
MANDATED BENEFIT REVIEW OF HOUSE BILL 4748
AND SENATE BILL 2856
SUBMITTED TO THE 192ND GENERAL COURT

AN ACT RELATIVE TO BREAST CANCER EQUITY AND EARLY DETECTION

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Mandated Benefit Review of House Bill (H.B.) 4748 and Senate Bill (S.B.) 2856 Submitted to the 192nd General Court

An Act Relative to Breast Cancer Equity and Early Detection

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1.0 Benefit Mandate Overview: H.B. 4748 and S.B. 2856; Both Entitled: An Act Relative to Breast Cancer Equity and Early Detection

1.1 History of the Bill

The Massachusetts Legislature’s Committee on Financial Services referred House Bill (H.B.) 4748ⁱ and Senate Bill (S.B.) 2856,ⁱⁱ both entitled, “An Act Relative to Breast Cancer Equity and Early Detection,”¹ to the Massachusetts Center for Health Information and Analysis (CHIA) for review. Massachusetts General Law (MGL) Chapter 3 §38C requires CHIA to review the medical efficacy of treatments or services included in each mandated benefit bill referred to the agency by a legislative committee, should it become law. CHIA must also estimate each bill’s fiscal impact, including changes to premiums and administrative expenses. H.B. 4747 and S.B. 2856 are identical and will be collectively referenced as “the bill.”

This report is not intended to determine whether the bill would constitute a health insurance benefit mandate for purposes of Commonwealth of Massachusetts (Commonwealth) defrayal under the Affordable Care Act (ACA), nor is it intended to assist with Commonwealth defrayal calculations if it is determined to be a health insurance mandate requiring Commonwealth defrayal.

1.2 What Does the Bill Propose?

As submitted to the 192nd General Court of the Commonwealth of Massachusetts, the bill requires carriers that provide medical expense coverage for screening mammograms to cover diagnostic examinations for breast cancer and digital breast tomosynthesis (DBT) screening coverage that is equivalent to coverage provided for screening mammograms (i.e., with no cost sharing). Cost sharing includes deductibles, coinsurance, copayments, as well as any maximum limitation on the application such as deductibles, coinsurance, copayments, or similar out-of-pocket expenses. “*Diagnostic examinations for breast cancer*” refer to a “medically necessary and appropriate examination for breast cancer to evaluate the abnormality in the breast that is seen or suspected from a screening examination for breast cancer, detected by another means of examination; or suspected based on the medical history or family medical history of the individual.” “*Examination for breast cancer*” includes examinations used to evaluate breast abnormalities using diagnostic mammography, DBT, breast magnetic resonance imaging, or breast ultrasound. The bill’s effect would be to remove out pocket costs for these types of diagnostic breast imaging.

HSA-qualified health insurance policies are exempt from the prohibition on cost-sharing requirements to the extent the exemption is necessary to allow the policy to be an “HSA-qualified health insurance policy,” except as it applies to preventive care required by Massachusetts statute that pertains to preventive care as defined by regulation or

ⁱ H.B. 4748. An Act relative to breast cancer equity and early detection. <https://malegislature.gov/Bills/192/H4748>.

ⁱⁱ S.B. 2856. An Act relative to breast cancer equity and early detection. <https://malegislature.gov/Bills/192/S2856>.

guidance by the U.S. Department of the Treasury under 26 U.S.C. 223 with respect to any HSA-qualified insurance policy.²

Diagnostic examinations under the bill, for which cost sharing would be prohibited, include the following types of imaging:

- **Diagnostic mammograms:** Diagnostic mammograms are detailed breast X-rays used when an abnormality such as a lump, or external abnormal appearance, is noted in an area of the breast(s).³ Diagnostic mammograms can be 2D or 3D.
- **DBT:** DBT is a newer technology that can enhance a radiologist's ability to diagnose breast cancer⁴ by taking many pictures of the breast from different angles to show each layer of tissue. A computer puts the images together to create 3D views of the breasts.
- **Breast magnetic resonance imaging (MRI):** MRI is a body scan that uses a magnet linked to a computer and renders detailed pictures of internal areas of the breast and can be conducted with or without contrast dye.⁵
- **Breast ultrasound:** Ultrasounds use sound waves to render images, known as sonograms, of inner areas of the breast.⁶

1.3 Medical Efficacy of the Bill

Breast cancer is the most diagnosed cancer and second leading cause of cancer death in the U.S.⁷ 3.5 million women in U.S. were living with breast cancer in 2016.⁸ Breast cancer makes up 15% of all new cancer diagnoses, and about 1 in 8 women will be diagnosed during their lifetime.⁹ In 2019, there were estimated to be 268,600 new cases of female breast cancer and 41,760 deaths attributable to breast cancer. Men can also develop breast cancer, and in 2019 it was estimated there would be 2,670 cases of male breast cancer and 500 deaths. Breast cancer is most often diagnosed in middle-aged and older women, and most are diagnosed at an early stage.¹⁰ The Women's Preventive Services Initiative (WPSI) (supported by Health Resources and Services Administration [HRSA]) recommends that average-risk women start mammography screenings between age 40 and age 50.¹¹ These screenings should be at a minimum biennial, and no more than annual continued through at least age 74. Women who are at high risk of breast cancer due to prior breast or ovarian cancer, the BRCA1/2 gene (BReast CAncer gene 1) and BRCA2 (BReast CAncer gene 2) mutation carrier, or prior high-dose chest radiation exposure should undergo periodic mammography screenings and likely require additional follow-up based on their doctor's recommendations.¹² The United States Preventive Taskforce (USPSTF) recommends biennial screening for women aged 50 to 74 years (Grade B recommendation).ⁱⁱⁱ

For individuals with a history of breast cancer, subsequent periodic mammograms to screen for recurrent cancer are considered "diagnostic" rather than "screening." Therefore, these mammograms are generally subject to cost sharing. Furthermore, approximately 10% of screening mammograms result in additional diagnostic evaluations for which

ⁱⁱⁱ The USPSTF is currently updating its breast cancer screening recommendations.

there is generally cost sharing. The bill, if it were to become law, would prevent cost sharing for both situations. To the extent that cost sharing prevents women from undergoing screening or diagnostic mammograms, or other follow-up diagnostic examinations, the bill would be expected to improve the health of the population it is intended to serve by identifying breast cancers more frequently and in earlier stages.

1.4 Current Coverage

Federal and Massachusetts state law¹³ requires carriers to provide coverage of screening mammograms. The ACA eliminated cost sharing for preventive services that receive at least a B rating by the USPSTF, including screening mammograms.¹⁴ However, the ACA does not prevent cost sharing for additional diagnostic testing, nor does it remove cost sharing for diagnostic mammograms for women who have a history of breast cancer.^{15 16,17} These costs can vary widely and affect access to diagnostic services.¹⁸ Breast cancer diagnostic examinations are required to be covered as an EHB (i.e., ambulatory services) and are defined by the MA Benchmark Plan (benchmark plan). The benchmark plan provides coverage for these diagnostic services after a member's deductible is met.

The federal Access to Breast Cancer Diagnosis Act of 2021 (S.B. 1067) would prohibit private health insurance plans from imposing high cost-sharing requirements on diagnostic examinations than screening examinations but has not been enacted as of the date of this report.¹⁹

BerryDunn surveyed 10 insurance carriers in the Commonwealth, and 7 responded. All the responding carriers cover screening mammograms, including DBT, as a preventive service with no member cost sharing but require cost sharing for diagnostic mammograms or follow-up diagnostic examinations.

1.5 Cost of Implementing the Bill

Requiring coverage for diagnostic examinations for breast cancer would result in an average annual increase, over five years, to the typical member's monthly health insurance premium of between \$0.19 and \$0.33 per member per month (PMPM), or between 0.03% and 0.06% of premium. The impact on premiums is driven by the removal of member cost sharing for diagnostic examinations for breast cancer.

1.6 Plans Affected by the Proposed Benefit Mandate

The bill amends statutes that regulate healthcare carriers in the Commonwealth. It includes the following sections, each of which addresses statutes regarding a particular type of health insurance policy when issued or renewed in the Commonwealth:²⁰

- Chapter 32A – Plans Operated by the Group Insurance Commission (GIC) for the Benefit of Public Employees
- Chapter 175 – Commercial Health Insurance Companies
- Chapter 176A – Hospital Service Corporations
- Chapter 176B – Medical Service Corporations
- Chapter 176G – Health Maintenance Organizations (HMOs)

The bill, as written, amends Chapter 118E of the General Laws. However, estimating the bill's impact to MassHealth membership is outside the scope of this report.

1.7 Plans Not Affected by the Proposed Benefit Mandate

Self-insured plans (i.e., where the employer or policyholder retains the risk for medical expenses and uses a third-party administrator or insurer to provide only administrative functions), except for those provided by the GIC, are not subject to state-level health insurance mandates. State mandates do not apply to Medicare and Medicare Advantage plans or other federally funded plans, including TRICARE (covering military personnel and dependents), the Veterans Administration, and the Federal Employees Health Benefit Plan, the benefits for which are determined by, or under the rules set by, the federal government.

Endnotes

¹ The 192nd General Court of the Commonwealth of Massachusetts, House Bill 4748 and Senate Bill 2856, “An Act Relative to Breast Cancer Equity and Early Detection.” Accessed July 9, 2022.

<https://malegislature.gov/Bills/192/H4748> and <https://malegislature.gov/Bills/192/S2856>.

² Health Savings Accounts-IRS tax forms. Under Section 223(c)(2)(A), a HDHP may not provide benefits for any year until the minimum deductible for that year is satisfied. However, 223(c)(2)(C) provides a safe harbor for the absence of a deductible for preventive care as provided by the ACA. Accessed September 20, 2022.

<https://www.irs.gov/pub/irs-drop/n-13-57.pdf>.

³ Centers for Disease Control and Prevention. How is Breast Cancer Diagnosed? Accessed August 1, 2022.

https://www.cdc.gov/cancer/breast/basic_info/diagnosis.htm#:~:text=If%20you%20have%20a%20problem,magnet%20linked%20to%20a%20computer.

⁴ Digital Breast Tomosynthesis and Breast Cancer Screening. Cleveland Clinic. 12/11/2020. Accessed August 8, 2022.

<https://my.clevelandclinic.org/health/diagnostics/15939-digital-breast-tomosynthesis-and-breast-cancer-screening>.

⁵ *Op. cit.* Centers for Disease Control and Prevention. How is Breast Cancer Diagnosed?

⁶ *Ibid.*

⁷ American Cancer Society. Breast Cancer Facts & Figures. Accessed September 13, 2022.

<https://www.cancer.org/research/cancer-facts-statistics/breast-cancer-facts-figures.html#:~:text=Breast%20cancer%20is%20the%20most%20common%20cancer%20diagnosed,about%20risk%20factors%2C%20prevention%2C%20early%20detection%2C%20and%20treatment.>

⁸ *Ibid.*

⁹ Coverage of Breast Cancer Screening and Prevention Services. Women’s Health Policy. Kaiser Family Foundation (KFF). 2019. Accessed August 1, 2022. <https://www.kff.org/womens-health-policy/fact-sheet/coverage-of-breast-cancer-screening-and-prevention-services/>.

¹⁰ *Ibid.*

¹¹ Recommendations for Well-Woman Care Clinical Summary Tables 2022. Women’s Preventive Services Initiative. Accessed August 1, 2022. https://www.womenspreventivehealth.org/wp-content/uploads/FINAL_WPSI_ClinicalSummaryTables_2022.pdf.

¹² *Ibid.*

¹³ M.G.L. c. 175 §110L, M.G.L. c. 176A §8J, M.G.L. c. 176B §4I.

¹⁴ Coverage of Certain Preventive Services Under the Affordable Care Act. 80 FR 41317.

¹⁵ *Ibid.*

¹⁶ *Op. cit.* Coverage of Breast Cancer Screening and Prevention Services. Women's Health Policy. Kaiser Family Foundation (KFF).

¹⁷ Understanding Cost & Coverage Issues with Diagnostic Breast Imaging. Susan G. Komen. January 2019. Accessed September 9, 2022. <https://www.komen.org/wp-content/uploads/komen-understanding-cost-coverage-with-dbi-final-report.pdf>.

¹⁸ *Ibid.*

¹⁹ Senate Bill 1067 - Access to Breast Cancer Diagnosis Act of 2021. Accessed September 7, 2022. [https://www.congress.gov/bill/117th-congress/senate-bill/1067#:~:text=Introduced%20in%20Senate%20\(04%2F12%2F2021\)&text=This%20bill%20prohibits%20private%20health,initial%20breast%20cancer%20screening%20examinations](https://www.congress.gov/bill/117th-congress/senate-bill/1067#:~:text=Introduced%20in%20Senate%20(04%2F12%2F2021)&text=This%20bill%20prohibits%20private%20health,initial%20breast%20cancer%20screening%20examinations).

2.0 Medical Efficacy Assessment

As submitted to the 192nd General Court of the Commonwealth of Massachusetts, H.B. 4748 and S.B. 2856 (collectively, “the bill”)¹ require carriers that provide medical expense coverage for screening mammograms to provide coverage for diagnostic examinations for breast cancer and digital breast tomosynthesis (DBT) screening coverage that is equivalent to coverage provided for screening mammograms and prohibits increased patient cost sharing for screening mammograms and diagnostic examinations. Cost sharing includes deductibles, coinsurance, copayments, as well as any maximum limitation on the application such as deductibles, coinsurances, copayments, or similar out-of-pocket expenses. “*Diagnostic examinations for breast cancer*” refer to a “medically necessary and appropriate examination for breast cancer to evaluate the abnormality in the breast that is seen or suspected from a screening examination for breast cancer, detected by another means of examination; or suspected based on the medical history or family medical history of the individual.”^{iv,v} “*Examination for breast cancer*” includes examinations used to evaluate breast abnormalities using diagnostic mammography, DBT, breast magnetic resonance imaging, or breast ultrasound. Screening mammograms must be covered with no cost sharing, so the bill would, in effect, prohibit cost sharing on all the listed diagnostic examinations for breast cancer, with an exception for HSA-qualified health insurance policies to the extent necessary for the policy to maintain its HSA-qualified status except as it applies to preventive care required by Massachusetts statute that pertains to preventive care as defined by regulation or guidance by the U.S. Department of the Treasury under 26 U.S.C. 223 with respect to any HSA-qualified insurance policy.² The intent of the bill, as provided by the bill sponsors, is to allow for equitable access to breast imaging services by removing cost barriers (i.e., out-of-pocket costs). The sponsors report inconsistencies in cost and coverage of breast imaging services.

MGL Chapter 3 §38C charges CHIA with reviewing the medical efficacy of proposed mandated health insurance benefits. Medical efficacy reviews summarize current literature on the effectiveness and use of the treatment or service and describe the potential impact of a mandated benefit on the quality of patient care and health status of the population.

This report proceeds in the following sections:

- 2.0 Medical Efficacy Assessment
 - Section 2.1: Breast Cancer Prevalence
 - Section 2.2: Breast Cancer Screening and Preventive Guidelines
 - Section 2.3: Diagnostic Imaging: Types and Applications
- 3.0 Conclusion

^{iv} H.B. 4748. An Act relative to breast cancer equity and early detection. <https://malegislature.gov/Bills/192/H4748>.

^v S.B. 2856. An Act relative to breast cancer equity and early detection. <https://malegislature.gov/Bills/192/S2856>.

2.1 Breast Cancer Prevalence

Breast cancer is the most diagnosed cancer and second leading cause of cancer death in the U.S.³ 3.5 million women in the U.S. were living with breast cancer in 2016.⁴ Breast cancer makes up 15% of all new cancer diagnoses, and about 1 in 8 women will be diagnosed during their lifetime.⁵ In 2019, there were estimated to be 268,600 new cases of female breast cancer and 41,760 deaths attributable to breast cancer. Men can also develop breast cancer, and in 2019 it was estimated there would be 2,670 cases of male breast cancer and 500 deaths. Breast cancer is most often diagnosed in women who are age 55 and older, and most are diagnosed at an early stage.⁶ Localized diagnoses comprise 64% of breast cancer cases, while 29% are regional diagnoses (cancer has spread to regional lymph nodes), 6% are metastasized diagnoses, and 2% are unknown (or un-staged) diagnoses.⁷ White women have the highest incidence of breast cancer in the U.S., but black women have higher breast cancer mortality rates.⁸ This mortality rate disparity is likely due to several composite factors: stage at diagnosis differences, tumor biology, and genetics. Screening access, and follow-up care and treatment are societal level factors that exacerbate disparity.⁹ Breast cancer risk factors include increasing age, a family history of breast or ovarian cancer, particularly among first-degree relatives and onset prior to 50 years, history of atypical hyperplasia or other nonmalignant high-risk breast lesions, prior breast biopsy, and very dense breast tissue.¹⁰ Up to 10% of screening mammograms are abnormal, leading to approximately 10% of women who receive screening mammograms requiring follow-up diagnostic screening imaging.^{11,12}

The American Cancer Society's Cancer Statistics Center estimated there will be 6,710 new cases of female breast cancer and 760 deaths due to female breast cancer in Massachusetts in 2022.¹³ In 2014 – 2018, the incidence rate of female breast cancer was 136.9 per 100,000 people (this rate is age adjusted to the 2000 U.S. population). The 2015 – 2019 death rate for Massachusetts women due to breast cancer was 16.8 per 100,000 people (this rate is age adjusted to the 2000 U.S. population).¹⁴

2.2 Breast Cancer Screening and Preventive Guidelines

The WPSI (supported by HRSA) recommends that average-risk women start mammography screenings between age 40 and age 50.¹⁵ These screenings should be at a minimum biennial, and no more than annually continued through at least age 74. WPSI states that age as a singular factor should not be a reason for stopping screenings.¹⁶ Women who are at high risk of breast cancer due to prior breast or ovarian cancer, the BRCA1/2 gene (BREast CAncer gene 1) and BRCA2 (BREast CAncer gene 2) mutation carrier, or prior high-dose chest radiation exposure, should undergo periodic mammography screenings and likely require additional follow-up based on their doctor's recommendations.¹⁷ The United States Preventive Taskforce (USPSTF) recommends biennial screening for women aged 50 to 74 years (Grade B recommendation).^{vi}

Screening for breast cancer can detect cancer at an early stage, but it does not preclude cancer's development.¹⁸ WPSI recommends that for women who have an estimated 5-year breast cancer risk of 3% or greater medications to reduce breast cancer risk are likely to have more benefit than harm when factoring patient-specific age, race, ethnicity, and medication. Medications used for this purpose could include tamoxifen, raloxifene, or aromatase inhibitors to reduce the risk for estrogen receptor (ER) positive breast cancer. The USPSTF recommends (Grade B)

^{vi} The USPSTF is currently updating its breast cancer screening recommendations.

that clinicians offer these prescriptions to women 40 years of age or older who are at an increased risk for breast cancer, and a lower risk for adverse effects from the medications. Assessment of patient risk should occur annually, and clinicians should practice informed decision-making with women who are at an increased risk for breast cancer to reduce their risk.¹⁹

As of 2015, 58% of women 40 to 49 years old had mammograms over the prior 2 years.²⁰ The average rate of women 40 and older reporting having a mammogram in the prior 2 years was 73% based on Behavioral Risk Factor Surveillance System (BRFSS) 2014 – 2016 national survey data. In Massachusetts, less than 68% of woman 40 years and older reported having a mammogram in the past 2 years. 68% of White women received mammograms in the prior 2 years, compared to 54% of Hispanic women, and 66% of American Indian/Alaska Native women (the point estimates for Black and Asian & Native Hawaiian or Pacific Islander women did not meet the minimum standard for statistical reliability and were not reported). Women ages 40 to 64 who had insurance coverage were more likely to report having received a mammogram, with 72% of privately insured women and 58% of Medicaid insured women compared to 30% of uninsured women. Although the majority of professional guidelines stipulate that women should start receiving mammograms after age 40, almost half (47%) of women think that women without a family history of breast cancer should start receiving mammograms prior to age 40.²¹

Cost can be a barrier to receiving mammography screenings. A 2015 survey assessing knowledge, attitudes, and behaviors of women in the U.S. surrounding mammograms found in their survey population of 3,501 women that 16% (approximately 560 women) considered the high cost of mammograms to be one of two primary barriers to scheduling and attending mammogram appointments.²² Factors included in cost were associated with travel, childcare, and lost wages. Lack of adequate insurance coverage was cited as the second primary barrier (16% approximately 560 women). Women who were insured were twice as likely (57%) to have an annual mammogram than women who were uninsured (23%).²³

2.2.1 BRCA1/2 Genetic Testing and Screening

Individuals who have mutations in the BRCA 1/2 tumor suppressor genes are at increased risk of breast, ovarian, fallopian, peritoneum, pancreatic, and skin cancers.²⁴ Compared to the general population incidence rate (13%), almost three-quarters (72%) of women who have the BRCA1 mutation, and 69% of women have the BRCA2 mutation will develop breast cancer prior to age 80. Those who have inherited either the BRCA1 or BRCA2 mutation have an increased likelihood of breast cancer diagnoses prior to age 50, cancer in both breasts, having breast and ovarian cancers simultaneously, recurrent cases of breast cancers, two or more BRCA1 or BRCA2 related cancer deaths in the family, cases of male breast cancer, and being of Ashkenazi Jewish descent. The USPSTF recommends that primary care physicians screen women who have a personal or family history of breast, ovarian, tubal, or peritoneal cancers or an ancestry with BRCA 1/2 gene mutations with a screening tool designed for these BRCA genetic mutations. Women who screen positive should, according to USPSTF guidelines, receive genetic counseling, and if applicable BRCA genetic testing.²⁵

2.2.2 Presence of Disparities

Disparities in screening, diagnosing, and treating breast cancer exist in the U.S.^{26,27,28} Women with low incomes have significantly lower rates of breast cancer screening, which could be due to absence of a regular and trusted healthcare provider.²⁹ Medical mistrust is more common in minority communities, particularly prominent in Black women, which also can lead to lower screening rates.³⁰ A 1998 case-control study of patients who had diagnosed breast cancer found that Black women were more likely than White women to report a lack of provider recommendation for mammography screening as a primary reason they did not have a breast cancer screening.³¹ A 2004 study found that Black women were more likely to experience delays in diagnosis and treatment of breast cancer with 22.4% of Black women and 14.3% of White women experiencing clinical delays of over three months.³² Disparities in time to diagnostic follow-up were also found. A 2016 study determined that among women who had a positive screening mammogram, women who were uninsured experienced a longer time to initiate the diagnostic follow-up compared to women who were privately insured.³³ Time to diagnostic follow-up also varied by age, as women under age 65 experienced delayed diagnostic follow-up after a positive screening mammogram. Women who were both uninsured and under age 65 had the longest time to diagnostic follow-up.³⁴

Modeling breast cancer risk is a potential way to help mitigate disparities, as risk prediction models are often used to identify patients at high-risk for development of specific diseases, and while current models exist for breast cancer, they may not be suitable for all demographics.³⁵ Research conducted in 2021 led to the development of a validated risk prediction model for breast cancer in U.S. Black women.³⁶ Relative risk and attributable risk estimates for breast cancer were created using data from Black women in three U.S. population-based case-control studies, and combined with Surveillance, Epidemiology, and End Results (SEER) data. This model was subsequently validated in prospective data from the Black Women's Health Study. The discriminatory accuracy of these models matched that of the most frequently used questionnaire-based breast cancer risk prediction models commonly used for White women, which demonstrates that breast cancer stratification for Black women may now be attainable. This model was best able to predict whether cancer would occur in women younger than age 40, which is a critical finding as women under 40 are not typically recommended for screening, and Black women have a younger age distribution of breast cancer than white women, and thus cancer tends to go undetected until it has grown large enough to be palpable, which is associated with fewer treatment options and worse prognoses.^{37,38} While breast cancer prevalence is lower in Black women than in White women, breast cancer mortality is higher in Black women than in White women.³⁹

2.3 Diagnostic Imaging Types and Applications

Approximately 10% of women undergo additional testing after a mammogram (e.g., additional mammography, breast ultrasound),⁴⁰ although fewer than 1 in 10 of these women have breast cancer.

Women might require additional testing because:

- 1) The pictures were not clear or did not show a portion of the breast.
- 2) The radiologist saw something suspicious, such as a calcification or a mass.
- 3) The radiologist saw an area that looks different than other areas of the breast.

Waiting for additional testing, and the associated results, can cause significant fear and anxiety,⁴¹ as well as financial concerns when diagnostic tests, subject to member cost sharing, are needed. Several types of breast imaging exist currently, with varied applications based on intended use. A mammogram is an X-ray of the breast that can find breast cancer early, before a lump is palpable. Screening mammograms are performed at regular intervals for individuals without symptoms. They are performed for those who do not have a history of breast cancer. Screening mammograms are already covered without cost sharing, and they can be either 2D or 3D (DBT).

The bill requires member cost sharing to be removed for the following types of diagnostic testing:

- **Diagnostic mammograms** are detailed breast X-rays used when an abnormality such as a lump, or external abnormal appearance, is noted in an area of the breast(s).⁴² Diagnostic mammograms are more detailed and generally take longer than a screening mammogram. Individuals who have a history of breast cancer continue to have diagnostic mammograms, even after their breast cancer has been treated. Diagnostic mammograms can be 2D or 3D.
 - **2D mammograms** take pictures of each breast from the front and the side to create a single image of each breast. The images can show areas of overlapping breast tissue on the images.
 - **DBT** is a newer technology that can enhance a radiologist's ability to diagnose breast cancer.⁴³ DBT is also known as a "3D mammography" because it employs a series of two-dimensional images to construct a three-dimensional image of the breast.⁴⁴ This technology was first approved by the FDA in 2011, and was predicted to become the new gold standard for breast imaging, particularly among women with dense breasts which can make it more difficult to identify abnormalities.^{45,46}
- **Breast ultrasounds** use ultrasound machines to create sound waves that render pictures, known as sonograms, of inner areas of the breast.⁴⁷
- **Breast MRI** is a body scan that uses a magnet linked to a computer and renders detailed pictures of internal areas of the breast and can be conducted with or without contrast dye.⁴⁸

2.3.2 DBT

DBTs are particularly helpful when examining dense breasts and can improve a radiologist's aptitude at discovering cancer.⁴⁹ DBTs also reduce the rate of false-positive test results, as compared to other testing modalities, as well as the number of patients who need to return for subsequent mammograms. Additionally, DBTs reduce the need for a biopsy by providing a more complete image of the abnormality within the breast and enable providers to enhance the accuracy of the abnormality within the breast. A corollary benefit of DBT is its potential to reduce anxiety while patients await the results of their screenings. DBTs can be performed simultaneously as mammograms, resulting in the mammogram taking only marginally longer (less than one minute). DBT is only FDA approved to be used in conjunction with a mammogram (not as a standalone screening), and the total radiation dose is slightly under three times that of a mammogram.⁵⁰

2.3.1 Breast Ultrasounds

Breast ultrasounds are not typically used for routine breast cancer screenings, but can be useful for evaluating breast changes, such as lumps, dense breast tissue, or further examination of a suspicious area first seen on a mammogram.⁵¹ These ultrasounds are able to differentiate between fluid-filled masses, such as cysts that are unlikely to be cancer, and solid masses which may require additional testing to rule out cancer. Breast ultrasounds can also aid in guiding biopsy needles into breast areas to obtain cells for cancer testing. Ultrasounds are more widely accessible and tend to cost less than MRIs.⁵²

2.3.3 Breast MRI

The American Cancer Society notes that breast MRIs may be necessary in several contexts: to screen for breast cancer, to provide a view of the breasts if a person is exhibiting symptoms that could be caused by cancer, to aid in determining the exact size and location of the cancer in someone who has already been diagnosed, and to check for leaks due to silicone breast implants.⁵³ Breast MRIs are appropriate for breast cancer screening for women who are at high risk as an additive screening, as MRIs alone can miss some cancers that mammograms can find and vice versa.⁵⁴ The specificity for breast MRIs is moderate (56% – 98% across studies), less than that of mammography.⁵⁵ Thus, MRIs are more likely to find false-positive cases of breast cancer, which can result in unneeded tests or biopsies, and accordingly, MRIs are not recommended for screening women who are at average risk of developing breast cancer.⁵⁶ For those who are not yet diagnosed but experiencing symptoms that could be associated with breast cancer, MRIs can be used as a supplement to mammograms and breast ultrasounds if those results were inconclusive. For those who have cancer diagnoses, breast MRIs can help map the exact location and size of the cancer, as well as look for other tumors in both breasts.⁵⁷ According to the American Cancer Society guidelines, women who have an estimated lifetime risk (LTR, based on family history and risk modeling) of greater than or equal to 20% to 25% for developing breast cancer are classified as high risk.⁵⁸ Women who are at a high risk for developing breast cancer, such as those with the BRCA 1/2 gene mutation, are likely candidates for MRI to supplement mammograms.⁵⁹

A 2018 study using data from the Dense Tissue and Early Breast Neoplasm Screening (DENSE) trial found that among women who qualify, and for whom breast MRIs would be appropriate, many do not complete these screenings.⁶⁰ Of the women invited for an MRI due to extremely dense breasts, 66% indicated they were interested, and 59% eventually participated, with women with higher socioeconomic status (SES) more often interested than women who were lower SES (68% versus 59%, $p < 0.01$). Among those who did not participate, the most frequently stated reasons were due to “MRI-related inconveniences and/or self-reported contraindications to MRI” (27%), as well as “anxiety regarding the result of supplemental screening” (21%). Among those who did participate, the most frequently stated reasons were due to “expected personal health benefit” (68%), as well as “contribution to science.”⁶¹

Breast MRIs are also indicated in surgical practice; by isolating the cancerous sections, the number of re-excisions can be reduced, and unnecessary mastectomies can be avoided.⁶² Breast MRIs are the preferred modality for modifying therapeutic agents for patients already undergoing breast cancer treatment, and for presurgical assessment of residual tumor size. Due to the high cost associated with MRIs, depending on a patient’s indication, the duration of a breast MRI could be abbreviated. Studies suggest that these types of abbreviated MRIs could also be more comfortable for patients due to less time spent within the machine, and could help increase the availability for scheduling MRI screenings.⁶³

3.0 Conclusion

Breast cancer is a costly, and at times deadly, form of cancer that when properly screened for can have a positive prognosis.⁶⁴ Mammography is recommended as the first line of screening for average-risk women, starting between age 40 and age 50, as recommended by the WPSI.⁶⁵ Although the ACA largely eliminated cost sharing for screening mammography, it did not do so for diagnostic mammography. For individuals with a history of breast cancer or breast biopsy, periodic mammograms to screen for breast cancer are considered diagnostic mammograms rather than screening mammograms. Additionally, follow-up diagnostic examinations are frequently needed after screening mammograms for individuals with no breast cancer history. The bill would prevent cost sharing for these types of diagnostic examinations. Therefore, if the bill were to pass, it would likely prevent individuals from delaying screening mammograms or follow-up diagnostic examinations related to cost considerations, thereby identifying more cancers at an earlier stage resulting in better outcomes for the population the bill is intended to reach.

Endnotes

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<https://malegislature.gov/Bills/192/H4748> and <https://malegislature.gov/Bills/192/S2856>.
- ² Health Savings Accounts-IRS tax forms. Under Section 223(c)(2)(A), a HDHP may not provide benefits for any year until the minimum deductible for that year is satisfied. However, 223(c)(2)(C) provides a safe harbor for the absence of a deductible for preventive care as provided by the ACA. Accessed September 20, 2022.
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- ³ *Op. cit. American Cancer Society. Breast Cancer Facts & Figures.*
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- ¹⁰ *Op. cit. Recommendations for Well-Woman Care Clinical Summary Tables 2022. Women’s Preventive Services Initiative.*
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<https://www.hrsa.gov/womens-guidelines/index.html>.

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¹⁹ *Ibid.*

²⁰ *Op. cit. Coverage of Breast Cancer Screening and Prevention Services. Women's Health Policy. Kaiser Family Foundation (KFF).*

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²⁴ *Op Cit. Coverage of Breast Cancer Screening and Prevention Services. Women's Health Policy. Kaiser Family Foundation (KFF).*

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²⁶ Freeman, Harold P. "Poverty, culture, and social injustice: determinants of cancer disparities." *CA: a cancer journal for clinicians* vol. 54,2 (2004): 72-7. Accessed September 6, 2022. <https://pubmed.ncbi.nlm.nih.gov/15061597/>.

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⁴⁴ *Ibid.*

⁴⁵ *Ibid.*

⁴⁶ Related: In 2014, Massachusetts passed H.B. 3733 "An act relative to breast cancer early detection" that requires mammography providers to inform patients who have dense breast tissue about their condition via written notification. See: M.G.L. c. 111 §5Q. Accessed September 1, 2022. <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVII/Chapter111/Section5Q>.

⁴⁷ *Op. cit. Centers for Disease Control and Prevention. How is Breast Cancer Diagnosed?*

⁴⁸ *Ibid.*

⁴⁹ *Op. cit. Digital Breast Tomosynthesis and Breast Cancer Screening. Cleveland Clinic.*

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⁵³ Breast MRI. American Cancer Society. Accessed August 1, 2022. <https://www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/breast-mri-scans.html>.

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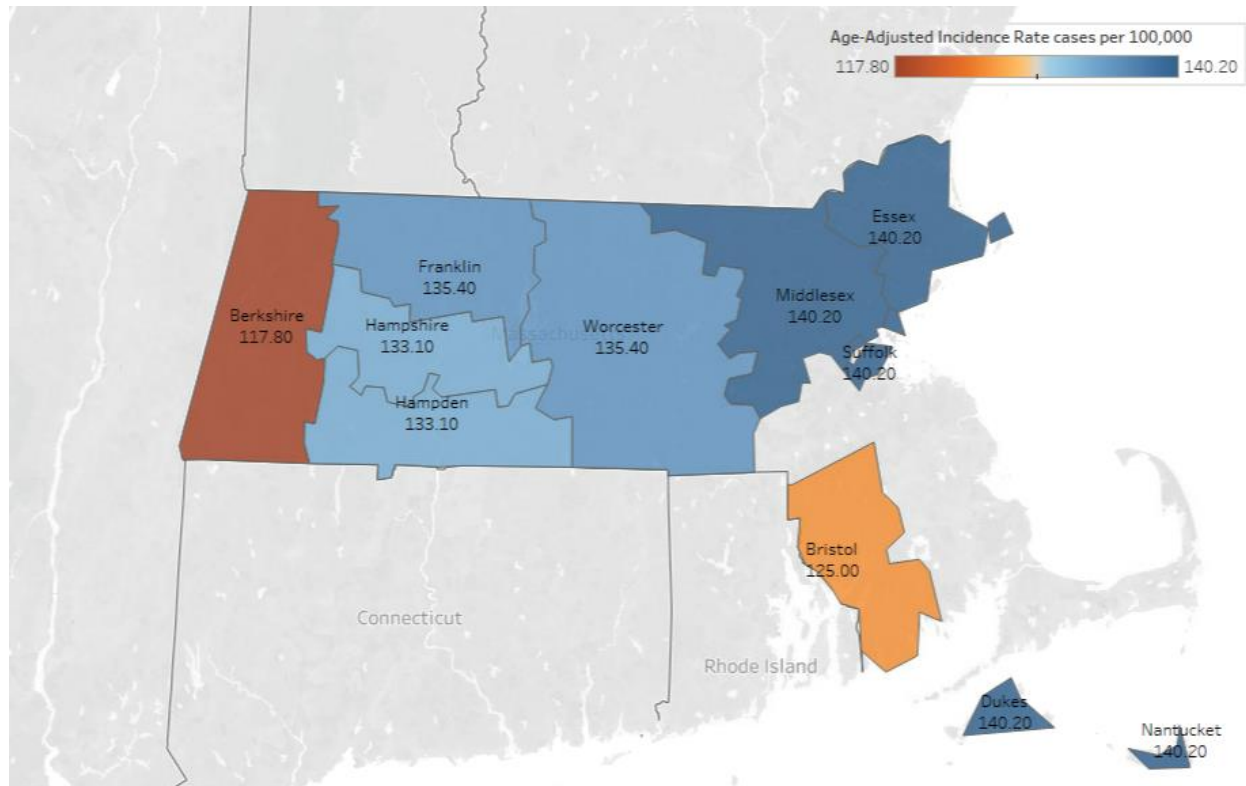
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Appendix A: Massachusetts Breast Cancer Age-Adjusted Incidence Rate per 100,000 Map by County

Breast Cancer (All Stages), 2014-2018, All Races, Female, All Ages



*The incidence rate (denominator) is age adjusted to the 2000 U.S. population and grouped according to Census categorization. The case rate (numerator) is based on Surveillance, Epidemiology, and End Results 2020 submission data. Data for Dukes and Nantucket counties are grouped with Essex, Middlesex, and Suffolk counties. Data for Plymouth and Barnstable counties was not reported at the county level and are excluded from this map.1

AN ACT RELATIVE TO BREAST CANCER EQUITY AND EARLY DETECTION

ACTUARIAL ASSESSMENT

1.0 Executive Summary

The Massachusetts Legislature's Committee on Financial Services referred House Bill (H.B.) 4748 and Senate Bill (S.B.) 2856, both entitled, "An Act Relative to Breast Cancer Equity and Early Detection,"² to the Massachusetts Center for Health Information and Analysis (CHIA) for review. As submitted to the 192nd General Court of the Commonwealth of Massachusetts, for carriers that provide medical expense coverage for screening mammograms, H.B. 4748 and S.B. 2856 require carriers that provide medical expense coverage screening mammograms to cover diagnostic examinations for breast cancer and for digital breast tomosynthesis (DBT) screening that is equivalent to coverage provided for screening mammograms (i.e., with no cost sharing). Cost sharing includes deductibles, coinsurance, copayments, as well as any maximum limitation on the application such as deductibles, coinsurances, copayments, or similar out-of-pocket expenses. "*Diagnostic examinations for breast cancer*" refer to a "medically necessary and appropriate examination for breast cancer to evaluate the abnormality in the breast that is seen or suspected from a screening examination for breast cancer, detected by another means of examination; or suspected based on the medical history or family medical history of the individual."^{vii,viii} "*Examination for breast cancer*" includes examinations used to evaluate breast abnormalities using diagnostic mammography, DBT breast magnetic resonance imaging (MRI), or breast ultrasound. The effect of the bill would be to remove out-of-pocket costs for the types of diagnostic breast imaging.

HSA-qualified health insurance policies are exempt from the prohibition on cost-sharing requirements to the extent the exemption is necessary to allow the policy to be an "HSA-qualified health insurance policy," except as it applies to preventive care required by Massachusetts statute that pertains to preventive care as defined by regulation or guidance by the U.S. Department of the Treasury under 26 U.S.C. 223 with respect to any HSA-qualified insurance policy.³

This report is not intended to determine whether the bill would constitute a health insurance benefit mandate for purposes of Commonwealth of Massachusetts (Commonwealth) defrayal under the Affordable Care Act (ACA), nor is it intended to assist with Commonwealth defrayal calculations if it is determined to be a health insurance mandate requiring Commonwealth defrayal. The intent of the actuarial estimate portion of this report is to estimate the bill's fiscal impact, including changes to premiums and administrative expenses.

1.1 Current Insurance Coverage

Federal and Massachusetts state law⁴ require carriers to provide coverage of screening mammograms. The ACA eliminated cost sharing for preventive services that receive at least a B rating by the United States Preventive Services Taskforce (USPTF), including screening mammograms.⁵ However, the ACA does not prevent cost sharing for additional diagnostic testing, nor does it remove cost sharing for diagnostic mammograms for women who have a history of breast cancer. Breast cancer diagnostic examinations are covered as an EHB (i.e., ambulatory services) and defined by the MA Benchmark Plan (benchmark plan). The benchmark plan provides coverage for these diagnostic services after a member's deductible is met.

^{vii} H.B. 4748. An Act relative to breast cancer equity and early detection. <https://malegislature.gov/Bills/192/H4748>.

^{viii} S.B. 2856. An Act relative to breast cancer equity and early detection. <https://malegislature.gov/Bills/192/S2856>.

BerryDunn surveyed ten insurance carriers in the Commonwealth, and seven responded. All the carriers currently cover screening mammograms, including DBT, as a preventive service with no member cost sharing but require cost sharing for diagnostic mammograms or follow-up diagnostic examinations.

1.2 Analysis

The bill requires carriers that provide medical expense coverage for screening mammograms to provide coverage for diagnostic examinations for breast cancer and DBT screening coverage that is equivalent to coverage provided for screening mammograms and prohibits increased patient cost sharing for screening mammograms and diagnostic examinations. The effect of the bill would be to prohibit cost sharing for screening DBT and diagnostic examinations for breast cancer.

1.3 Summary Results

Table ES-1, on the following page, summarizes the estimated effect of the bill on premiums for fully insured plans over five years. This analysis estimates that the bill, if enacted as drafted for the General Court, would increase fully insured premiums by as much as 0.06% on average over the next five years; a more likely increase is around 0.04%, equivalent to an average annual expenditure of \$6.7 million over the period 2023 – 2027. The impact on premiums is driven by the prohibition on cost sharing for diagnostic examinations for breast cancer, since Massachusetts carriers are already covering screening DBT without cost sharing.

Table ES-1: Summary Results

	2023	2024	2025	2026	2027	WEIGHTED AVERAGE	FIVE-YEAR TOTAL
Members (000s)	2,156	2,242	2,262	2,266	2,269		
Medical Expense Low (\$000s)	\$3,421	\$4,631	\$4,475	\$4,211	\$4,036	\$4,391	\$20,774
Medical Expense Mid (\$000s)	\$4,199	\$5,889	\$5,887	\$5,742	\$5,695	\$5,794	\$27,412
Medical Expense High (\$000s)	\$5,105	\$7,405	\$7,646	\$7,716	\$7,907	\$7,562	\$35,780
Premium Low (\$000s)	\$3,984	\$5,393	\$5,212	\$4,905	\$4,701	\$5,114	\$24,195
Premium Mid (\$000s)	\$4,891	\$6,859	\$6,856	\$6,688	\$6,633	\$6,748	\$31,927
Premium High (\$000s)	\$5,946	\$8,625	\$8,906	\$8,987	\$9,210	\$8,808	\$41,674
PMPM Low	\$0.21	\$0.20	\$0.19	\$0.18	\$0.17	\$0.19	\$0.19
PMPM Mid	\$0.26	\$0.25	\$0.25	\$0.25	\$0.24	\$0.25	\$0.25
PMPM High	\$0.32	\$0.32	\$0.33	\$0.33	\$0.34	\$0.33	\$0.33
Estimated Monthly Premium	\$562	\$577	\$593	\$609	\$625	\$593	\$593
Premium % Rise Low	0.038%	0.035%	0.032%	0.030%	0.028%	0.032%	0.032%
Premium % Rise Mid	0.047%	0.044%	0.043%	0.040%	0.039%	0.042%	0.042%
Premium % Rise High	0.057%	0.056%	0.055%	0.054%	0.054%	0.055%	0.055%

Endnotes

¹ National Cancer Institute. State Cancer Profiles. Massachusetts. Accessed August 2, 2022.
<https://www.statecancerprofiles.cancer.gov/map/map.withimage.php?25&hsa&001&055&01&2&01&0&1&5&0#results>.

² The 192nd General Court of the Commonwealth of Massachusetts, House Bill 4748 and Senate Bill 2856, “An Act Relative to Breast Cancer Equity and Early Detection.” Accessed July 29, 2022.
<https://malegislature.gov/Bills/192/H4748> and <https://malegislature.gov/Bills/192/S2856>.

³ Health Savings Accounts-IRS tax forms. Under Section 223(c)(2)(A), a HDHP may not provide benefits for any year until the minimum deductible for that year is satisfied. However, 223(c)(2)(C) provides a safe harbor for the absence of a deductible for preventive care as provided by the ACA. Accessed September 20, 2022.
<https://www.irs.gov/pub/irs-drop/n-13-57.pdf>.

⁴ M.G.L. c. 175 §110L, M.G.L. c. 176A §8J, M.G.L. c. 176B §4I.

⁵ Coverage of Certain Preventive Services Under the Affordable Care Act. 80 FR 41317.

2.0 Introduction

As submitted to the 192nd General Court of the Commonwealth of Massachusetts, H.B. 4748 and S.B. 2856 (collectively, “the bill”) require carriers that provide medical expense coverage for screening mammograms to provide coverage for diagnostic examinations for breast cancer and digital breast tomosynthesis (DBT) screening coverage that is equivalent to coverage provided for screening mammograms and prohibits increased patient cost sharing for screening mammograms and diagnostic examinations. Cost sharing includes deductibles, coinsurance, copayments, as well as any maximum limitation on the application such as deductibles, coinsurances, copayments, or similar out-of-pocket expenses. “*Diagnostic examinations for breast cancer*” refer to a “medically necessary and appropriate examination for breast cancer to evaluate the abnormality in the breast that is seen or suspected from a screening examination for breast cancer, detected by another means of examination; or suspected based on the medical history or family medical history of the individual.”^{9,10} “*Examination for breast cancer*” includes examinations used to evaluate breast abnormalities using diagnostic mammography, DBT, breast magnetic resonance imaging, or breast ultrasound. Screening mammograms must be covered with no cost sharing, so the bill would, in effect, prohibit cost sharing on all the listed diagnostic examinations for breast cancer. The intent of the bill, as provided by the bill sponsors, is to allow for equitable access to breast imaging services by removing cost barriers (i.e., out-of-pocket costs). The sponsors report inconsistencies in cost and coverage of breast imaging services.

HSA-qualified health insurance policies are exempt from the prohibition on cost-sharing requirements to the extent the exemption is necessary to allow the policy to be an “HSA-qualified health insurance policy,” except as it applies to preventive care required by Massachusetts statute that pertains to preventive care as defined by regulation or guidance by the U.S. Department of the Treasury under 26 U.S.C. 223 with respect to any HSA-qualified insurance policy.¹

Section 3.0 of this analysis outlines the provisions and interpretations of the bill. Section 4.0 summarizes the methodology used for the estimate. Section 5.0 discusses important considerations in translating the bill’s language into estimates of its incremental impact on healthcare costs, and steps through the calculations. Section 6.0 discusses results.

3.0 Interpretation of the Bill

3.1 Reimbursement for Diagnostic Breast Cancer Examinations

As submitted to the 192nd General Court of the Commonwealth of Massachusetts, the bill requires carriers that provide medical expense coverage for screening mammograms to cover diagnostic examinations for breast cancer and DBT screening coverage that is equivalent to coverage provided for screening mammograms (i.e., with no cost sharing). Increasing patient cost sharing for screening mammograms and diagnostic examinations is prohibited with this bill. Cost sharing includes deductibles, coinsurance, copayments, as well as any maximum limitation on the application such as deductibles, coinsurances, copayments, or similar out-of-pocket expenses. The effect of the bill

⁹ H.B. 4748. An Act relative to breast cancer equity and early detection. <https://malegislature.gov/Bills/192/H4748>.

¹⁰ S.B. 2856. An Act relative to breast cancer equity and early detection. <https://malegislature.gov/Bills/192/S2856>.

would be to remove out-of-pocket costs for diagnostic examinations for breast cancer. The bill also prohibits out-of-pocket costs for screening DBT; however, Massachusetts carriers already cover screening DBT without member cost sharing.

3.2 Plans Affected by the Proposed Mandate

The bill amends statutes that regulate commercial healthcare carriers in the Commonwealth. It includes the following sections, each of which addresses statutes dealing with a particular type of health insurance policy when issued or renewed in the Commonwealth:²

Chapter 32A – Plans Operated by the GIC for the Benefit of Public Employees

Chapter 175 – Commercial Health Insurance Companies

Chapter 176A – Hospital Service Corporations

Chapter 176B – Medical Service Corporations

Chapter 176G – Health Maintenance Organizations (HMOs)

Self-insured plans, except for those managed by the GIC, are not subject to state-level health insurance benefit mandates. State mandates do not apply to Medicare or Medicare Advantage plans, the benefits of which are qualified by Medicare. This analysis excludes members over 64 years of age who have fully insured commercial plans, and this analysis does not address any potential effect on Medicare supplement plans, even to the extent they are regulated by state law. Although the bill includes Chapter 118, this analysis does not estimate the bill's impact to MassHealth.

3.3 Covered Services

BerryDunn surveyed ten insurance carriers in the Commonwealth, and seven responded. All the carriers currently cover screening mammograms, including DBT, as a preventive service with no member cost sharing. Diagnostic breast exams are covered but may include cost sharing of deductible, copayment, and/or coinsurance depending on plan design. All the carriers that responded to BerryDunn's survey reported they anticipate a change in their benefit structure to eliminate member cost sharing from diagnostic exams should the proposed bill become law.

3.4 Existing Laws Affecting the Cost of the Bill

Federal and Massachusetts state law³ require carriers to provide coverage of screening mammograms. The ACA eliminated cost sharing for preventive services that receive at least a B rating by the USPTF, including screening mammograms.⁴ However, the ACA does not prevent cost sharing for additional diagnostic testing, nor does it remove cost sharing for diagnostic mammograms for women who have a history of breast cancer.⁵ Diagnostic examinations for breast cancer are covered as an EHB (i.e., ambulatory services) and defined by the MA Benchmark Plan (benchmark plan). The benchmark plan provides coverage for these diagnostic services after a member's deductible is met.

Insurance coverage of screening DBT is not mandated under the ACA, but several states have required coverage without cost sharing for private insurers.⁶ Although state law does not require it, carriers in Massachusetts provide coverage for screening DBT as a preventive service without cost sharing.

4.0 Methodology

4.1 Overview

As submitted to the 192nd General Court of the Commonwealth of Massachusetts, the bill requires carriers that provide medical expense coverage for screening mammograms to cover diagnostic examinations for breast cancer and DBT screening that is equivalent to coverage provided for screening mammograms. Increasing patient cost sharing for screening mammograms and diagnostic examinations is prohibited. Cost sharing includes deductibles, coinsurance, copayments, as well as any maximum limitation on the application such as deductibles, coinsurances, copayments, or similar out-of-pocket expenses.

The incremental cost of removing member cost sharing for diagnostic breast cancer examination coverage is estimated using claims data from the Massachusetts All-Payer Claims Database (APCD) to determine a PMPM cost for member cost sharing. The member cost sharing amounts are adjusted to exclude High Deductible Health Plan (HDHP) deductible amounts, since they are exempt from the proposed bill. Accounting for carrier retention results in a baseline estimate of the proposed mandate's incremental effect on premiums, which is projected over the five years following the assumed January 1, 2023, implementation date of the proposed law.

4.2 Data Sources

The primary data sources used in the analysis are as follows:

- Survey of legislative sponsors, providing information about the intended effect of the bill
- Survey of commercial carriers in the Commonwealth, gathering descriptions of current coverage
- Massachusetts APCD
- Published scholarly literature, reports, and population data, cited as appropriate

4.3 Steps in the Analysis

This section summarizes the analytic steps to estimate the impact of the bill on premiums.

1. Estimate the marginal cost to insurers from eliminating deductibles from diagnostic examinations for breast cancer.

To estimate the cost of eliminating member cost sharing, BerryDunn:

- A. Used claims data from the APCD and determined the total member deductible cost-sharing amounts for diagnostic examinations for breast cancer
- B. Divided the cost-sharing amounts from Step A by the corresponding membership to calculate a PMPM
- C. Adjusted the PMPM from Step B by an estimated increase in utilization to calculate the marginal PMPM cost to carriers

- D. Used the APCD and publicly available literature to determine the portion of the fully insured membership that are enrolled in an HDHP
 - E. Estimated the portion of member cost sharing for members in an HDHP
 - F. Adjusted the total member cost-sharing amount to exclude cost sharing for members in an HDHP since HDHPs are exempt for the proposed mandate
 - G. Divided the cost-sharing amounts by the corresponding membership to calculate the marginal PMPM cost for carriers to eliminate member cost sharing
- 2. Estimate the marginal cost to insurers from eliminating any copayments and or coinsurance from diagnostic examinations for breast cancer.**

To estimate the cost of eliminating member cost sharing, BerryDunn:

- A. Used claims data from the APCD and determined the total member copayment and coinsurance amounts for diagnostic examinations for breast cancer
 - B. Divided the cost-sharing amounts by the corresponding membership to calculate the PMPM cost
 - C. Adjusted the PMPM from Step B by an estimated increase in utilization to calculate the marginal PMPM cost to carriers
- 3. Calculate the impact of the projected claim costs on insurance premiums.**
- A. Added the incremental cost from deductible in Step 1 to the incremental cost for copays and coinsurance calculated in Step 2
 - B. Estimated the fully insured Commonwealth population under age 65, projected for the next five years (2023 – 2027)
 - C. Multiplied the PMPM incremental net cost of the mandate by the projected population estimate, to calculate the total estimated marginal claims cost of the bill
 - D. Estimated insurer retention (administrative costs, taxes, and profit) and applied the estimate to the final incremental claims cost calculated in Step C

4.4 Limitations

In general, carriers currently provide coverage for breast cancer screening, including DBT, so the marginal cost of the bill is due to eliminating member cost sharing on diagnostic examinations for breast cancer. Determining how member cost sharing will change over time is uncertain. Deductibles and copayments are fixed dollar amounts, and unless the carrier or employer makes changes, the dollar amounts remain fixed. Employers often increase deductibles and copays to keep pace with premium increases. However, the extent to which cost-sharing amounts will increase depends upon overall premium increases and employer group budgets.

Removing cost sharing will impact the use of diagnostic breast cancer examinations. The increase in utilization is uncertain.

Cost-sharing data in the APCD are not available specific to HDHPs, so cost-sharing amounts applicable to the proposed mandate are uncertain. BerryDunn estimated the amount of cost sharing attributable to HDHPs using an

enrollment distribution by plan type and assumptions for the average cost-sharing levels for members enrolled in an HDHP and members not enrolled in an HDHP.

COVID-19 has impacted the number of commercial fully insured members in 2020. Fully insured membership declined due to decreased enrollment in employer-sponsored insurance (ESI). The impact that COVID-19 and economic trends will have on employment, and therefore ESI, in the 2023 – 2027 projection period is uncertain. Appendix A addresses these limitations further.

A 2016 study comparing the treatment costs for breast cancer by disease stage using the Truven Healthcare MarketScan commercial claims database found that the average costs per patient allowed by insurance plans in the year following diagnosis were \$60,637 for disease stage 0, \$82,121 for disease stages I and II, \$129,387 for disease stage III, and \$134,682 for disease stage IV.⁷ The bill, if it were to pass, would likely result in more cancers being identified in earlier stages—when it is less costly to treat and more likely to result in a positive outcome. The extent and impact of cost offsets resulting from early detection is beyond the scope of this report.

5.0 Analysis

This section describes the calculations outlined in the previous section in more detail. The analysis includes a best-estimate middle-cost scenario, a low-cost scenario, and a high-cost scenario using more conservative assumptions.

The analysis section will proceed as follows:

- Section 5.1 describes the steps used to calculate the requirement of eliminating deductibles from coverage of diagnostic examinations for breast cancer and DBT.
- Section 5.2 describes the steps used to calculate the requirement of eliminating copayments and coinsurance from coverage of diagnostic examinations for breast cancer and DBT screening.
- Section 5.3 aggregates the marginal PMPM costs.
- Section 5.4 projects the fully insured population age 0 to 64 in the Commonwealth over the years 2023 to 2027.
- Section 5.5 calculates the total estimated marginal cost of the bill.
- Section 5.6 adjusts these projections for carrier retention to arrive at an estimate of the bill's effect on premiums for fully insured plans.

5.1 Eliminating Deductible for Diagnostic Breast Cancer Examinations

The proposed legislation requires insurers to eliminate any deductible, coinsurance, copayments, or any other member cost sharing from diagnostic breast cancer examinations and DBT screening. Carriers in Massachusetts already cover DBT screening without cost sharing. In this section, BerryDunn calculates the incremental cost component due to eliminating member deductibles for these services. A review of the APCD showed that the 2020 claims data for these services were lower than 2019, likely due to the deferral or elimination of care during the COVID-19 pandemic. As such, BerryDunn used 2019 claims data in the APCD to measure the member deductible

amounts for diagnostic breast cancer examinations and divided by the corresponding membership to calculate the PMPM. The resulting PMPM costs are reflected in Table 1.

Table 1: 2019 Deductible Amounts

	ANNUAL TOTAL	MEMBER MONTHS	PMPM
Deductible	\$15,839,088	22,096,512	\$0.72

Removing the cost sharing will impact the use of diagnostic breast cancer examinations. Among the insured population, there is unmet care due to cost. In Massachusetts, 28% of women reported forgoing healthcare services due to cost.⁸ About 59% of them indicated that this was due to cost sharing being too expensive.⁹ This means approximately 16.5% of women forgo services because of member cost sharing. Approximately 10% of women require follow-up (i.e., diagnostic breast examinations for cancer) after screening mammograms.¹⁰ Based on these statistics, BerryDunn estimates that utilization for diagnostic breast cancer examinations will increase by 1.7%. BerryDunn increased the PMPM in Table 1 by this percentage. The results are shown in Table 2.

Table 2: Utilization Adjusted Deductible PMPM's

	2019 PMPM	UTILIZATION FACTOR	ADJUSTED PMPM
	\$0.72	1.017	\$0.73

It is uncertain how member cost sharing will change over time. Deductibles are fixed dollar amounts, and unless the carrier or employer makes changes, the dollar amounts remain fixed. Member coinsurance amounts increase over time with claims cost increases. Employers often increase deductibles to keep pace with premium increases. In the high scenario, BerryDunn assumed that employers would increase cost-share levels at the same pace that claims cost increases. Therefore, the long-term national average projection for cost increases for physician services (6.1%) was used to project PMPM cost for deductible amounts.¹¹ In the low scenario, BerryDunn assumed that cost sharing would not increase over time, and in the mid scenario, BerryDunn assumed that cost sharing would increase by 3.1% per year on average. BerryDunn multiplied the PMPM amount from Table 1 by the annual cost increases to estimate the PMPM cost of deductible over the projection period, and Table 3 shows these results.

Table 3: Projected Deductible PMPM's

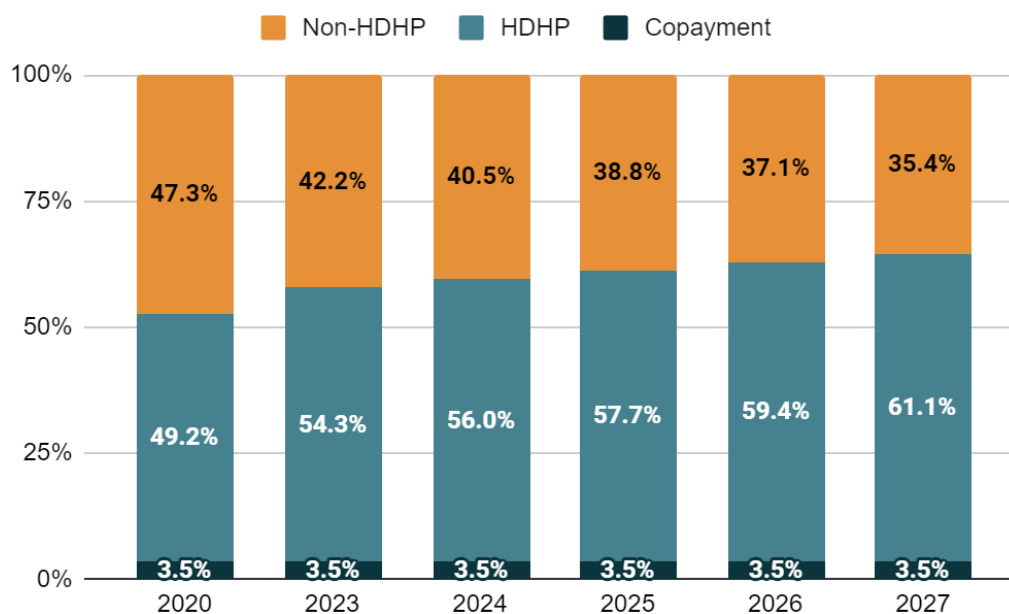
	2019	2023	2024	2025	2026	2027
Low	\$0.73	\$0.73	\$0.73	\$0.73	\$0.73	\$0.73
Mid	\$0.73	\$0.82	\$0.85	\$0.87	\$0.90	\$0.93
High	\$0.73	\$0.92	\$0.98	\$1.04	\$1.10	\$1.17

The elimination of cost sharing for HDHPs is exempt from the proposed mandate, meaning cost sharing for these plans can continue if the mandate were to pass. Using the APCD, BerryDunn calculated that 3.5% of the claimants were on a copayment plan. Cost-sharing data in the APCD are not available specific to HDHPs. Based on enrollment data in CHIA's annual report,¹² BerryDunn calculated the portion of the fully insured membership that are enrolled in HDHPs. In 2020, the most recent data available, 49.3% of the fully insured members was enrolled in an HDHP. If 49.3% claimants were in an HDHP, and 3.5% of the members were in a copayment plan, then 47.3% of fully insured members were in a non-HDHP with deductible and coinsurance. Between 2018 and 2020, membership in HDHPs increased by 1.7% per year. BerryDunn assumed this growth rate would continue and projected the distribution of fully insured membership over the projection period, and Table 4 shows these results.

Table 4: Member Distribution by Plan Type

	2020	2023	2024	2025	2026	2027
Copayment	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
HDHP	49.2%	54.3%	56.0%	57.7%	59.4%	61.1%
Non-HDHP	47.3%	42.2%	40.5%	38.8%	37.1%	35.4%

Figure 1: Member Distribution by Plan Type



Deductible amounts are typically higher for HDHPs and, as such, the cost-sharing amount is not proportional to the membership distribution. To estimate the portion of the cost sharing attributable to HDHPs, BerryDunn used a claims pricing model and calculated average member cost-sharing amounts for a typical HDHP and for a typical non-HDHP plan. BerryDunn weighted the cost-share amounts with the membership distribution from Table 4 and estimated that 77% of the deductible amounts were likely attributable to members in an HDHP, meaning only 23% of the deductible

cost would be removed. Using the membership distribution from Table 4, and average cost-share amounts, BerryDunn calculated the cost-share distribution over the projection period. Since the number of claimants in HDHPs and the actual member cost shares in those plans are uncertain, BerryDunn assumed that the member cost-share amounts would be 2.5% lower in the low scenario and 2.5% higher in the high scenario. Table 5 shows these results.

Table 5: Cost-Sharing Percentage for Non-HDHPs

	2020	2023	2024	2025	2026	2027
Low	20%	16%	14%	13%	12%	11%
Mid	23%	19%	17%	16%	15%	14%
High	25%	21%	19%	18%	17%	16%

Next, BerryDunn multiplied the deductible amounts from Table 3 by the portion of the member cost-sharing amounts for non-HDHPs from Table 5 to calculate cost-sharing excluding HDHPs. Results are shown in Table 6.

Table 6: Marginal Costs for Non-HDHPs

	2020	2023	2024	2025	2026	2027
Low	\$0.15	\$0.12	\$0.11	\$0.10	\$0.09	\$0.08
Mid	\$0.17	\$0.15	\$0.14	\$0.14	\$0.13	\$0.13
High	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19

5.2 Eliminating Copays and Coinsurance for Diagnostic Breast Cancer Examinations and DBT

In addition to eliminating any deductible, the proposed legislation requires insurers to eliminate any copayments and coinsurance from diagnostic breast cancer examinations and DBT screening. Massachusetts carriers already provide coverage for DBT screening without cost sharing. In this section, BerryDunn calculates the incremental cost component due to eliminating copayments and coinsurance. Using 2019 claims data in the APCD, BerryDunn measured the member copayment and coinsurance amounts for diagnostic breast cancer screening and DBT screening and divided by the corresponding membership to calculate the PMPM. The resulting incremental PMPM costs are reflected in Table 7.

Table 7: 2019 Copayment and Coinsurance Amounts

	ANNUAL TOTAL	MEMBER MONTHS	PMPM
Amounts	\$1,427,832	22,096,512	\$0.065

As discussed in the previous section, removing the cost shares will impact the use of diagnostic breast cancer examinations. Using the estimated utilization increases from Table 2, BerryDunn adjusted the copayment and coinsurance PMPM in Table 7 by the 1.7% increase in utilization. The results are shown in Table 8.

Table 8: Utilization Adjusted Copayment and Coinsurance PMPMs

2019 PMPM	UTILIZATION FACTOR	ADJUSTED PMPM
\$0.065	1.017	\$0.066

It is uncertain how member cost sharing will change over time. Copayments are fixed dollar amounts, and unless the carrier or employer makes changes, the dollar amounts remain fixed. Employers can increase copayment amounts to keep pace with premium increases. In the high scenario, BerryDunn assumed that employers would increase copayments at the same pace that claims cost increases. Therefore, the long-term national average projection for cost increases physician services (6.1%) was used to project PMPM cost for copays.¹³ In the low scenario, BerryDunn assumed that cost sharing would not increase over time, and in the mid scenario, BerryDunn assumed that cost sharing would increase by 3.1% per year on average. BerryDunn multiplied the PMPM amounts from Table 8 by the annual cost increases to estimate the PMPM cost of copayment amounts over the projection period, and Table 9 shows these results.

Table 9: Projected Copayment and Coinsurance PMPMs

	2019	2023	2024	2025	2026	2027
Low	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07
Mid	\$0.07	\$0.07	\$0.08	\$0.08	\$0.08	\$0.08
High	\$0.07	\$0.08	\$0.08	\$0.09	\$0.09	\$0.10

5.3 Marginal Cost Per Member Per Month

Adding together the estimated PMPM costs associated with deductible and coinsurance/copayments (from Tables 6 and 9) yields the total PMPM marginal cost, shown in Table 10.

Table 10: Estimated Marginal PMPM Cost of Mandate

	2023	2024	2025	2026	2027
Low Scenario	\$0.18	\$0.17	\$0.16	\$0.15	\$0.15
Mid Scenario	\$0.23	\$0.22	\$0.22	\$0.21	\$0.21
High Scenario	\$0.27	\$0.28	\$0.28	\$0.28	\$0.29

5.4 Projected Fully Insured Population in the Commonwealth

Table 11 shows the fully insured population in the Commonwealth ages 0 to 64 projected for the next five years. Appendix A describes the sources of these values.

Table 11: Projected Fully Insured Population in the Commonwealth, Ages 0 – 64

YEAR	TOTAL (0-64)
2023	2,155,695
2024	2,241,736
2025	2,262,201
2026	2,265,778
2027	2,268,960

5.5 Total Marginal Medical Expense

Multiplying the total estimated PMPM cost by the projected fully insured membership over the analysis period results in the total cost (medical expense) associated with the proposed requirement, shown on in Table 12. This analysis assumes the bill, if enacted, would be effective January 1, 2023.¹¹

Table 12: Estimated Marginal Claims Cost

	2023	2024	2025	2026	2027
Low Scenario	\$3,420,611	\$4,630,684	\$4,474,770	\$4,211,384	\$4,036,123
Mid Scenario	\$4,199,097	\$5,889,130	\$5,886,813	\$5,742,188	\$5,695,234
High Scenario	\$5,105,384	\$7,405,471	\$7,646,205	\$7,716,084	\$7,907,310

5.6 Carrier Retention and Increase in Premium

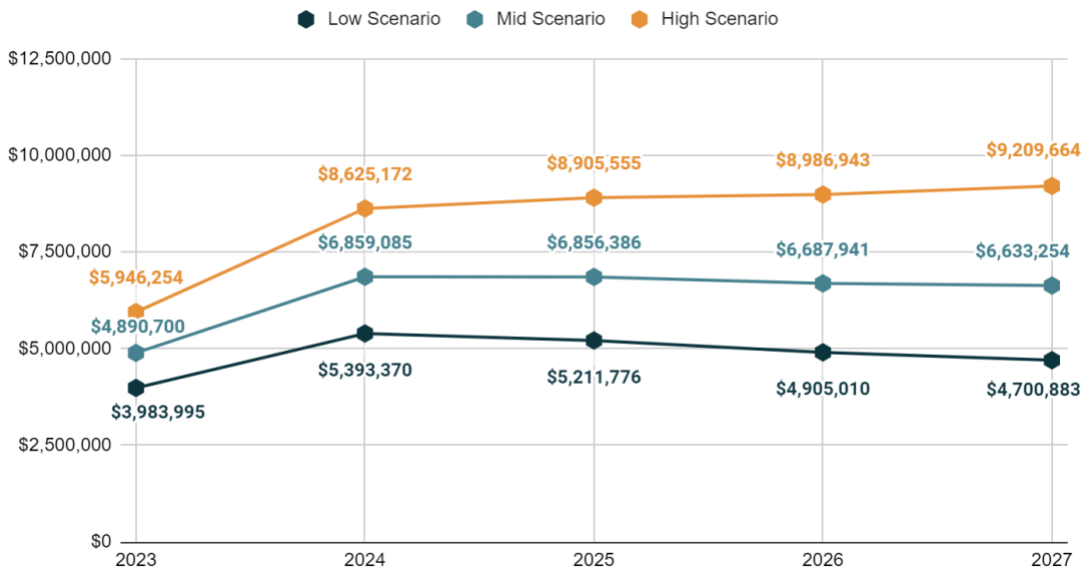
Assuming an average retention rate of 14.1%—based on CHIA’s analysis of administrative costs and profit in the Commonwealth¹⁴—the increase in medical expense was adjusted upward to approximate the total impact on premiums. Table 13 displays the result.

Table 13: Estimate of Increase in Carrier Premiums

	2023	2024	2025	2026	2027
Low Scenario	\$3,983,995	\$5,393,370	\$5,211,776	\$4,905,010	\$4,700,883
Mid Scenario	\$4,890,700	\$6,859,085	\$6,856,386	\$6,687,941	\$6,633,254
High Scenario	\$5,946,254	\$8,625,172	\$8,905,555	\$8,986,943	\$9,209,664

¹¹ The analysis assumes the mandate would be effective for policies issued and renewed on or after January 1, 2023. Based on an assumed renewal distribution by month, by market segment, and by the Commonwealth market segment composition, 72.1% of the member months exposed in 2023 will have the proposed mandate coverage in effect during calendar year 2023. The annual dollar impact of the mandate in 2023 was estimated using the estimated PMPM and applying it to 72.1% of the member months exposed.

Figure 2: Estimate of Increase in Carrier Premiums by Scenario



6.0 Results

The estimated impact of the proposed requirement on medical expense and premiums appears below. The analysis includes development of a best estimate “mid-level” scenario, as well as a low-level scenario, and a high-level scenario using more conservative assumptions.

The impact on premiums is driven by the provisions of the bill that require carriers that provide coverage for screening mammograms to cover diagnostic examinations for breast cancer equivalent to coverage provided for screening mammograms.

6.1 Five-Year Estimated Impact

For each year in the five-year analysis period, Table 14 (on the following page) displays the projected net impact of the proposed language on medical expense and premiums using a projection of Commonwealth fully insured membership. Note that the relevant provisions of the bill are assumed effective January 1, 2023.¹⁵

The low scenario impact is \$5.1 million per year on average, based on an assumption that the non-HDHP member cost share is 2.5% less than the best estimate and a 0% trend assumption on cost sharing. The high scenario impact is \$8.8 million per year on average, based on an assumption that the non-HDHP member cost share is 2.5% more than the best estimate and a 6.1% trend on cost sharing. The middle assumes that the non-HDHP cost share starts at about 19% and declines to about 14% at the end of the study period, resulting in average annual costs of \$6.7 million, or an average of 0.042% of premium.

Finally, the impact of the proposed law on any one individual, employer group, or carrier may vary from the overall results, depending on the current level of benefits each receives or provides, and on how the benefits will change under the proposed language.

Table 14: Summary Results

	2023	2024	2025	2026	2027	WEIGHTED AVERAGE	FIVE-YEAR TOTAL
Members (000s)	2,156	2,242	2,262	2,266	2,269		
Medical Expense Low (\$000s)	\$3,421	\$4,631	\$4,475	\$4,211	\$4,036	\$4,391	\$20,774
Medical Expense Mid (\$000s)	\$4,199	\$5,889	\$5,887	\$5,742	\$5,695	\$5,794	\$27,412
Medical Expense High (\$000s)	\$5,105	\$7,405	\$7,646	\$7,716	\$7,907	\$7,562	\$35,780
Premium Low (\$000s)	\$3,984	\$5,393	\$5,212	\$4,905	\$4,701	\$5,114	\$24,195
Premium Mid (\$000s)	\$4,891	\$6,859	\$6,856	\$6,688	\$6,633	\$6,748	\$31,927
Premium High (\$000s)	\$5,946	\$8,625	\$8,906	\$8,987	\$9,210	\$8,808	\$41,674
PMPM Low	\$0.21	\$0.20	\$0.19	\$0.18	\$0.17	\$0.19	\$0.19
PMPM Mid	\$0.26	\$0.25	\$0.25	\$0.25	\$0.24	\$0.25	\$0.25
PMPM High	\$0.32	\$0.32	\$0.33	\$0.33	\$0.34	\$0.33	\$0.33
Estimated Monthly Premium	\$562	\$577	\$593	\$609	\$625	\$593	\$593
Premium % Rise Low	0.038%	0.035%	0.032%	0.030%	0.028%	0.032%	0.032%
Premium % Rise Mid	0.047%	0.044%	0.043%	0.040%	0.039%	0.042%	0.042%
Premium % Rise High	0.057%	0.056%	0.055%	0.054%	0.054%	0.055%	0.055%

The proposed mandate would apply to self-insured plans operated for state and local employees by the GIC. The benefit offerings of GIC plans are like most other commercial plans in Massachusetts, and the next section describes the results for the GIC.

6.2 Impact on GIC

Findings from BerryDunn’s carrier survey indicate that GIC benefit offerings and other commercial plans in the Commonwealth are similar. However, a review of the GIC benefit offerings¹⁶ indicates they do not offer HDHPs. BerryDunn measured the member deductible, copayment and coinsurance amounts for diagnostic breast cancer screening and DBT screening and divided by the corresponding membership to calculate the GIC PMPM. Member cost share amounts for the GIC are about 50% of those amounts for the fully insured population. Since the HDHP exemption does not apply to the GIC, all the cost share amounts will be removed and as such are marginal cost. BerryDunn estimates that the claims cost of the bill is between 1.8 and 2.6 times greater for the GIC when compared to other fully insured plans in the Commonwealth. BerryDunn multiplied the fully insured claims PMPM amounts by these factors to account for the differences in plan design.

BerryDunn assumed the proposed legislative change will apply to self-insured plans that the GIC operates for state and local employees, with an effective date of July 1, 2023. Because of the July effective date, the results in 2023 are approximately one-half of an annual value. Table 15 breaks out the GIC’s self-insured membership, as well as the corresponding incremental medical expense.

Table 15: GIC Summary Results

	2023	2024	2025	2026	2027	WEIGHTED AVERAGE	FIVE-YEAR TOTAL
GIC Self-Insured							
Members (000s)	312	312	311	311	310		
Medical Expense Low (\$000s)	\$735	\$1,467	\$1,464	\$1,461	\$1,458	\$1,464	\$6,585
Medical Expense Mid (\$000s)	\$826	\$1,699	\$1,748	\$1,797	\$1,849	\$1,760	\$7,918
Medical Expense High (\$000s)	\$925	\$1,960	\$2,075	\$2,198	\$2,328	\$2,109	\$9,486

Endnotes

¹ Health Savings Accounts-IRS tax forms. Under Section 223(c)(2)(A), a HDHP may not provide benefits for any year until the minimum deductible for that year is satisfied. However, 223(c)(2)(C) provides a safe harbor for the absence of a deductible for preventive care as provided by the ACA. Accessed September 20, 2022.

<https://www.irs.gov/pub/irs-drop/n-13-57.pdf>.

² The bill, as currently written, does not include Chapter 176A. However, it was confirmed with the Sponsors that the bill's intent is to include Chapter 176A.

³ M.G.L. c. 175 §110L, M.G.L. c. 176A §8J, M.G.L. c. 176B §4I

⁴ Coverage of Certain Preventive Services Under the Affordable Care Act. 80 FR 41317.

⁵ *Ibid.*

⁶ Richman I, Long J, Kyanko K, et. al. Insurance Coverage Mandates and the Adoption of Digital Breast Tomosynthesis. *JAMA Netw Open*. 2022 Mar 1;5(3):e224208. Accessed August 1, 2022.

<https://pubmed.ncbi.nlm.nih.gov/35333358/>.

⁸ Massachusetts Center for Health Information and Analysis, Unmet Healthcare Needs Due to Cost are Still Common Among the Insured. Accessed September 9, 2022.

<https://www.bing.com/ck/a?!&p=b44a15dd88fcd490JmItdHM9MTY2MzAyNzlwMCZpZ3VpZD0zMzdIMmRjOC1iMTFjLTZmOGYtMjkzOS0zYzZiYjA1ZjZINDEmaW5zaWQ9NTE2Mw&ptn=3&hsh=3&fclid=337e2dc8-b11c-6f8f-2939-3c6eb05f6e41&u=a1aHR0cHM6Ly93d3cuY2hpYW1hc3MuZ292L2Fzc2V0cy9kb2NzL3lvcHVicy8yMDIxL0luc2lkZS1Mb29rLVVubWV0LUhiYWx0aC1DYXJILU5lZWRzLnBkZg&ntb=1>.

⁹ *Ibid.*

¹⁰ *Op. cit. Getting Called Back After a Mammogram. American Cancer Society.*

¹¹ U.S. Centers for Medicare and Medicaid Services (CMS), Office of the Actuary. National Health Expenditure Projections. Table 6, Hospital Care Expenditures and Table 7, Physician and Clinical Services Expenditures; Aggregate and per Capita Amounts, Percent Distribution and Annual Percent Change by Source of Funds: Calendar Years 2019-2026; Private Insurance. Accessed February 4, 2021. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html>.

¹² Massachusetts Center for Health Information and Analysis. Annual Report on the Massachusetts Health Care System, March 2012. Accessed August 27, 2022. <http://www.chiamass.gov/annual-report>.

¹³ *Op. cit. U.S. Centers for Medicare and Medicaid Services (CMS), Office of the Actuary. National Health Expenditure Projections.*

¹⁴ *Op. cit. Massachusetts Center for Health Information and Analysis. Annual Report on the Massachusetts Health Care System.*

¹⁵ With an assumed start date of January 1, 2023, dollars were estimated at 72.1% of the annual cost, based upon an assumed renewal distribution by month (Jan through Dec) by market segment and the Massachusetts market segment composition.

¹⁶ Group Insurance Commission, 2022-2023 Benefits Overview, Accessed October 13, 2022:
<https://www.mass.gov/lists/benefit-guides>.

Appendix A: Membership Affected by the Proposed Language

Membership potentially affected by proposed mandated change criteria includes Commonwealth residents with fully insured, employer-sponsored health insurance issued by a Commonwealth-licensed company (including through the GIC); nonresidents with fully insured, employer-sponsored insurance issued in the Commonwealth; Commonwealth residents with individual (direct) health insurance coverage; and lives covered by GIC self-insured coverage.

The unprecedented economic circumstances due to COVID-19 add challenges to estimation of health plan membership. The membership projections are used to determine the total dollar impact of the proposed mandate in question; however, variations in the membership forecast will not affect the general magnitude of the dollar estimates. Given the uncertainty, BerryDunn took a simplified approach to the membership projections. These membership projections are not intended for any purpose other than producing the total dollar range in this study. Further, to assess how recent volatility in commercial enrollment levels might affect these cost estimates, please note that the PMPM and percentage of premium estimates are unaffected because they are per-person estimates, and the total dollar estimates will vary by the same percentage as any percentage change in enrollment levels.

The 2018 Massachusetts APCD formed the base for the projections. The Massachusetts APCD provided fully insured membership by insurance carrier. The Massachusetts APCD was also used to estimate the number of nonresidents covered by a Commonwealth policy. These are typically cases in which a nonresident works for a Commonwealth employer that offers employer-sponsored coverage. Adjustments were made to the data for membership not in the Massachusetts APCD, based on published membership reports available from CHIA and the Massachusetts Division of Insurance (DOI).

CHIA publishes monthly enrollment summaries in addition to its biannual enrollment trends report and supporting databook (enrollment-trends-Data Through September 2021 databook¹ and Monthly Enrollment Summary – June 2021²), which provide enrollment data for Commonwealth residents by insurance carrier for most carriers, excluding some small carriers. CHIA uses supplemental information beyond the data in the Massachusetts APCD to develop its enrollment trends report and adjust the resident totals from the Massachusetts APCD.

The DOI published reports titled Quarterly Report of HMO Membership in Closed Network Health Plans as of December 31, 2018,³ and Massachusetts Division of Insurance Annual Report Membership in Medical Insured Preferred Provider Plans by County as of December 31, 2018.⁴ These reports provide fully insured covered members for licensed Commonwealth insurers where the member's primary residence is in the Commonwealth. The DOI reporting includes all insurance carriers and was used to supplement the Massachusetts APCD membership for small carriers not in the Massachusetts APCD.

In 2021, commercial, fully insured membership was 5.6% less than in 2019, with a shift to both uninsured and MassHealth coverage. As part of the public health emergency (PHE), members were not disenrolled from MassHealth coverage, even when they no longer passed eligibility criteria. When the PHE ends, redetermination efforts will begin at which time these individuals will no longer be eligible for MassHealth coverage. It is anticipated that a portion of individuals losing coverage will be eligible for coverage in individual ACA plans. Although the impact of COVID-19 on the fully insured market over the five-year projected period (2023 – 2027) is uncertain, BerryDunn has made the following assumptions to estimate membership:

- The federal PHE will end in 2023
- Redetermination will occur over 12 months for MassHealth members ⁵
- MassHealth members will be eligible for commercially insured plans

BerryDunn assumes 80% of the commercial membership reductions that occurred during the PHE will return to the commercial market by the end of 2023. BerryDunn further assumes that the remainder of this membership will return to the commercial market by the end of the projection period in December of 2027.

The distribution of members by age and gender was estimated using Massachusetts APCD population distribution ratios and was checked for reasonableness and validated against U.S. Census Bureau data.⁶ Membership was projected from 2022 – 2027 using Massachusetts Department of Transportation population growth rate estimates by age and gender.⁷

Projections for the GIC self-insured lives were developed using the GIC base data for 2018 and 2019, which BerryDunn received directly from the GIC, as well as the same projected growth rates from the Census Bureau that were used for the Commonwealth population. Breakdowns of the GIC self-insured lives by gender and age were based on the Census Bureau distributions.

Appendix A: Endnotes

¹ Center for Health Information and Analysis. Estimates of fully insured and self-insured membership by insurance carrier. Accessed November 15, 2020. <https://www.chiamass.gov/enrollment-in-health-insurance/>.

² *Ibid.*

³ Massachusetts Department of Insurance. HMO Group Membership and HMO Individual Membership. Accessed November 12, 2020. <https://www.mass.gov/doc/group-members/download>; <https://www.mass.gov/doc/individual-members/download>.

⁴ Massachusetts Department of Insurance. Membership 2018. Accessed November 12, 2020. <https://www.mass.gov/doc/2018-ipp-medical-plans/download>.

⁵ Blue Cross Blue Shield of Massachusetts Foundation, The End of the Federal Continuous Coverage Requirement in MassHealth. Accessed September 22, 2022. <https://www.bluecrossmafoundation.org/publication/end-federal-continuous-coverage-requirement-masshealth-key-strategies-reducing-coverage>.

⁶ U.S. Census Bureau. Annual Estimates of the Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2018. Accessed November 12, 2020. <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>.

⁷ Massachusetts Department of Transportation. Socio-Economic Projections for 2020 Regional Transportation Plans. Accessed November 12, 2020. <https://www.mass.gov/lists/socio-economic-projections-for-2020-regional-transportation-plans>.