, and increasing workforce participation, while also benefiting the broader health care system.

Cost Estimates Provided in Stakeholder Comments

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

- Given the current levels of cost-sharing, MMB's health plan administrators estimated the average state fiscal impact of the proposed mandate to be $0.59 PMPM, as the bill would expand current health care coverage to all cancer-related imaging and genetic testing services with no member cost-sharing.
- Respondents confirmed that some commercial issuers in Minnesota already cover most genetic testing and imaging services for cancer, but this coverage is subject to specific criteria, cost-sharing, and prior authorization requirements. Some respondents reported that, if enacted, this proposed mandate may result in an estimated cost increase of less than $1.35 PMPM.

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

Evaluation of Proposed Health Benefit Mandate

Methodology

The following section includes an overview of the literature review and actuarial analysis performed to examine the potential public health and economic impact of the mandate. The literature review includes moderate- to high-quality relevant peer-reviewed literature and/or independently conducted research with domestic data that was published within the last 10 years and is related to the public health, economic, or legal impact of the proposed health benefit mandate. For further information on the literature review methodology, please reference https://mn.gov/commerce/insurance/industry/policy-data-reports/62j-reports/.

Public Health Impact

Literature Review

Background. Early detection of cancer is the broader goal of clinical genetic testing and imaging, given the impact of early detection in improving the rates of morbidity and mortality for certain cancers.[33,34] For those at high risk of cancer, particularly those with genetic risk factors associated with more aggressive cancers, early detection may be even more critical. Clinical genetic testing and imaging, the two services covered by the proposed mandate, are each used for different but congruent purposes for individuals at high risk of cancer. Genetic testing, which may refer to both single-gene testing and germline multigene testing (which is specifically covered by this mandate), is used to identify individuals at higher risk for certain types of cancer, and potentially facilitate personalized prevention, early detection, and treatment plans if cancer is diagnosed.[35,a] Imaging is used for screening, diagnostic follow-up, and monitoring tumor growth. Individuals at high risk for cancer may require different methods of screening than those at average risk.[36,37] The frequency of imaging, type of imaging used, and age at which imaging for screening begins may be informed by results from genetic testing.

Cancer Prevalence in Minnesota. While coverage under this mandate applies to all risks of cancer indicated by the NCCN® guidelines, there are several cancers that occur most frequently among Minnesotans and which may be most routinely screened for. As of 2021, some of the most common newly diagnosed cancers in Minnesota were breast, lung, prostate, and colorectal cancer.[38] There are different risk factors for each of these cancers that may significantly increase an individual's risk for cancer, including but not limited to, a personal or family history of cancer, specific lifestyle factors, and genetic markers. Given the broad range of risk factors for each of these cancers, as well as other less common cancers, the percentage of individuals who would be considered high-risk for the purposes of the proposed mandate is unknown. According to one study, approximately three percent of the population carry a genetic variant that could cause cancer and may be treatable if detected early,

[a] Not all genetic testing is germline multigene testing, and the literature in this review that relates to standards of care and health outcomes refers to the full array of genetic testing.

which include breast and ovarian cancer as well as Lynch syndrome.[39] Nationally, around 34% of individuals report a family history of cancer from a first-degree relative.[40]

Consensus Organizations and Guidelines for Genetic Testing and Imaging for Cancer. The proposed coverage for clinical genetic testing and imaging explicitly aligns with the screening recommendations set forth by the NCCN® guidelines. While there are other guidelines, such as screening recommendations from the USPSTF and the American Cancer Society, the NCCN® guidelines provide screening and diagnostic algorithms specifically for individuals with high-risk factors.[41–43] Widely accepted and applied in clinical practice, these guidelines are routinely updated through rigorous methods that include a review of the current biomedical data with a focus on quality ratings, consensus development, and a multidisciplinary evaluation of the associated health outcomes. These NCCN® guidelines provide the most specific recommendations for individuals at high risk for certain cancers with an attempt to balance the risks associated with missed or delayed diagnosis with unnecessary and costly testing.[41] Genetic testing is recommended by the USPSTF and NCCN® as a screening method for certain types of cancer, which may inform the type of imaging modality used for screening, frequency of screening, and age at which screening might occur.[44]

Many organizations, including the NCCN and USPSTF, seek to provide more individualized screening recommendations to balance the harms of delayed diagnosis and supplemental testing with the potential harms of false positives and overdiagnosis.[45] False positives rates vary by screening mechanism, and may result in unnecessary testing, cost, and psychological stress.[46] Overdiagnosis, referring to the diagnosis of cancer that may otherwise be asymptomatic, may result in unnecessary costs and invasive treatment.[45] Estimating the risk and prevalence of overdiagnosis is methodologically challenging, and has not been calculated for the high-risk population relevant to the proposed mandate.[45,47] However, for individuals with specific high-risk factors, there is largely clinical consensus that the benefits of evidence-based screening (imaging and genetic testing) outweigh the risks associated with false positives and overdiagnosis.[45] This varies by cancer type, and is part of the ongoing evolution of clinical practice guidelines.

Guideline Recommendations for Clinical Genetic Testing

The inclusion of genetic testing in the NCCN® guidelines echoes the proposed mandate's coverage criteria for those with a personal or family history of cancer. The NCCN® guidelines recommend genetic testing for individuals with a personal or family history of inherited cancer types, such as early-onset cancers, multiple cancers in the same individual, or cancers with a known genetic link (e.g., BRCA mutations for breast and ovarian cancer).[48] Specific genes may indicate as much as a two to three-fold relative risk of developing particular cancers and potentially more aggressive forms of cancer.[44,49] Testing is also recommended by NCCN® guidelines for individuals with specific racial and/or ethnic backgrounds.[50] The guidelines specifically recommend multigene panels for those with an unclear or complex family history.[48] The specific risk factors and associated genetic testing recommendations are summarized in Table 2. This table indicates where genetic testing is generally recommended, and for what risk factors the NCCN® guidelines specifically recommend multigene testing.

Table 2. Genetic Testing Guidelines for Common Cancers in Minnesota

Cancer	Personal History	Familial History	Multigene Testing
Breast[48,50]	-Breast cancer diagnosed at age 50 or younger -Triple-negative breast cancer diagnosed at age 60 or younger -History of both breast and ovarian cancer or multiple breast cancers	-Family history of breast cancer, ovarian cancer, or other cancers associated with hereditary syndromes -Ashkenazi Jewish descent -Individuals with a known gene mutation (e.g., BRCA1 or BRCA2) in a family member	-Individuals with a history of breast, ovarian, or related cancers -Complex family history and/or when hereditary cancer syndromes are suspected but not limited to BRCA1 and BRCA2 mutations
Colorectal[50-51]	-Colorectal cancer diagnosed at age 50 or younger -Multiple colorectal cancers or other cancers associated with hereditary syndromes -Individuals with known hereditary syndromes -Personal history of colorectal growths	-Family history of colorectal cancer, particularly when cancer occurs at young age or in multiple family members -History of familial colorectal growths	-Individuals with family history suggestive of hereditary colorectal cancer syndromes (e.g., MLH1, MSH2, MSH6, PMS2, APC, and MUTYH mutations) -Complex family history
Prostate[52,53]	-Prostate cancer diagnosed at age 60 or younger -Individuals with known or suspected hereditary cancer syndromes -Personal history of prostate cancer combined with other cancers associated with a hereditary syndrome	-Family history of prostate cancer, particularly with early-onset prostate cancer in multiple family members -Family history of mutations in BRCA1, BRCA 2, or other gene mutations -Family history of prostate cancer combined with other cancers associated with a hereditary syndrome	-Individuals with advanced or widely spread (metastatic) prostate cancer, particularly those with a personal or family history of cancer -Complex family history
Lung[54]	-History of cancer, regardless of smoking history -History of other cancers that may suggest underlying hereditary cancer syndrome -History of non-small cell lung cancer (NSCLC) or advanced NSCLC to identify genetic mutations (e.g., EGFR, ALK, ROS1, BRAF, MET, RET)	-Family history of lung cancer, especially with early-onset lung cancer or multiple cases within the family	-Individuals with a personal or family history suggestive of a hereditary cancer (e.g., mutations in TP53, BRCA1, BRCA2, or RAD51) -Broader hereditary cancer syndrome is suspected -Complex family history

Imaging for Screening and Diagnostic Follow-up

As previously stated, imaging may be used at different stages for screening and prevention purposes for individuals and may vary by individual risk for certain cancers. The following section covers more specific NCCN® guideline recommendations that would apply to the proposed coverage requirements for screening and detection in high-risk individuals. The NCCN® guidelines provide specific guidance for screening age and modality for individuals at high risk for cancer, compared to those used for routine screening for individuals at average risk for cancer (See Table 3).

Table 3. Routine Screening Guidelines and Mechanisms for Common Cancers for Average Risk Individuals

Cancer	Routine Imaging Screening Guideline	Standard Imaging Mechanism
Breast[55]	Women aged 40 and older every 1 to 2 years	Mammography
Colorectal[56]	Individuals aged 45 and older every 10 years	Colonoscopy
Prostate[53]	Men aged 50 to 70 with follow-up timeframe dependent on results	Prostate-specific antigen (PSA) blood test and digital rectal examination

Breast Cancer. For women with a high risk of breast cancer, such as those with a strong family history, known genetic mutations (e.g., BRCA1 or BRCA2) or personal history of certain breast conditions, earlier and more frequent screening may be recommended compared to recommendations for individuals at average risk (See Table 3).[48] In addition to mammography, other imaging techniques, such as breast ultrasound or MRI, may be used depending on individual risk factors.[57] MRI is typically indicated for women with a significantly increased risk of breast cancer, such as those with a known genetic mutation or a history of radiation therapy to the chest, or for further evaluation of abnormal findings. Imaging for breast cancer is also indicated when there are signs or symptoms of breast cancer, such as a detectable lump or changes in breast size or shape.[48] In these cases, diagnostic mammography and ultrasound may be used to investigate and characterize abnormal findings, with MRI occasionally used to assess the extent of the disease or guide biopsy.[48] These imaging techniques are used to confirm the diagnosis, assess tumor characteristics, and guide further treatment decisions.[36]

Colorectal Cancer. For individuals at high risk for cancer, specifically those with a family history of colorectal cancer, inherited conditions like Lynch syndrome or FAP, or a personal history of colorectal polyps, inflammatory bowel disease, or other risk factors, earlier and more frequent screening may be necessary.[51,58] Diagnostic imaging is indicated when there are symptoms suggestive of colorectal cancer, such as unexplained weight loss, rectal bleeding, changes in bowel habits, or when screening tests show abnormal findings.[51] Imaging techniques, such as CT scans or MRI, are used to assess the size, location, and spread (staging) of tumors.[51] These imaging methods help confirm the diagnosis, determine the stage of cancer, guide treatment decisions, and monitor for recurrence.

Prostate Cancer. For men at higher risk, such as those with a family history of prostate cancer, Black men, or those with known genetic mutations (e.g., BRCA1 or BRCA2), screening may start earlier, typically between ages 40 and 45.[52] If screening tests, such as an elevated PSA or abnormal digital rectal exam findings, suggest the possibility of prostate cancer, further diagnostic imaging may be required.[52] Ultrasound may be used to guide prostate biopsy in cases where imaging is needed for more accurate tissue sampling, or CT and bone scans may be considered to evaluate abnormal findings for men at high risk of prostate cancer.[52]

Lung Cancer. Routine screening is recommended for individuals at high risk of lung cancer, such as adults aged 50 to 80 years with a significant smoking history (defined in "pack-years" as greater than or equal to the equivalent of 20 packs a year for the duration of an individual's smoking history) and greater than or equal to a 20 year history of smoking cigarettes.[54] Annual screening is typically done using low-dose CT scans to detect early-stage lung cancer in these high-risk individuals.[54,59] Diagnostic imaging is indicated for patients presenting with symptoms suggestive of lung cancer, such as persistent cough, unexplained weight loss, chest pain, or coughing up blood.[54] In such cases, imaging studies such as chest X-rays or CT scans are used to evaluate abnormalities in the lungs, such as masses, tumors, or areas of concern. If lung cancer is suspected based on imaging findings, further diagnostic imaging, such as PET scans, may be indicated.

Clinical Effectiveness of Genetic Testing. While most studies have not evaluated the long-term impact of multigene testing, some studies have investigated the potential impact of clinical genetic testing on early detection. Several studies have found that multigene testing for individuals identified as high risk for certain cancers, as defined in NCCN® guidelines, resulted in changes in clinical management strategies for individuals at risk for colorectal cancer.[44,60] One study indicated the specific utility of the most expansive form of genetic testing through multigene testing because it identified high-risk factors that were not detected through single-gene testing.[61] However, the majority of genetic testing literature focuses on, or include, single-gene testing as opposed to germline multigene panels. As a result, the potential impact of expanded coverage for multigene testing is difficult to assess from the available literature. Additionally, most studies do not differentiate among those with average and high cancer risk and thus the effectiveness of testing among high-risk individuals cannot be directly assessed from the current literature.[44]

Clinical Effectiveness of Imaging. Given the range of cancers and imaging modalities used for screening and diagnostic follow-up, it is beyond the scope of this evaluation to assess the effectiveness of all potentially covered imaging modalities in cancer detection. However, the recommendations from NCCN® for specific cancer types are informed by the larger body of evidence relating to imaging modalities that best detect cancer based on currently available evidence, expert opinion, and modalities that are appropriate for specific high-risk groups based on cost and relative susceptibility.[41,42] The screening and diagnostic follow-up imaging included in the NCCN® guidelines are based on the latest peer-reviewed literature on optimal clinical outcomes for individuals at high risk.[41]

Health Equity

Genetic susceptibility to cancer, cancer morbidity and mortality, and rates of delayed or missed diagnosis are not equal across populations.[62,63] For example, Black and Hispanic women often face later-stage diagnoses and poorer survival outcomes for breast cancer and are least likely to be prescribed genetic testing.[62] In addition to racial and ethnic disparities related to cancer risk, socioeconomic and geographic factors also contribute to cancer outcomes.[63,64] While genetic testing has become more accessible in recent years, the literature suggests many patients are not receiving these services.[39,64,65] Access to health insurance has been noted as a barrier to receiving cancer screening and follow-up treatment, and disparities exist among individuals with public and private plans.[64] Even for those with private insurance, there is variation in cost-sharing for these services across plans and providers.[64] Many times the high out-of-pocket costs for services contribute to the disparities described, resulting in delayed or missed diagnoses.[64,65] The degree to which the proposed coverage would

address disparities related to access and resulting health outcomes has not been specifically evaluated in the current literature.

Economic Impact

Actuarial Analysis[b]

Objective

This actuarial analysis includes analysis of the current prevalence of risk factor diagnoses, current levels of coverage and utilization, and potential effects of increased utilization with expanded coverage on cost-sharing, premiums, and overall expenditures. Given the broad range of cancers, cancer-specific tests, and high-risk factors that may be applicable to the mandate, the actuarial analysis focused on four of the most common cancers in Minnesota, which include breast, prostate, colorectal, and lung cancer, and the associated population and testing parameters recommended in the NCCN® guidelines for individuals at high-risk for those cancer types.

Assumptions and Approach

MDH provided the Actuarial Research Corporation (ARC) with tabulations from the Minnesota All Payer Claims Database (MN APCD) for years 2018-2022 for all high-risk factor diagnoses for colorectal, breast, lung and prostate cancers, including personal/family history diagnoses for multigene germline tests. MDH provided the claims of associated imaging and screening procedures for individuals at high-risk as a snapshot of current prevalence and procedure utilization, expenditures, and enrollee cost-sharing for diagnostic imaging and cancer screening for Minnesota commercial health plan enrollees.[66]

Not all commercial insurance plans are required to provide data to the MN APCD,[67] and this proposed mandate would only apply to certain plans. As such, the insurance plans impacted by the proposed mandate may not perfectly align with those represented in the MN APCD. However, claims that are not captured in the MN APCD largely represent health plans that are not subject to the requirements of the state health benefit mandate and are not in the scope of the evaluation. All available non-public claims data from the MN APCD were used to improve the robustness and accuracy of PMPM estimates.

The following criteria were used by MDH to identify commercial enrollees with a high-risk factor diagnosis and claims for associated imaging or screening procedures:

[b] 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.

- Aligning with the NCCN® clinical practice guidelines for colorectal, breast, lung, or prostate cancer, enrollees were identified as having a high-risk factor diagnosis if they had one of the International Classification of Diseases, Tenth Revision (ICD-10 (ICD-10) diagnosis codes in Appendix C.
- Enrollees were identified as having a personal/family history diagnosis in accordance with evidence-based clinical practice guidelines necessitating multigene germline testing if they had one of the ICD-10 diagnosis codes in Appendix C.
- The Current Procedural Terminology (CPT)/Healthcare Common Procedure Coding System (HCPCS) procedure codes in Appendix C were used to identify procedures associated with imaging and screening for the identified cancer types and multigene germline testing.

Developing the methodology and related assumptions for the data collection and analysis for this proposed mandate was complex, given the variation in high-risk factors, overlap in use for some testing mechanisms, as well as current coverage and utilization under current law. With limited data, this actuarial estimate relied on the most robust metrics available at the time of analysis.

Data for enrollees in 2018–2022 who had a qualifying high-risk factor or personal/family history diagnosis, based on the identified ICD-10 diagnosis codes, and the utilization and expenditures for imaging and screening procedures for these enrollees were tabulated by MDH. Total expenditures and enrollee cost-sharing were tabulated for each of the cancer types. For the historical period 2018–2022, as tabulated by MDH, the proportion of enrollees with a high-risk factor diagnosis for colorectal cancer trended steadily upward from 7.1% in 2018 to 9.9% in 2022. For the other identified cancer-specific high-risk factor diagnoses, the prevalence was fairly stable throughout the historical period with no trend. Breast cancer ranged from 1.33% to 1.53%, lung cancer ranged from 2.8% to 3.3%, prostate cancer ranged from 0.37% to 0.42% and multigene germline testing ranged from 4.2% to 4.7% among the full commercial population in the MN APCD (which, per MDH, includes approximately 40% of the total commercial market in Minnesota).[67]

For the purposes of this analysis, high-risk factor prevalence, utilization of imaging and screening procedures and total expenditures were projected at current law and for three scenarios based on different assumptions. The per-user expenditure rates for each of the three categories were trended forward to the projection period 2026–2035 using category-specific projection factors derived from the National Health Expenditure data compiled by the Centers for Medicare & Medicaid Services (CMS)[68] as well as the 2024 Medicare Trustees Report.[69]

The current law scenario assumes a 3% annual increase in the prevalence of diagnoses indicating high-risk for colorectal cancer, a 5% annual increase for multigene germline testing[c] and constant prevalence of high-risk factor diagnoses of 1.35%, 3.15% and 0.39% for breast, lung and prostate cancers, respectively.

The low-impact scenario, like the current law scenario, assumes a 3% annual increase in the prevalence of colorectal high-risk factor diagnoses, a 5% annual increase for multigene germline testing and constant

[c] A small trend of increasing prevalence for multigene germline testing was included throughout the duration of the projection to account for expanding development of available tests and potential for gene linkages to be newly discovered.

prevalence of high-risk factor diagnoses of 1.35%, 3.15% and 0.39% for breast, lung and prostate cancers, respectively; it also assumes an initial 50% utilization rate for enrollees with a high-risk factor diagnosis, increasing by 1 percentage point each year of the projection.[70] Additionally, due to the single instance nature of multigene germline testing compared to repeat testing of high-risk individuals for the other identified cancer types, it was assumed that among the subset of the population that would utilize multigene germline testing, 40% would utilize in the first year, 20% in the 2nd year, 10% in the 3rd year and 5% in all subsequent years of the projection.

The moderate-impact scenario, like the current law scenario, assumes a 3% annual increase in the prevalence of colorectal high-risk factor diagnosis, a 5% annual increase for multigene germline testing and constant prevalence of high-risk factor diagnoses of 1.35%, 3.15% and 0.39% for breast, lung and prostate cancers, respectively; it also assumes an initial 55% utilization rate for enrollees with a high-risk factor diagnosis, increasing by 1 percentage point each year of the projection. Additionally, this scenario used the same phase-in assumptions for the multigene germline testing utilization.

The high-impact scenario, like the current law scenario, assumes a 3% annual increase in the prevalence of colorectal high-risk factor diagnosis, a 5% annual increase for multigene germline testing and constant prevalence of high-risk factor diagnoses of 1.35%, 3.15% and 0.39% for breast, lung, and prostate cancers, respectively; it also assumes an initial 60% utilization rate for enrollees with a high-risk factor diagnosis, increasing by one percentage point each year of the projection. Additionally, this scenario used the same phase-in assumptions for the multigene germline testing utilization.

The actual population impacted by the proposed mandate is unknown. While certain plans may not be impacted directly by the proposed mandate, individuals within those plans may be impacted by broader changes to insurance design in response to the mandate. Therefore, results for prevalence, utilization, and expenditures were scaled to the entire non-publicly insured market in Minnesota for illustrative purposes. This does not affect PMPM estimates, which are based on prevalence and per-user expenditure rates. The overall Minnesota population projections for 2026 (the base year) through 2035 are based on the figures published by the Minnesota State Demographic Center.[71] Given the historic non-public health insurance coverage levels from Minnesota Public Health Data Access, 65% of the total state population under the age of 65 were assumed to be included in the non-public insured population.

Results

This analysis projects high-risk factor and personal/family history diagnoses prevalence in Minnesota for the total non-public insured population as well as current law utilization and expenditures for diagnostic imaging and screening for the identified cancer types, then projects potential utilization and total expenditures under the mandate's expanded coverage.

Table 4 shows the total projected high-risk factor and personal/family history diagnoses prevalence, alongside projected current law utilization and expenditures based on historic claims.

Table 5 shows the total projected high-risk factor and personal/family history diagnoses prevalence, projected utilization and expenditures, and net projected effect on the total non-public insured population PMPM under the low-impact scenario assumption set.

Table 6 shows the total projected high-risk factor and personal/family history diagnoses prevalence, projected utilization and expenditures, and net projected effect on the total non-public insured population PMPM under the moderate-impact scenario assumption set.

Table 7 shows the total projected high-risk factor and personal/family history diagnoses prevalence, projected utilization and expenditures, and net projected effect on the total non-public insured population PMPM under the high-impact scenario assumption set.

Table 4. Total Projected Current Law High-Risk Factor Prevalence and Expenditures[d]

	Population		Number of enrollees with specific high-risk factors for coverage eligibility					Current law expenditures	
Year	Total Minnesota population	Non-public insured population	High-risk factors for colorectal cancer	High-risk factors for breast cancer	High-risk factors for lung cancer	High-risk factors for prostate cancer	High-risk factors for multigene testing eligibility	Plan paid	Cost-sharing
2026	5,830,008	3,067,013	303,634	41,405	96,611	11,961	154,090	$333,927,095	$9,522,992
2027	5,854,785	3,064,627	312,500	41,372	96,536	11,952	161,668	$363,035,076	$10,280,731
2028	5,878,663	3,070,240	322,465	41,448	96,713	11,974	170,062	$392,457,540	$11,038,101
2029	5,901,603	3,075,295	332,685	41,516	96,872	11,994	178,860	$427,370,701	$11,940,050
2030	5,923,535	3,079,734	343,161	41,576	97,012	12,011	188,074	$462,826,881	$12,846,762
2031	5,944,374	3,083,514	353,889	41,627	97,131	12,026	197,720	$501,360,608	$13,828,455
2032	5,964,016	3,086,623	364,873	41,669	97,229	12,038	207,815	$543,003,412	$14,885,022
2033	5,982,648	3,095,934	376,953	41,795	97,522	12,074	218,864	$589,305,673	$16,057,823
2034	6,000,234	3,104,721	389,364	41,914	97,799	12,108	230,459	$639,463,216	$17,323,546
2035	6,016,749	3,112,910	402,103	42,024	98,057	12,140	242,621	$693,772,717	$18,689,171

[d] The state health benefit mandates generally only apply to fully insured individual and small group health plans regulated in Minnesota, except where explicitly indicated. Prevalence, utilization, and expenditures were scaled to the entire non-publicly insured market in Minnesota for illustrative purposes. This does not impact PMPM estimates. For more details, see the *Assumptions and Approach* section.

Table 5. Total Projected High-Risk Factor Prevalence and Expenditures and Total Non-Public Insured PMPM, Low Impact[e]

	Population		Projected expenditures						
Year	Total Minnesota population	Non-public insured population	Colorectal	Breast	Lung	Prostate	Multigene	Total plan paid	Total non-public insured PMPM change
2026	5,830,008	3,067,013	$298,342,233	$19,429,652	$30,834,436	$15,911,764	$25,883,643	$390,401,728	$1.53
2027	5,854,785	3,064,627	$331,902,521	$20,985,707	$33,303,862	$17,186,083	$14,677,203	$418,055,375	$1.50
2028	5,878,663	3,070,240	$366,977,620	$22,527,625	$35,750,852	$18,448,825	$8,271,693	$451,976,616	$1.62
2029	5,901,603	3,075,295	$408,535,549	$24,348,289	$38,640,207	$19,939,845	$4,693,607	$496,157,498	$1.86
2030	5,923,535	3,079,734	$452,086,967	$26,159,134	$41,513,979	$21,422,822	$5,294,817	$546,477,718	$2.26
2031	5,944,374	3,083,514	$500,194,044	$28,099,764	$44,593,716	$23,012,086	$5,971,997	$601,871,606	$2.72
2032	5,964,016	3,086,623	$553,080,725	$30,165,842	$47,872,537	$24,704,085	$6,731,652	$662,554,840	$3.23
2033	5,982,648	3,095,934	$612,551,878	$32,436,395	$51,475,855	$26,563,536	$7,600,253	$730,627,917	$3.80
2034	6,000,234	3,104,721	$678,044,709	$34,858,670	$55,319,953	$28,547,240	$8,576,214	$805,346,786	$4.45
2035	6,016,749	3,112,910	$750,118,784	$37,440,815	$59,417,762	$30,661,868	$9,672,069	$887,311,298	$5.18

[e] The state health benefit mandates generally only apply to fully insured individual and small group health plans regulated in Minnesota, except where explicitly indicated. Prevalence, utilization, and expenditures were scaled to the entire non-publicly insured market in Minnesota for illustrative purposes. This does not impact PMPM estimates. For more details, see the *Assumptions and Approach* section.

Table 6. Total Projected High-Risk Factor Prevalence and Expenditures and Total Non-Public Insured PMPM, Moderate Impact[f]

	Population		Projected expenditures						
Year	Total Minnesota population	Non-public insured population	Colorectal	Breast	Lung	Prostate	Multigene	Total plan paid	Total non-public insured PMPM change
2026	5,830,008	3,067,013	$328,176,457	$21,372,617	$33,917,879	$17,502,940	$28,472,007	$429,441,900	$2.60
2027	5,854,785	3,064,627	$364,441,983	$23,043,129	$36,568,946	$18,870,994	$16,116,144	$459,041,196	$2.61
2028	5,878,663	3,070,240	$402,263,930	$24,693,743	$39,188,434	$20,222,751	$9,067,048	$495,435,906	$2.80
2029	5,901,603	3,075,295	$447,076,639	$26,645,298	$42,285,510	$21,820,962	$5,136,400	$542,964,809	$3.13
2030	5,923,535	3,079,734	$493,946,871	$28,581,276	$45,357,865	$23,406,417	$5,785,078	$597,077,507	$3.63
2031	5,944,374	3,083,514	$545,666,230	$30,654,288	$48,647,690	$25,104,093	$6,514,906	$656,587,206	$4.20
2032	5,964,016	3,086,623	$602,462,933	$32,859,221	$52,146,871	$26,909,806	$7,332,692	$721,711,523	$4.82
2033	5,982,648	3,095,934	$666,284,498	$35,281,693	$55,991,281	$28,893,671	$8,266,942	$794,718,086	$5.53
2034	6,000,234	3,104,721	$736,496,840	$37,863,727	$60,088,914	$31,008,209	$9,315,543	$874,773,233	$6.32
2035	6,016,749	3,112,910	$813,688,173	$40,613,766	$64,453,165	$33,260,331	$10,491,736	$962,507,171	$7.19

[f] The state health benefit mandates generally only apply to fully insured individual and small group health plans regulated in Minnesota, except where explicitly indicated. Prevalence, utilization, and expenditures were scaled to the entire non-publicly insured market in Minnesota for illustrative purposes. This does not impact PMPM estimates. For more details, see the *Assumptions and Approach* section.

Table 7. Total Projected High-Risk Factor Prevalence and Expenditures and Total Non-Public Insured PMPM, High Impact[g]

	Population		Projected expenditures						
Year	Total Minnesota population	Non-public insured population	Colorectal	Breast	Lung	Prostate	Multigene	Total plan paid	Total non-public insured PMPM change
2026	5,830,008	3,067,013	$358,010,680	$23,315,582	$37,001,323	$19,094,117	$31,060,372	$468,482,073	$3.66
2027	5,854,785	3,064,627	$396,981,446	$25,100,551	$39,834,031	$20,555,904	$17,555,086	$500,027,017	$3.73
2028	5,878,663	3,070,240	$437,550,240	$26,859,860	$42,626,016	$21,996,676	$9,862,403	$538,895,196	$3.97
2029	5,901,603	3,075,295	$485,617,728	$28,942,306	$45,930,812	$23,702,079	$5,579,194	$589,772,120	$4.40
2030	5,923,535	3,079,734	$535,806,775	$31,003,418	$49,201,752	$25,390,011	$6,275,339	$647,677,296	$5.00
2031	5,944,374	3,083,514	$591,138,415	$33,208,812	$52,701,664	$27,196,101	$7,057,814	$711,302,807	$5.67
2032	5,964,016	3,086,623	$651,845,140	$35,552,599	$56,421,204	$29,115,528	$7,933,733	$780,868,205	$6.42
2033	5,982,648	3,095,934	$720,017,119	$38,126,990	$60,506,707	$31,223,806	$8,933,631	$858,808,254	$7.25
2034	6,000,234	3,104,721	$794,948,970	$40,868,785	$64,857,876	$33,469,178	$10,054,871	$944,199,680	$8.18
2035	6,016,749	3,112,910	$877,257,561	$43,786,716	$69,488,569	$35,858,795	$11,311,403	$1,037,703,044	$9.21

[g] The state health benefit mandates generally only apply to fully insured individual and small group health plans regulated in Minnesota, except where explicitly indicated. Prevalence, utilization, and expenditures were scaled to the entire non-publicly insured market in Minnesota for illustrative purposes. This does not impact PMPM estimates. For more details, see the *Assumptions and Approach* section.

The total statewide non-public insured population potential plan paid expenditures for cancer imaging and screening procedures for high-risk enrollees are projected to be between $390 million under the low-impact scenario and $468 million under the high-impact scenario in Year 1, and to increase to between $887 million under the low-impact scenario and $1.04 billion under the high-impact scenario in the 10th and final year of the projection period. These expenditures are projected to result in a net increase of between $1.53 PMPM under the low-impact assumption set and $3.66 PMPM under the high-impact assumption set for the total non-public insured population in the first year and to result in a net increase of between $5.18 and $9.21 PMPM in Year 10. It is worth noting that, in projections under current law and the mandate, colorectal cancer screening accounts for the majority of high-risk individuals (above 50%) and an overwhelming proportion of the total expenditures for imaging and screening (75-80%+). This is supported by both the Minnesota data in the historical period as well as the literature review of nationwide experience.[72]

Data Sources

- Minnesota state population projections are from the "Long-Term Population Projections for Minnesota" published by the Minnesota State Demographic Center.[71]
- Minnesota non-public health insurance coverage levels are from Minnesota Public Health Data Access.[73]
- Trends and projection factors are derived from the National Health Expenditure data compiled by CMS as well as the 2024 Medicare Trustees Report.[74]
- MDH tabulations of the MN APCD from 2018 to 2022 were used to estimate the current prevalence and procedure utilization, expenditures, and enrollee cost-sharing for diagnostic imaging and cancer screening for Minnesota commercial health plan enrollees.[66]

Literature Review

A more comprehensive actuarial analysis and modeling of all services related to and associated with imaging, screening and multigene germline tests for cancer, including downstream effects, 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 environment of coverage, utilization, and expenditures and identify potential long-term savings and improved health outcomes.

Actual Costs of Proposed Coverage. The total cost implications of the proposed coverage, beyond the actuarial analysis, are difficult to determine from the available literature. Given the variation in screening modalities recommended for individuals at high risk of cancer, as well as the associated variability in costs for multigene panel testing and different imaging modalities (e.g., MRI vs. 3D mammogram)[34], there are no studies to date that have evaluated the impacts of no cost-sharing for clinical genetic testing and imaging for individuals at high risk for cancer.

Cost-Effectiveness. The increased financial burden to issuers related to the mandate's proposed coverage may be mitigated by the mandate's alignment with the NCCN® guidelines and requirements for specific high-risk factors, rather than allowing broader coverage for individuals without the required risk factors.[40] There is a potential for downstream savings associated with the mandate, as no cost-sharing for clinical genetic testing and

imaging may lead to earlier detection, and therefore, personalized screening and treatment plans.[75] As cost may be one of the primary barriers for adherence to recommended interventions for cancer risk, the proposed coverage may have an impact on total health expenditures associated with late-stage diagnosis.[76,77] One systematic review incorporating both United States and international studies evaluated the cost-effectiveness of germline testing for both individuals at average and high risk for certain cancer types, following alignment with the NCCN® guidelines, and found that there is a potential for cost-effectiveness based on earlier detection for certain cancers and risk-based populations.[34]

Direct savings attributable to early diagnosis has been estimated up to $10.7 billion nationwide across all cancer types[78] and indirect benefits and cost-savings in the form of decreased work absence, short-term disability and long-term disability during the first year post-diagnosis has been estimated between $6,877 and $22,283 per person.[79] An NIH study of the cost of cancer treatment for Medicare beneficiaries found first year total costs of $7,640 for stage I diagnoses for prostate cancer compared to stage IV diagnosis costs as high as $58,783 for prostate cancer.[80] Additionally, higher total costs persisted in subsequent years based on initial stage of diagnosis.

Lastly, the two components of coverage, clinical genetic testing and imaging, may interact to create better specificity on imaging recommendations. Markers identified through clinical genetic testing may provide meaningful information on the degree of risk for individuals for certain cancer types, and provide actionable information about which patients would benefit from a more costly screening regimen according to the NCCN® algorithm.[60]

Potential Limits on Downstream Savings. There are also studies that question the long-term cost-benefit and the value of increased cancer screening, and whether the potential for downstream savings is equal across different cancers. There can be significant costs associated with follow-up tests and procedures even in cases with no eventual diagnosis.[81] Additionally, the potential cost savings from early detection may vary based on cancer type, specific high-risk factors (e.g., family history or specific hereditary genes), and additional health risks for those at high risk for cancers.[34,75] This review found that, for certain cancers (e.g., colorectal cancer), testing was cost-effective but only with high-risk populations, thus aligning with the high-risk requirements of the proposed coverage.

Limitations

Given the considerable variability in literature related to specific cancer risk factors, populations, and evaluated health outcomes, the evaluation is unable to capture the aggregate public health and economic impact of the proposed coverage. While cost is a well-documented barrier for individuals following up on prescription and/or recommendation for evidence-based screening, there are other barriers related to access that may not be addressed by the proposed coverage, and may limit the degree to which utilization, adherence, and total costs may change if the proposed mandate is enacted. Additionally, despite the research on the positive impact of early detection on cancer outcomes, the overall effect of these services on long-term cost is not yet clearly established for all related interventions covered by the proposed mandate.

State Fiscal Impact

The potential state fiscal impact of this proposed mandate includes the estimated cost to SEGIP as assessed by MMB in consultation with health plan administrators, the cost of defrayal of benefit mandates as understood under the ACA, and the potential impact to Minnesota Health Care Programs.

- MMB estimates the cost of this proposed mandate for the state plan to be $460,200 for six months of Fiscal Year 2026 (FY 2026) and $966,420 for FY 2027.
- There are no estimated defrayal costs associated with this proposed mandate.
- There is no estimated cost to Minnesota Health Care Programs (e.g., Medical Assistance and MinnesotaCare), as the proposed health benefit mandate does not explicitly apply to these programs as written.

Fiscal Impact Estimate for SEGIP

MMB provided SEGIP's fiscal impact analysis, which is based on 2023 claims data, as well as assumptions for the impact of revised medical necessity determinations. MMB's analysis predicted a PMPM fiscal impact of $0.59 PMPM, as the bill would expand the current health care coverage to all cancer-related imaging and genetic testing services with no member cost-sharing. The partial fiscal year impact of the proposed mandate on SEGIP is estimated to be $460,200 for six months of FY 2026 ($0.59 PMPM medical cost × 130,000 members × 6 months). The estimated impact for FY 2027 equals $966,420, and the amount is estimated to increase by a 5% annual inflation factor each of the following years due to the upward trend in the cost of medical services.

Patient Protection and Affordable Care Act Mandate Impact and Analysis

States may require qualified health plan issuers to cover benefits in addition to the 10 EHBs defined by the ACA but must defray the costs, either through payments to individual enrollees or directly to issuers, and can partially defray the costs of proposed mandates if some of the care, treatment, or services are already covered in the state's benchmark plan or mandated by federal law, pursuant to section 1311(d)(3)(b) of the ACA. For further defrayal requirements and methodology, please visit https://mn.gov/commerce/insurance/industry/policy-data-reports/62j-reports/.

If enacted, HF 5050 would not constitute an additional benefit mandate requiring defrayal, as it does not relate to any new requirements for specific care, treatment, or services that are not already covered by Minnesota's benchmark plan. Minnesota's benchmark plan includes coverage laboratory outpatient and professional services and imaging.[82]

Fiscal Impact of State Public Programs

There is no estimated impact to Minnesota Health Care Programs (e.g., Medical Assistance and MinnesotaCare), as the proposed health benefit mandate, as written, does not apply to these programs. However, licensed health maintenance organizations (HMOs) that participate in the programs as managed care organizations (MCOs) are required to meet the requirements of coverage in chapter 62Q.

If applied to Minnesota Health Care Programs, this proposed mandate may have a cost. However, a fiscal estimate has not yet been completed.

Appendix A. Bill Text

Section 1. **[62Q.452] CANCER; CLINICAL GENETIC TESTING AND IMAGING**.

Subdivision 1. **Definitions.**

(a) For purposes of this section, the following terms have the meanings given.

(b) "Clinical genetic testing" means germline multigene testing for an inherited mutation associated with an increased risk of cancer performed in accordance with evidence-based clinical practice guidelines.

(c) "Imaging" means evidence-based cancer imaging modalities performed in accordance with the most recent version of the National Comprehensive Cancer Network (NCCN) clinical practice guidelines.

Subd. 2. **Coverage.**

(a) A health plan must include coverage for:

(1) imaging for enrollees with an increased risk of cancer, as determined by the NCCN; and

(2) clinical genetic testing for an inherited gene mutation that is recommended by a health care provider for enrollees with a personal or family history of cancer.

(b) The coverage required by this section is not subject to cost-sharing, including but not limited to deductible, co-payment, or coinsurance.

Subd. 3. **Application.** If the application of subdivision 2, paragraph (b), before an enrollee has met their health plan's deductible would result in: (1) health savings account ineligibility under United States Code, title 26, section 223; or (2) catastrophic health plan ineligibility under United States Code, title 42, section 18022(e), then subdivision 2, paragraph (b), applies to imaging and clinical genetic testing only after the enrollee has met the enrollee's health plan's deductible.

EFFECTIVE DATE. This section is effective January 1, 2025, and applies to health plans offered, issued, or renewed on or after that date.

Appendix B. Key Search Terms for Literature Scan

Biomarkers

Breast cancer

Cancer

Cancer gene testing

Colorectal cancer

Computerized tomography

Cost-sharing

Diagnostic follow-up

Digital breast tomosynthesis

DNA repair genes

Early detection

Genetic susceptibility

Genetic testing for cancer

Health outcomes

High risk

Insurance coverage

Lung cancer

Magnetic resonance imaging

Mammography

Melanoma

Multigene testing

Oncogenes

Ovarian cancer

Overdiagnosis

Panel tests

Prostate cancer

Screening

Sensitivity

Single mutation

Specificity

Tumor suppressor genes

Appendix C. Associated Codes

Colorectal Screening Procedure Codes

Name	Code
CPT Codes	
SIGMOIDOSCOPY FLX DX W/COLLJ SPEC BR/WA IF PFRMD	45330
SIGMOIDOSCOPY FLX W/BIOPSY SINGLE/MULTIPLE	45331
SIGMOIDOSCOPY FLX W/RMVL FOREIGN BODY	45332
SIGMOIDOSCOPY FLX W/RMVL TUMOR BY HOT BX FORCEPS	45333
SIGMOIDOSCOPY FLX CONTROL BLEEDING	45334
SGMDSC FLX DIRED SBMCSL NJX ANY SBST	45335
SGMDSC FLX W/DCMPRN W/PLMT DCMPRN TUBE	45337
SGMDSC FLX RMVL TUM POLYP/OTH LES SNARE TQ	45338
SIGMOIDOSCOPY FLX TNDSC BALO DILAT	45340
SIGMOIDOSCOPY FLX NDSC US XM	45341
SIGMOIDOSCOPY FLX TNDSC US GID NDL ASPIR/BX	45342
SIGMOIDOSCOPY FLX ABLATION TUMOR POLYP/OTH LES	45346
SIGMOIDOSCOPY FLX PLACEMENT OF ENDOSCOPIC STENT	45347
SGMDSC FLX WITH ENDOSCOPIC MUCOSAL RESECTION	45349
SIGMOIDOSCOPY FLX WITH BAND LIGATION(S)	45350
COLONOSCOPY FLX DX W/COLLJ SPEC WHEN PFRMD	45378
COLONOSCOPY FLX W/REMOVAL OF FOREIGN BODY(S)	45379
COLONOSCOPY W/BIOPSY SINGLE/MULTIPLE	45380
COLSC FLX WITH DIRECTED SUBMUCOSAL NJX ANY SBST	45381
COLSC FLEXIBLE W/CONTROL BLEEDING ANY METHOD	45382
COLSC FLX W/REMOVAL LESION BY HOT BX FORCEPS	45384
COLSC FLX W/RMVL OF TUMOR POLYP LESION SNARE TQ	45385
COLONOSCOPY FLX ABLATION TUMOR POLYP/OTHER LES	45388
CT COLONOGRAPHY SCREENING IMAGE POSTPROCESSING	74263
COLORECTAL CANCER SCREENING; FLEXSIG	G0104
COLOREC CANCR SCR; COLONSCPY INDIVIDUL@HIGH RISK	G0105
COLOREC CANCR SCR; COLNSCPY NOT MEET HI RISK	G0121
Procedure Modifier Codes	
Preventive Services	33
Colorectal Cancer Screening Test; Converted to Diagnostic Test or Other Procedure	PT
ICD-10 Procedure Codes	
ENCOUNTER SCREENING MALIGNANT NEOPLASM OF COLON	Z1211
ENCOUNTER SCREENING MALIGNANT NEOPLASM RECTUM	Z1212

Breast Cancer Screening Procedure Codes

Name	Code
CPT Codes	
MRI BREAST WITHOUT CONTRAST MATERIAL BILATERAL	77047
SCREENING DIGITAL BREAST TOMOSYNTHESIS BI	77063
SCREENING MAMMOGRAPHY BI 2-VIEW BREAST INC CAD	77067
ICD-10 Procedure Codes	
ENCOUNTER SCREENING MAMMO MALIG NEOPLASM BREAST	Z1231
ENCOUNTER OTHER SCREENING MALIG NEOPLASM BREAST	Z1239

Lung Cancer Screening Procedure Codes

Name	Code
CPT Codes	
COMPUTED TOMOGRAPHY THORAX LW DOSE LNG CA SCR C-	71271
ICD-10 Procedure Codes	
ENCOUNTER SCREENING MALIG NEOPLASM RESPIR ORGANS	Z122

Prostate Cancer Screening Procedure Codes

Name	Code
CPT Codes	
MRI PELVIS W/O & W/CONTRAST MATERIAL	72197
3D RENDERING W/INTERP&POSTPROC DIFF WORK STATION	76377
PET IMAGING CT ATTENUATION SKULL BASE MID-THIGH	78815
ICD-10 Procedure Codes	
MALIGNANT NEOPLASM OF PROSTATE	C61

Multigene Germline Tests Procedure Codes

Name	Code
CPT Codes	
Hered colon CA do gen seq alys panel 15 genes	0101U
Hered brst CA rltd do gen seq alys pnl 17 genes	0102U
Hered ovarian cancer gen seq alys panel 24 genes	0103U
Hered pan cancer gen seq alys panel 32 genes	0104U
Hereditary brst CA rltd do gen seq&del/dup pnl	0129U
Hered brst CA rltd do trgt MRNA seq alys 13 gene	0131U
Hered ova CA rltd do trgt MRNA seq alys 17 gene	0132U
Hered prst8 CA rltd do trgt MRNA seq alys 11 gen	0133U
Hereditary pan CA trgt MRNA seq alys 18 gene	0134U
Hereditary gyn CA trgt MRNA seq alys 12 gene	0135U
Hered colon CA targeted MRNA sequence alys panel	0162U

Onc lynch syndrome genomic DNA sequence analysis	0238U
BRCA1 BRCA2 gene alys full seq full dup/del alys	81162
BRCA1 BRCA2 gene analysis full sequence analysis	81163
BRCA2 gene analysis known familial variant	81217
MSH2 gene analysis full sequence analysis	81295
Hereditary brst CA-related gen seq analys 10 gen	81432
Hereditary brst CA-related dup/del analysis	81433
Hereditary colon CA dsrdrs gen seq analys 10 gen	81435
Hereditary colon CA dsrdrs dup/del analys 5 gen	81436
Heredtry nurondcrn tum dsrdrs gen seq anal 6 gen	81437
Heredtry nurondcrn tum dsrdrs dup/del analysis	81438
Unlisted molecular pathology procedure	81479

High Risk for Colorectal Cancer

Name	Code
BENIGN NEOPLASM OF CECUM	D120
BENIGN NEOPLASM OF APPENDIX	D121
BENIGN NEOPLASM OF ASCENDING COLON	D122
BENIGN NEOPLASM OF DESCENDING COLON	D124
BENIGN NEOPLASM OF RECTUM	D128
CROHNS DISEASE SMALL INTESTINE W/O COMP	K5000
CROHNS DISEASE LARGE INTESTINE W/O COMP	K5010
ULCERATIVE CHRONIC PANCOLITIS W/O COMPLICATIONS	K5100
ULCERATIVE COLITIS UNS WITHOUT COMPLICATIONS	K5190
NEUROFIBROMATOSIS NONMALIGNANT	Q850
OTHER PHAKOMATOSES NOT ELSEWHERE CLASSIFIED	Q858
ENCOUNTER SCREENING MALIGNANT NEOPLASM OF COLON	Z1211
ENCOUNTER SCREENING MALIGNANT NEOPLASM RECTUM	Z1212
GENETIC SUSCEPTIBILITY OTHER MALIGNANT NEOPLASM	Z1509
FAMILY HX MALIGNANT NEOPLASM DIGESTIVE ORGANS	Z800
FAMILY HISTORY OF COLONIC POLYPS	Z8371
PERSONAL HX MALIG NEOPLASM UNS DIGESTIVE ORGAN	Z8500
PERSONAL HISTORY MALIGNANT NEOPLASM OF ESOPHAGUS	Z8501
PERSONAL HISTORY MALIGNANT NEOPLASM OF STOMACH	Z8502
PERSONAL HISTORY MALIG CARCINOID TUMOR STOMACH	Z85020
PERSONAL HISTORY OTHER MALIG NEOPLASM STOMACH	Z85028
PERSONAL HX MALIGNANT NEOPLASM LARGE INTESTINE	Z8503
PERSONAL HX MALIG CARCINOID TUMOR LG INTESTINE	Z85030
PERSONAL HX OTH MALIG NEOPLASM LARGE INTESTINE	Z85038
PERSONAL HX OTH MAL NEO RECTUM RS JUNC & ANUS	Z85048
PERSONAL HISTORY OF COLONIC POLYPS	Z86010

PERSONAL HISTORY OF BENIGN NEOPLASM OF THE BRAIN	Z86011
PERSONAL HISTORY OF BENIGN CARCINOID TUMOR	Z86012

High-Risk for Breast Cancer

Name	Code
NEOPLASM OF UNSPECIFIED BEHAVIOR OF BREAST	D493
GENETIC SUSCEPTIBILITY MALIGNANT NEOPLASM BREAST	Z1501
FAMILY HISTORY OF MALIGNANT NEOPLASM OF BREAST	Z803
PERSONAL HISTORY PRIMARY MALIG NEOPLASM BREAST	Z853

High Risk for Lung Cancer

Name	Code
NICOTINE DEPENDENCE CIGARETTES	F1721
NICOTINE DEPENDENCE CIGARETTES UNCOMPLICATED	F17210
NICOTINE DEPENDENCE CIGARETTES IN REMISSION	F17211
NICOTINE DEPENDENCE CIGARETTES WITH WITHDRAWAL	F17213
NICOTINE DEPENDENCE CIGARETTES W/OTH INDUCED D/O	F17218
NICOTINE DEPENDENCE CIGARETTES W/UNS INDUCED D/O	F17219
OTHER CHRONIC OBSTRUCTIVE PULMONARY DISEASE	J44
CHR OBST PULM DIS WITH (ACUTE) LOWER RESP INFECT	J440
CHRONIC OBSTRUCTIVE PULMONARY DZ W/EXACERBATION	J441
CHRONIC OBSTRUCTIVE PULMONARY DISEASE UNS	J449
CONTACT WITH AND SUSPECTED EXPOSURE TO ASBESTOS	Z77090
CONTACT&EXPOS RADON & OTH NATURALLY OCCUR RADIAT	Z77123
FAMILY HX MALIGNANT NEOPLASM TRACHEA BRONCH&LUNG	Z801
PERSONAL HISTORY OF NICOTINE DEPENDENCE	Z87891

High Risk for Prostate Cancer

Name	Code
GENETIC SUSCEPTIBILITY MALIG NEOPLASM PROSTATE	Z1503
FAMILY HISTORY OF MALIGNANT NEOPLASM OF PROSTATE	Z8042
PERSONAL HISTORY MALIGNANT NEOPLASM OF PROSTATE	Z8546

Personal/Family History for Multigene Germline

Name	Code
Family history of primary malignant neoplasm	Z80
Family hx malignant neoplasm digestive organs	Z800
Family hx malignant neoplasm trachea bronch&lung	Z801
Family hx mal neoplsm oth resp&intrathorac orgn	Z802
Family history of malignant neoplasm of breast	Z803

Family history malignant neoplasm genital organs	Z804
Family history of malignant neoplasm of ovary	Z8041
Family history of malignant neoplasm of prostate	Z8042
Family history of malignant neoplasm of testis	Z8043
Family hx malignant neoplasm oth genital organs	Z8049
Family history malignant neoplasm urinary tract	Z805
Family history of malignant neoplasm of kidney	Z8051
Family history of malignant neoplasm of bladder	Z8052
Family hx malig neoplasm oth urinary tract organ	Z8059
Family history of leukemia	Z806
Fam hx oth mal neo lymphd hematopoietc&rel tiss	Z807
Family hx malignant neoplasm oth organs/systems	Z808
Family history of malignant neoplasm unspecified	Z809
Personal history of malignant neoplasm	Z85
Personal hx malignant neoplasm digestive organs	Z850
Personal hx malig neoplasm uns digestive organ	Z8500
Personal history malignant neoplasm of esophagus	Z8501
Personal history malignant neoplasm of stomach	Z8502
Personal history malig carcinoid tumor stomach	Z85020
Personal history other malig neoplasm stomach	Z85028
Personal hx malignant neoplasm large intestine	Z8503
Personal hx malig carcinoid tumor lg intestine	Z85030
Personal hx oth malig neoplasm large intestine	Z85038
Personal hx mal neoplasm rectum rs junc & anus	Z8504
Personal history malig carcinoid tumor rectum	Z85040
Personal hx oth mal neo rectum rs junc & anus	Z85048
Personal history of malignant neoplasm of liver	Z8505
Personal history malig neoplasm small intestine	Z8506
Personal hx malig carcinoid tumr small intestine	Z85060
Personal hx oth malig neoplasm small intestine	Z85068
Personal history malignant neoplasm of pancreas	Z8507
Personal hx malig neoplasm oth digestive organs	Z8509
Personal hx malignant neoplsm trach bronch&lung	Z851
Personal hx malignant neoplasm bronchus & lung	Z8511
Personal hx malig carcinoid tumor bronch & lung	Z85110
Personal hx oth malig neoplasm bronchus & lung	Z85118
Personal history malignant neoplasm of trachea	Z8512
Personal hx mal neo oth resp & intrathor organ	Z852
Personal hx malig neoplasm uns respiratory organ	Z8520
Personal history of malignant neoplasm of larynx	Z8521
Personal hx mal neo nasal cav mid ear&acss sinus	Z8522
Personal history of malignant neoplasm of thymus	Z8523

Personal history malig carcinoid tumor of thymus	Z85230
Personal history other malignant neoplasm thymus	Z85238
Personal hx mal neo oth resp&intrathoracic orgn	Z8529
Personal history primary malig neoplasm breast	Z853
Personal hx malignant neoplasm genital organs	Z854
Personal hx malig neoplasm uns fe genital organ	Z8540
Personal history malignant neoplasm cervix uteri	Z8541
Personal history malig neoplasm oth parts uterus	Z8542
Personal history of malignant neoplasm of ovary	Z8543
Personal hx malig neoplasm oth fe genital organs	Z8544
Personal hx malig neoplsm uns male genital organ	Z8545
Personal history malignant neoplasm of prostate	Z8546
Personal history of malignant neoplasm of testis	Z8547
Personal history malignant neoplasm epididymis	Z8548
Personal hx malig neoplasm oth male genital orgn	Z8549
Personal hx malignant neoplasm of urinary tract	Z855
Personal hx malig neoplsm uns urinry tract organ	Z8550
Personal history malignant neoplasm of bladder	Z8551
Personal history of malignant neoplasm of kidney	Z8552
Personal history malig carcinoid tumor of kidney	Z85520
Personal history other malignant neoplasm kidney	Z85528
Personal history malignant neoplasm renal pelvis	Z8553
Personal history of malignant neoplasm of ureter	Z8554
Personal hx malig neoplsm oth urinry tract organ	Z8559
Personal history of leukemia	Z856
Personal hx oth mal neo lymphd&hematopoiet tiss	Z857
Personal history of Hodgkin lymphoma	Z8571
Personal history of non-Hodgkin lymphomas	Z8572
Personal hx oth mal neo lymphd hematopoiet tiss	Z8579
Personal hx mal neoplasm other organs & systems	Z858
Personal hx mal neoplasm lip oral cav & pharynx	Z8581
Personal history of malignant neoplasm of tongue	Z85810
Personal hx mal neo oth site lip orl cav&pharynx	Z85818
Personal hx mal neo uns site lip orl cav&pharynx	Z85819
Personal history of malignant neoplasm of skin	Z8582
Personal history of malignant melanoma of skin	Z85820
Personal history of Merkel cell carcinoma	Z85821
Personal history other malignant neoplasm skin	Z85828
Personal hx malig neoplasm of bone & soft tissue	Z8583
Personal history of malignant neoplasm of bone	Z85830
Personal history malignant neoplasm soft tissue	Z85831
Personal hx malig neoplasm eye & nervous tissue	Z8584

Personal history of malignant neoplasm of eye	Z85840
Personal history of malignant neoplasm of brain	Z85841
Personal hx malig neoplasm oth parts nerv tissue	Z85848
Personal hx malignant neoplasm endocrine glands	Z8585
Personal history malignant neoplasm of thyroid	Z85850
Personal hx malig neoplasm oth endocrn glands	Z85858
Personal hx malig neoplasm oth organs & systems	Z8589
Personal history malignant neoplasm unspecified	Z859

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