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Diagnostic and Supplemental Exams and Biopsies for Breast Cancer – Cost Sharing

Maryland Health Care Commission

December 14, 2023

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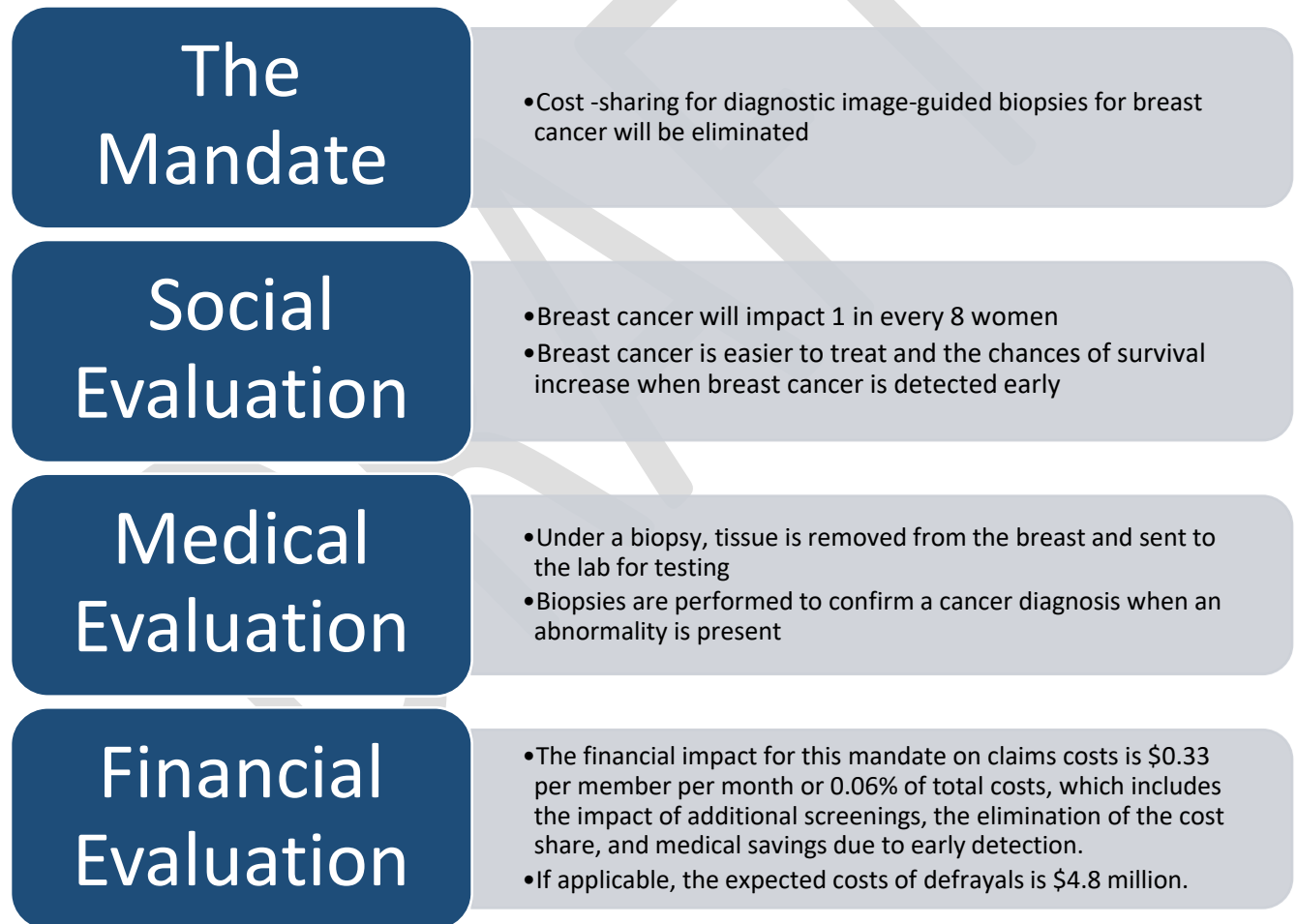
Section 1: Executive Summary

Introduction

During the 2023 legislative session of the Maryland General Assembly Senate Bill 184/House Bill 376, Health Insurance – Diagnostic and Supplemental Examinations and Biopsies for Breast Cancer – Cost Sharing was enacted into law effective January 1, 2024.

The Maryland Health Care Commission (MHCC) has retained Axene Health Partners, LLC (AHP) to deliver health care related actuarial services to assist the Commission in completing its response to a legislative request to determine the financial impact of eliminating cost-sharing for diagnostic image-guided biopsies for breast cancer.

Key Findings



Section 2. The Social Evaluation

Breast cancer is a devastating disease that is projected to impact one in every eight women and one in every 800 men during their lifetimes.¹ The impact of affliction is certain cells growing abnormally, often interfering with the work of healthy cells. The federal government has estimated that there will be nearly 300,000 new cases and 43,000 deaths related to breast cancer in 2023.²

The legislation requires payers to cover supplemental breast screenings (i.e. not related to an abnormality seen or suspected from a prior examination, and in individuals with a personal or family medical history or additional factors that may increase risk of breast cancer) without cost sharing. Prior to the legislation, payers were required to provide the United States Preventive Services Task Force (USPSTF) routine screenings without cost-sharing. The USPSTF guidelines describe screening mammograms in individuals with no prior indication (in any previous examination) of breast cancer between age 40 and 75 as preventative, however many payers apply this provision loosely and consider screening mammograms for individuals of any age and/or without restriction on diagnosis code (i.e. previous history of breast cancer) to be preventative (i.e. without cost sharing).^{3, 4, 5} This likely means an increase in supplemental breast screenings due to awareness of the law prompting Maryland residents to seek more breast cancer screening and biopsy services due to the awareness of the elimination of cost-sharing (even if a member could have received these services without cost-sharing even in the absence of the law).

A key question in analyzing any legislation is whether it can be administered appropriately, including what legal requirements need to be considered. Although no carrier surveys were solicited as part of the analysis, AHP's experience indicates that the key to administering this benefit is the ability to determine which claim submissions should be covered at 100% and which will not. We believe the medical codes listed in Appendix A are the appropriate indicator.

From a regulatory perspective, there are two overarching regulations that must be considered, the Affordable Care Act (ACA) definition of Essential Health Benefits and Internal Revenue Service (IRS) regulations regarding preventive services for a high-deductible health plan.

Under the ACA, each qualified health plan must cover all services in that state's list of essential services. Exception processing is required if a health plan covers services not on the essential benefits list. Biopsies are on the essentials benefits list for Maryland, but it is not clear if biopsies are considered preventative. If not considered preventative, then the cost-share portion of the costs could be considered a non-essential benefit. Since that is a legal opinion and not an actuarial opinion, a definitive answer to that question is outside the scope of this paper. That said, a few observations:

- Under Maryland law, preventive services for women include services and screening included in the Health Resources and Services Administration Guidelines.⁶

¹ [Breast Cancer Risk in American Women - NCI](#)

² [Female Breast Cancer — Cancer Stat Facts](#)

³ [UHC Preventative Services Medical Policy, October 2023](#)

⁴ [Cigna Administrative Policy, October 2023](#)

⁵ [Anthem Preventative Health Guidelines](#)

⁶ [essentialbenefitschart.pdf \(maryland.gov\)](#)

- The guidelines state that preventive services can be obtained through a single visit or a series of visits, which is somewhat consistent with the concept that biopsies are preventive services and not subject to the exception processing.⁷

Many plans covered under the ACA are high-deductible health plans which are governed in part by federal law. Under the federal law, all services are subject to cost-sharing except the services designated by the IRS. According to the IRS services considered preventive under the ACA are not subject to cost-sharing.⁸

DRAFT

⁷ [Women's Preventive Services Guidelines | HRSA](#)

⁸ [Section 223 – Health Savings Accounts \(irs.gov\)](#)

Section 3. Medical Evaluation

Breast cancer is the most common form of cancer among women after skin cancer.⁹ One in eight women will have breast cancer during their lifetime.¹⁰ Breast cancer is also deadly. There is a one in thirty-nine chance a women will die of breast cancer.¹¹ Although breast cancer death rates have decreased significantly in the last thirty years, this trend has slowed slightly in recent years. The decrease in death rates is believed to be the result of increased awareness, increased screenings, and better treatment.¹²

Screening Guidelines

As breast cancer is easier to treat successfully if it is diagnosed before it has begun to spread throughout the body, the United States Preventive Services Task Force (USPSTF) and other reputable organizations recommend routine screenings. The recommended frequency varies by age and other risk factors including family history.¹³ If the result of a routine screening indicates a lump or other mass in the breast, the customary next step is to perform a biopsy to confirm or eliminate a cancer diagnosis. In many cases, a sample of the mass is excised from the breast and tested for a malignancy. Image-guided biopsies assist the doctor in removing the sample more accurately.¹⁴

The USPSTF, the organization designated in the Affordable Care Act to define preventive care, recommends a 3-step screening process for breast cancer:

- Self-Examination. The USPSTF guidelines recommend that clinicians teach women to perform self-examinations to determine if they feel any lumps or other abnormalities.
- Clinical Breast Examination. A clinical breast examination is similar to a self-examination but performed by a doctor or other clinician. This is often done in conjunction with an annual wellness visit.
- Screening Mammograms. A screening mammogram is performed on asymptomatic women. The USPSTF recommends biennial screenings for women between the ages of 50 to 74.¹⁵

In the discussion regarding this recommendation, the USPSTF notes that some women may prefer to have a mammogram before age 50 or more often than biennially based on family and medical history.

Diagnosis and Treatment

Although breast cancer may begin in the milk-producing ducts, it can also begin in the lobules or other tissue in the breast.¹⁶ If an abnormality is detected through the screening process, a diagnostic

⁹ [Breast Cancer Statistics | How Common Is Breast Cancer? | American Cancer Society](#)

¹⁰ Ibid

¹¹ Ibid

¹² Ibid

¹³ [Recommendation: Breast Cancer: Screening | United States Preventive Services Taskforce \(uspreventiveservicestaskforce.org\)](#)

¹⁴ [Image-Guided Biopsy | Conditions & Treatments | UT Southwestern Medical Center \(utswmed.org\)](#)

¹⁵ [Recommendation: Breast Cancer: Screening | United States Preventive Services Taskforce \(uspreventiveservicestaskforce.org\)](#)

¹⁶ [Breast cancer - Symptoms and causes - Mayo Clinic](#)

mammogram, a breast ultrasound, or an MRI may be needed to further diagnose the abnormality. The only way to definitively diagnose breast cancer is through a biopsy. A biopsy is a procedure for removing a small amount of tissue from the lump or abnormality for further testing in a lab.¹⁷

There are several types of biopsies, which vary by the size of the abnormality, the location, overall health, clinical assessment, and personal preferences. The procedure may remove just a small portion of the tissue or an entire lump. Physicians may rely on imaging to more accurately target the tissue removal. There are three main types¹⁸ of imaging used:

- Stereotactic (mammogram- or tomosynthesis-guided)
- Ultrasound-guided
- MRI-guided

If cancer is detected, treatment¹⁹ may include:

- Surgery to remove just the tumor (lumpectomy), the entire breast (mastectomy), or the lymph nodes
- Radiation, in the form of x-rays or other high-powered beams to kill the cancer cells
- Chemotherapy, which relies on drugs to destroy fast-growing cells like cancer cells
- Hormone therapy to block cancers sensitive to hormones
- Targeted therapy drugs to attack specific abnormalities
- Immunotherapy which uses the body's immune system to fight cancer

Survival Rates

When breast cancer is detected earlier, it is easier to treat and the chances of survival increase. Although there are several ways to define breast cancer stages, perhaps the easiest to explain is the one below.²⁰ As Figure 1 shows, the 5-year survival rate is much higher if the cancer is localized.

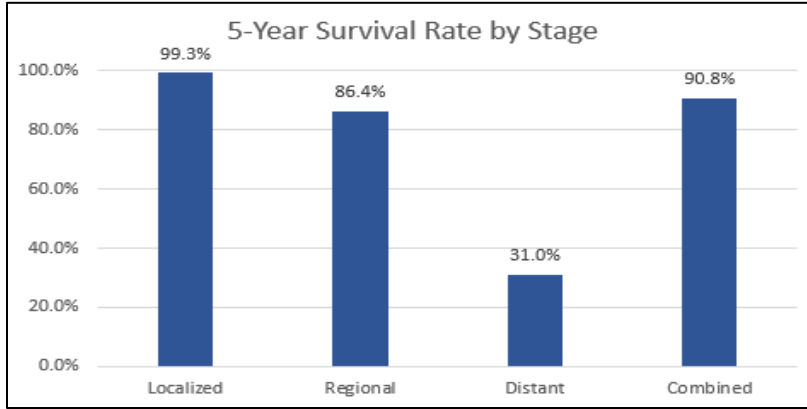
¹⁷ [8579.00.pdf \(cancer.org\)](#)

¹⁸ Ibid

¹⁹ [Breast cancer - Diagnosis and treatment - Mayo Clinic](#)

²⁰ [Survival Rates for Breast Cancer | American Cancer Society](#)

Figure 1. Survival Rates



Section 4. Financial Analysis

The financial impact of this legislation, like most laws related to health insurance benefit mandates, is increased costs in health insurance benefit plans. In this case, the financial model demonstrates that the removal of cost-sharing from some medical services leads to an increase in insurance payer costs. The financial model also reflects savings resulting from earlier detection of breast cancer; the modeling does not reflect expected extension of life or reduced loss of productivity, two key benefits of this legislation.

The Financial Model

AHP developed a financial model detailing the legislative impact and the results are displayed in Appendix 2. The source data includes Maryland's All-Payer Claims Data Base (APCD), proprietary information, and public data as indicated in the 'Comment' column of the financial model. The items labeled assumptions are based on AHP's experience with estimating similar benefits.

The financial model measures the three primary effects of the legislation:

- Increase in the Number of Screenings. AHP assumed that as a result of the legislation there will be an overall number of screenings of 12,306 or 3% of the total as shown in row c. The net result is an increase in the overall claims costs per member per month (PMPM) of \$0.21 as shown in row e. Presumably, the increase will be driven primarily by providers urging their patients to receive all necessary services without cost-share.
- Elimination of Cost Sharing. The 12,306 additional mammograms imply an increase of 865 additional biopsies as shown in row f. The law's requirement that diagnostic breast screenings and biopsies be covered without cost-sharing will transfer the member's current cost-sharing obligation to the payer, increasing payer costs by an estimated \$84.53 per diagnostic biopsy as shown in row g. The net increase in costs PMPM is \$0.14 as shown in row h.
- Savings Impact. The increase in supplemental breast screenings will result in the identification of some breast cancers in earlier stages of the disease progression, which will result in the more cost-effective treatment of these patients. This effect is small in comparison to the increased utilization of diagnostic screening because only one to two in 1,000 screening mammograms will result in a diagnosis of breast cancer at an estimated savings of \$15,000 per detected cancer. The net savings is \$0.02 on a cost basis as shown in row k.

The total cost PMPM is \$0.33 on a cost basis. Assuming an 85% loss ratio this translates to a \$0.39 premium increase or 0.06% of the total.

Section 5. Actuarial Considerations

This report has been prepared by Gregory G. Fann, FSA, FCA, MAAA, who is also the primary contact.

The report has been peer-reviewed by:

- Joan C. Barrett, FSA, MAAA
- Tony Pistilli, FSA, CERA, MAAA, CPC

All members of the team members of the American Academy of Actuaries (MAAA) in good standing and are qualified to perform this work. This report was prepared in accordance with the following Standards of Practice as promulgated by the Actuarial Standards Board of the American Academy of Actuaries:

- Actuarial Standards of Practice No. 1, “Introductory Standard of Practice”
- Actuarial Standards of Practice No. 5, “Incurred Health and Disability Claims”
- Actuarial Standards of Practice No. 23, “Data Quality”
- Actuarial Standards of Practice No. 25, “Credibility Procedures Applicable to Accident and Health, Group Term Life, and Property/Casualty Coverages”
- Actuarial Standards of Practice No. 41, “Actuarial Communication”
- Actuarial Standards of Practice No. 56, “Modeling”

Although AHP has performed due diligence in researching the legal implications of this analysis, this report does not constitute a legal opinion and the reader should consult their own legal counsel about specific legal issues.

Appendix 1. Medical Codes Used

Criteria 1) At least 1 CPT/HCPCS code from the list below:	Criteria 2) A primary ICD-10 diagnosis code matching the list below (astrick denotes start of diagnosis code):																																																																																	
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Appendix 2. The Financial Model

	2021 Data	2024 No Legislation	2024 With Legislation	Legislative Impact	Comment
Baseline Screening Costs					
a. Eligible women	1,527,140	1,527,140	1,527,140		APCD data
Age 25 - 39	509,818	509,818	509,818		
Age 40 - 49	332,093	332,093	332,093		
Age 50 - 75	685,229	685,229	685,229		
b. Member Months	16,798,540	16,798,540	16,798,540		APCD Data
c. Total screenings in total population	381,747	381,747	394,052	12,306	APCD data, assumption
Screening rate per 1,000 women age 25 - 39	7.2	7.2	7.9		
Screening rate per 1,000 women age 40 - 49	299.5	299.5	314.5		
Screening rate per 1,000 women age 50 - 75	406.6	406.6	416.8		
d. Allowed costs per screening	\$ 252	\$ 292	\$ 292	-	APCD data, 5% annual increase
e. Allowed PMPM	\$ 5.73	\$ 6.64	\$ 6.85	0.21	(c. x d.) ÷ b.
Cost Sharing Impact					
f. Diagnostic biopsies in total population	26,835	26,835	27,700	865	APCD data
g. Average cost-share amount	\$ (73.02)	\$ (84.53)	-	84.53	APCD data, 5% annual increase
h. Cost-share impact PMPM	\$ (0.12)	\$ (0.14)	-	0.14	(f. x g.) ÷ b.
Savings Impact					
i. Cancers detected per mammogram	0.2%	0.2%	0.2%	0.0%	Published data
j. Savings per detected cancer	\$ (13,000)	\$ (15,000)	\$ (15,000)	-	Proprietary data ¹
k. Savings impact PMPM	\$ (0.53)	\$ (0.61)	\$ (0.63)	(0.02)	(i. x j.) ÷ b.
Net Mammogram PMPM					
l. Baseline screening allowed PMPM	\$ 5.73	\$ 6.64	\$ 6.85	0.21	e.
m. Cost-sharing	\$ (0.12)	\$ (0.14)	-	0.14	h.
n. Expected savings	\$ (0.53)	\$ (0.61)	\$ (0.63)	(0.02)	k.
o. Net Impact to payers	\$ 5.09	\$ 5.89	\$ 6.22	0.33	l. + m. + n.
Net Impact % of Total Costs					
p. Net allowed PMPM	\$ 470	\$ 576	\$ 576	-	Proprietary data
q. Net Impact on the cost per service	\$ -	\$ -	\$ 85	85	g.
r. Increase in appropriate use of the service	0%	0%	0%	-	Assumption
s. Substitution effect	0%	0%	0%	-	Assumption
t. Impact on total cost of health care PMPM \$	\$ 5.09	\$ 5.89	\$ 6.22	0.33	o.
u. Impact on total cost of health care %	1.08%	1.02%	1.08%	0.06%	t ÷ p.
v. Defrayal claims costs PMPM			\$	0.33	t.
w. Loss ratio				85%	Assumption
x. Applicable members				922,361	Proprietary data
y. Total defrayal costs, if applicable			\$	4,287,207	(v. ÷ w.) x x. x 12

¹ Source: [What Percentage of Diagnostic Mammograms is Cancer? | Independent Imaging](#)