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**MANDATED BENEFIT REVIEW OF H.B. 847:  
AN ACT RELATIVE TO PROMOTING WOMEN'S HEALTH**

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**MAY 2014**



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## Benefit Mandate Overview: H.B. 847: Cervical Cytology Screening

### HISTORY OF THE BILL

The Joint Committee on Health Care Financing referred House Bill (H.B.) 847, “An act relative to promoting women’s health,” sponsored by Rep. Benson of Lunenburg, to the Center for Health Information and Analysis (CHIA) for review. Massachusetts General Laws, chapter 3, section 38C requires CHIA to review and evaluate the potential fiscal impact of each mandated benefit bill referred to the agency by a legislative committee.

### WHAT DOES THE BILL PROPOSE?

H.B. 847 requires that, for health insurance plans defined in the bill, “[a]nnual cytologic screenings performed at the same time as an annual physical exam may be separately billed by the health care provider and shall be paid by the insurer.”

### MEDICAL EFFICACY OF CYTOLOGIC SCREENINGS

A cytologic screening in this bill refers to a Papanicolaou (‘Pap’) smear, which is a method to detect abnormal cells in a woman’s cervix in either the precancerous stage, or in the early stage of non-invasive cervical cancer. Detection in either of these phases can almost always prevent development of invasive cervical cancer. Routinely part of a woman’s gynecological exam, the screening involves the removal of cervical cells for microscopic review and the identification of abnormalities, which can then be treated as necessary.<sup>i</sup> Clinical guidelines recommend screenings every three to five years for women ages 21 to 65, depending on the age of the woman and the type of screening conducted.<sup>ii</sup> H.B. 847 relates to how cytologic screenings may be billed by the health care provider.

### CURRENT COVERAGE

In accordance with accepted medical practice as well as existing Massachusetts mandates,<sup>iii</sup> all health insurers in the state already cover cervical cytology screenings; the frequency of such exams is left to the discretion of a woman’s provider, but is reimbursable at least annually. The carriers vary, however, on whether payments are already included in the reimbursement rates for other examinations, including women’s preventive wellness visits, or are separately payable. This mandate would require separate reimbursement for these screenings when conducted during a woman’s preventive wellness visit.

### COST OF IMPLEMENTING THE BILL

Requiring separate payment for this benefit by fully-insured health plans would result in an average annual increase, over five years, to the typical member’s monthly health insurance premiums of between \$0.10 (0.02%) and \$0.42 (0.07%) per year.

i American Cancer Society (ACS): What is cancer? Last Medical Review and Revision: 04/11/2013; accessed 6 January 2014. <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-what-is-cancer>.

ii American College of Obstetricians and Gynecologists (ACOG): New Cervical Cancer Screening Recommendations from the U.S. Preventive Services Task Force and the American Cancer Society/American Society for Colposcopy and Cervical Pathology/American Society for Clinical Pathology. Released March 14, 2012; accessed 7 January 2014: [http://www.acog.org/About\\_ACOG/Announcements/New\\_Cervical\\_Cancer\\_Screening\\_Recommendations](http://www.acog.org/About_ACOG/Announcements/New_Cervical_Cancer_Screening_Recommendations).

iii Massachusetts General Laws: Ch. 175 §47G, Ch. 176A §8J, Ch. 176B §4I.

## PLANS AFFECTED BY THE PROPOSED BENEFIT MANDATE

Individual and group accident and sickness insurance policies, corporate group insurance policies, and HMO policies issued pursuant to Massachusetts General Laws, as well as the Group Insurance Commission (GIC) covering public employees and their dependents, would be subject to this mandate. The proposed benefit mandate would apply to members covered under the relevant plans, regardless of whether they reside within the Commonwealth or merely have their principal place of employment in the Commonwealth. The proposed mandate also applies to Medicaid/MassHealth; CHIA's analysis does not estimate the effect of the mandate on Medicaid expenditures.

## PLANS NOT AFFECTED BY THE PROPOSED BENEFIT MANDATE

Self-insured plans (i.e., where the employer policyholder retains the risk for medical expenses and uses an insurer to provide administrative functions) are subject to federal law and not to state-level health insurance benefit mandates.

State health benefit mandates do not apply to Medicare and Medicare Advantage plans whose benefits are qualified by Medicare. Consequently this analysis excludes any members of commercial fully-insured plans over 64 years of age. These mandates also do not apply to federally-funded plans including TRICARE (covering military personnel and dependents), Veterans Administration, and the Federal Employee's Health Benefit Plan.

## PRELIMINARY ESTIMATE OF POTENTIAL MASSACHUSETTS LIABILITY UNDER THE ACA

Analysis of the cost associated with proposed state benefit mandates is important in light of new requirements introduced by the Affordable Care Act (ACA). In accordance with the ACA, all states must set an Essential Health Benefits (EHB) benchmark that all qualified health plans (QHPs), and those plans sold in the individual and small-group markets, must cover, at a minimum. Section 1311(d)(3)(B) of the ACA, as codified in 45 C.F.R. § 155.170, explicitly permits a state to require QHPs to offer benefits in addition to EHB, provided that the state is liable to defray the cost of additional mandated benefits by making payments to or on behalf of individuals enrolled in QHPs. The state is not financially responsible for the costs of state-required benefits that are considered part of the EHB benchmark plan. State-required benefits enacted on or before December 31, 2011 (even if effective after that date) are not considered "in addition" to EHB and therefore will not be the financial obligation of the state. The policy regarding state-required benefits is effective as of January 1, 2014 and is intended to apply for at least plan years 2014 and 2015.

To provide additional information about the potential state liability under the ACA associated with mandating this benefit, CHIA generated a preliminary estimate of the incremental annual premium costs to QHPs associated with this benefit mandate; incremental premium costs exclude the cost of services already provided absent the mandate or already required by other federal or state laws. CHIA's review of the proposed health benefit mandate is not intended to determine whether or not this mandate is subject to state liability under the ACA. CHIA generated this estimate to provide neutral, reliable information to stakeholders who make decisions that impact health care access and costs in the Commonwealth.

CHIA applied the mid-range PMPM (per-member per-month) actuarial projection for 2015 cost (\$0.29) to an estimated 800,000 potential QHP members.<sup>iv</sup> This results in an estimated potential incremental premium increase to QHPs of approximately \$230,000 per month or \$2.75 million per year. If fewer (or more) enrollees join QHPs in the merged market than expected, the potential incremental premium cost may be less (or more) than this estimate. A final determination of the Commonwealth's liability will require a detailed analysis by the appropriate state agencies.

<sup>iv</sup> Estimated QHP membership provided by the Massachusetts Division of Insurance.

## H.B. 847 Medical Efficacy Assessment: Cytology Screening for Cervical Cancer

Massachusetts House Bill 847 requires health insurance plans to pay for annual cytologic screenings performed at the same time as an annual physical exam even when the screening is billed as a procedure separate from the exam.<sup>1</sup> Massachusetts General Laws (M.G.L.) c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (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 mandated treatment or service, often compared to alternative treatments, and describe the potential impact of a mandated benefit on the quality of patient care and the health status of the population.

### CERVICAL CANCER

Cervical cancer is out-of-control growth of abnormal cells in the cervix, the lower part of a woman's uterus connecting the uterus to the birth canal.<sup>2,3</sup>

In 2010, the latest year for which statistics are available, the incidence of cervical cancer in Massachusetts was 5.5 per 100,000 women, ranking the state fifth lowest in the U.S.; the rate for minority women was significantly higher, at 9.6 to 9.8 per 100,000.<sup>4</sup> In that year approximately 1.3 per 100,000, or 44 women, died of cervical cancer.<sup>5</sup>

Overall, the American Cancer Society reports that deaths in America due to cervical cancer, once the most common cause of cancer death in women, have fallen by almost 70% between 1992 and 1995, becoming stable in more recent years.<sup>6</sup> Cervical cancer now ranks 14<sup>th</sup> for all cancer deaths.<sup>7</sup> The rate of cervical cancer varies by age in the United States and by race, with Hispanics most likely to get the disease, and whites least likely.<sup>8</sup>

### CERVICAL CANCER PREVENTION

The reduction in the American cervical cancer death rate has been attributed, for the most part, to the increased use of cytology screening.<sup>9</sup> Cytology screenings detect cervical cell changes prior to the development of invasive cancer, and can identify precancerous cells and non-invasive cancers in their earliest and most curable stages.

Most often with cervical cancers and pre-cancers, women show no symptoms of the disease until it has invaded nearby tissue.<sup>10</sup> However, invasive cervical cancer can be prevented if it is identified in its precancerous stage through the use of cytological screening, or Pap smear.<sup>11</sup>

### GUIDELINES FOR CERVICAL CANCER CYTOLOGIC SCREENING

In March 2012, revised guidelines for cervical cancer screening were simultaneously released both by the U.S. Preventive Services Task Force (USPSTF) and by a partnership of the ACS, the American Society for Colposcopy and Cervical Pathology (ASCCP), and the American Society for Clinical Pathology (ASCP).<sup>12,13</sup> While each set of guidelines was developed independently through separate analyses, the recommendations are very similar.<sup>14</sup> These recommendations were endorsed by the American Academy of Family Physicians (AAFP),<sup>15</sup> and similar guidelines were issued in November 2012 by the American Congress of Obstetricians

and Gynecologists (ACOG).<sup>16,17</sup>

Cytology screening every three years for cervical cancer is now recommended for average risk, asymptomatic women ages 21 to 65, regardless of the onset of sexual activity.<sup>18,19,20,21</sup> As an alternative for women age 30 to 65, cytology screening may be conducted every five years in combination with testing for the human papillomavirus (HPV); this is the method recommended by the ACS/ASCCP/ASCP partnership and ACOG. Screening is not recommended for anyone under 21 years of age, nor for women over 65 years old with “adequate prior screening” and not at high risk for cervical cancer.

One significant revision in both sets of recent guidelines is that average-risk, asymptomatic “[w]omen of any age should NOT be screened every year by any screening method,”<sup>22,23</sup> and “that the annual Pap is no longer the standard of care.”<sup>24</sup> This comes as a result of numerous studies which conclude that while annual screenings may prevent a small number of cervical cancers, the tests would identify changes and abnormalities that would not ultimately become cancer, and would increase the number of unnecessary procedures and treatments performed.<sup>25</sup>

These organizations, balancing the benefits and harms of annual screening, now unanimously agree that the screening interval for women at average risk should be between three and five years, depending on the woman’s age and the type(s) of test(s) performed. While the financial cost of the procedures and treatments was unambiguously excluded in their evaluations, the organizations cited the increased anxiety of a positive screen, discomfort and bleeding from the procedures and treatment, potential pregnancy complications, and the stigma associated with sexually-transmitted disease diagnosis (such as HPV).<sup>26</sup>

## EFFECT OF MODIFYING BILLING PRACTICES ON SCREENING RATES

Massachusetts statutes already require insurers to cover cytologic screening.<sup>27</sup> The clinical efficacy of H.B. 847 therefore arises not from the value of Pap smears in general, but from the effect of billing arrangements for Pap smears on the quality of patient care and the health status of the population, presumably by increasing the number of women who are screened because providers will no longer have an incentive to collect the cytologic sample on a day different from that of the patient’s general exam. Research conducted for this analysis has found no studies of the effect of such a change in billing arrangements on patient outcomes.



## Endnotes

- 1 The 188<sup>th</sup> General Court of the Commonwealth of Massachusetts. Bill H. 847: An Act relative to promoting women's health. Accessed 7 January 2014: <https://malegislature.gov/Bills/188/House/H847>.
- 2 American Cancer Society (ACS): What is cancer? Last Medical Review and Revision: 04/11/2013; accessed 6 January 2014: <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-what-is-cancer>.
- 3 When normal cells in the cervix lining develop abnormalities, the tissue may become cancerous. Not all such abnormalities will develop into invasive cervical cancer, and in most of these cases, the change happens over several years (although it can happen much more quickly). And while most precancerous cells will resolve without treatment, “[t]reating all pre-cancers can prevent almost all true cancers.” ACS: What is cervical cancer? Last Medical Review and Revision: 11 April 2013; accessed 6 January 2014: <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-what-is-cervical-cancer>.
- 4 U.S. Centers for Disease Control, National Program of Cancer Registries. United States Cancer Statistics (USCS), Cancers By State and Region 2010 Cancer Types Grouped by State and Region: Cervix. Age-Adjusted Invasive Cancer Incidence Rates and 95% Confidence Intervals by U.S. Census Region and Division, State and Metropolitan Area, and Race and Ethnicity, United States (Table 2.3.1.1F). Accessed 6 March 2014: <http://apps.nccd.cdc.gov/uscs/cancersbystateandregion.aspx>.
- 5 *Ibid.*
- 6 *Ibid.*
- 7 D. Saslow, D. Solomon, H.W. Lawson, et.al and ACS-ASCCP-ASCP Cervical Cancer Guideline Committee (2012). American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology screening guidelines for the prevention and early detection of cervical cancer. CA: A Cancer Journal for Clinicians, 62: 147–172. doi: 10.3322/caac.21139. Accessed 7 January 2014: <http://onlinelibrary.wiley.com/doi/10.3322/caac.21139/full>.
- 8 ACS: What are the key statistics about cervical cancer? Last Medical Review and Revision: 11 April 2013; accessed 6 January 2014: <http://www.cancer.org/cancer/cervicalcancer/detailedguide/>.
- 9 *Ibid.*
- 10 ACS: How are cervical cancers and pre-cancers diagnosed? Last Medical Review and Revision: 11 April 2013; accessed 6 January 2014. <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-diagnosis>.
- 11 A Pap smear, routinely collected as part of a woman's pelvic exam, is a sample of cervical cells isolated for microscopic review and the identification of abnormalities. ACS: Can cervical cancer be prevented? Last Medical Review and Revision: 11 April 2013; accessed 6 January 2014: <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-prevention>.
- 12 American College of Obstetricians and Gynecologists (ACOG): New Cervical Cancer Screening Recommendations from the U.S. Preventive Services Task Force and the American Cancer Society/American Society for Colposcopy and Cervical Pathology/American Society for Clinical Pathology. Released 14 March 2012; accessed 7 January 2014: [http://www.acog.org/About\\_ACOG/Announcements/New\\_Cervical\\_Cancer\\_Screening\\_Recommendations](http://www.acog.org/About_ACOG/Announcements/New_Cervical_Cancer_Screening_Recommendations).
- 13 D. Saslow, D. Solomon, H.W. Lawson, et.al and ACS-ASCCP-ASCP Cervical Cancer Guideline Committee (2012). American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology screening guidelines for the prevention and early detection of cervical cancer. CA: A Cancer Journal for Clinicians, 62: 147–172. doi: 10.3322/caac.21139. Accessed 7 January 2014: <http://onlinelibrary.wiley.com/doi/10.3322/caac.21139/full>.
- 14 U.S. Department of Health and Human Services (US-DHHS), Agency for Healthcare Research and Quality (AHRQ), National Guideline Clearinghouse (NGC). Guideline synthesis: Screening for cervical cancer. Revised March 2013; accessed 7 January 2014: <http://www.guideline.gov/syntheses/synthesis.aspx?id=43606>.
- 15 American Academy of Family Physicians (AAFP): Cervical Cancer. Published 2012; accessed 7 January 2014: <http://www.aafp.org/patient-care/clinical-recommendations/all/cervical-cancer.html>.
- 16 American Congress of Obstetricians and Gynecologists (ACOG): Patient Education Fact Sheet: PFS004 New Guidelines for Cervical Cancer Screening. Published September 2013; accessed 7 January 2014: [http://www.acog.org/For\\_Patients/Search\\_FAQs/documents/New\\_Guidelines\\_for\\_Cervical\\_Cancer\\_Screening](http://www.acog.org/For_Patients/Search_FAQs/documents/New_Guidelines_for_Cervical_Cancer_Screening).
- 17 ACOG Practice Bulletin No. 131: Screening for Cervical Cancer. *Obstetrics & Gynecology*. 120(5):1222-1238, November 2012. Accessed 7 January 2014: [http://journals.lww.com/greenjournal/Abstract/2012/11000/Practice\\_Bulletin\\_No\\_131\\_Screening\\_for\\_Cervical.49.aspx](http://journals.lww.com/greenjournal/Abstract/2012/11000/Practice_Bulletin_No_131_Screening_for_Cervical.49.aspx).
- 18 ACS: Can cervical cancer be prevented? Last Medical Review and Revision: 11 April 2013; accessed 6 January 2014: <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-prevention>.
- 19 US-DHHS, AHRQ, NGC. Guideline Summary: American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology screening guidelines for the prevention and early detection of cervical cancer. Guideline updated 25 July 2012, verified 16 August 2012; accessed 7 January 2014: <http://www.guideline.gov/content.aspx?id=36834>.

- 20 U.S. Preventive Services Task Force (USPSTF): Screening for Cervical Cancer. Release Date: March 2012; accessed 6 January 2014: <http://www.uspreventiveservicestaskforce.org/uspstf/uspscerv.htm>.
- 21 ACS/ASCCP/ASCP, USPSTF and ACOG recommendations apply to all women who have a cervix, regardless of sexual history, who are not immunocompromised, have never received a diagnosis of cervical cancer or a high-grade precancerous cervical lesion, and have not had in utero exposure to diethylstilbestrol.
- 22 *Op cit.* American Cancer Society: Can cervical cancer be prevented?
- 23 U.S. Centers for Disease Control and Prevention (US-CDC): Cervical Cancer Screening Guidelines for Average-Risk Women. Accessed 7 January 2014: <http://www.cdc.gov/cancer/cervical/pdf/guidelines.pdf>
- 24 ACOG: Ob-Gyns Recommend Women Wait 3 to 5 Years Between Pap Tests. Released 22 October 2012; accessed 7 January 2014: [http://www.acog.org/About\\_ACOG/News\\_Room/News\\_Releases/2012/Ob-Gyns\\_Recommend\\_Women\\_Wait\\_3\\_to\\_5\\_Years\\_Between\\_Pap\\_Tests](http://www.acog.org/About_ACOG/News_Room/News_Releases/2012/Ob-Gyns_Recommend_Women_Wait_3_to_5_Years_Between_Pap_Tests).
- 25 According to ACOG, “[t]he prevalence of transient HPV infections and associated low-grade lesions is high, but most of these will regress within 1 to 2 years. The small fraction of lesions that do not regress will, on average, require many years to progress to cancer. Identifying and treating lesions that will likely regress on their own does not provide a benefit large enough to outweigh the harms.” *Op cit.* ACOG: New Cervical Cancer Screening Recommendations from the U.S. Preventive Services Task Force and the American Cancer Society/American Society for Colposcopy and Cervical Pathology/American Society for Clinical Pathology.
- 26 *Ibid.*
- 27 Massachusetts General Laws: c. 175 §47G, c. 176A §8J, c. 176B §4I. Accessed 10 March 2014: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXXII/Chapter175/Section47G>, <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXXII/Chapter176A/Section8J>, <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXXII/Chapter176B/Section4I>.

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**APPENDIX**

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**Actuarial Assessment of House Bill 847:  
“An Act relative to promoting women’s health”**

Prepared for  
Commonwealth of Massachusetts  
Center for Health Information and Analysis

May 2014

Prepared by  
Compass Health Analytics, Inc.







**Actuarial Assessment of House Bill 847:  
“An Act relative to promoting women’s health”**

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# Actuarial Assessment of House Bill 847: “An Act relative to promoting women’s health”

## Executive Summary

Massachusetts House Bill 847 (H.B. 847) requires health insurance plans to separately pay for annual cytology screening performed and billed at the same time as an annual physical exam.<sup>1</sup> Massachusetts General Laws (M.G.L.) c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with, among other duties, reviewing the potential impact of proposed mandated health care insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect enactment of the bill would have on the cost of health insurance in Massachusetts.

### Background

H.B. 847 states that “[a]nnual cytologic screenings performed at the same time as an annual physical exam may be separately billed by the health care provider and shall be paid by the insurer.”

A cytologic screening in this case refers to a ‘Pap smear,’ which is a method to detect abnormal cells in a woman’s cervix in either the precancerous stage, or in the early stage of non-invasive cervical cancer. Detection in either of these phases can almost always prevent development of invasive cervical cancer. Routinely part of a woman’s gynecological exam, which also includes pelvic and breast examinations, the screening involves the removal of cervical cells for microscopic review and the identification of abnormalities, which can then be treated as necessary.<sup>2</sup>

Clinical guidelines regarding Pap smears changed as of March 2012, and major medical societies and advocacy organizations have reached consensus regarding the timing of the screenings; they now recommend ranges of three to five years for women ages 21 to 65, depending on the age of the woman and the type of screening conducted.

Per accepted medical practice as well as existing Massachusetts mandates, all health insurers in the state already cover cervical cytology screenings; the frequency of such exams is left to the discretion of a woman’s provider, but is reimbursable at least annually. Carriers vary, however, on whether or not payments are already included in the reimbursement rates for other examinations, including women’s preventive wellness visits, or are separately payable. This mandate would require separate reimbursement for these screenings when conducted during a woman’s preventive wellness visit.

## Analysis

Compass estimated the impact of H.B. 847 by performing the following steps:

- Estimate the number of women aged 21 to 64 in the fully-insured Massachusetts population, projected for the next five years
- Estimate the number who received a cervical cytology screening and a wellness visit
- Estimate the number of these visits that will be impacted by the mandate
- Estimate the average current cost of reimbursement for preventive visits and cervical cytology screening
- Calculate the marginal cost resulting from this mandate
- Calculate the proposed mandate's incremental effect on carrier medical expenses
- Estimate the impact on premiums of insurer's retention (administrative costs and profit)
- Project the estimated cost over the next five years
- Estimate the impact on the self-insured population for the GIC

Factors affecting the analysis include:

- Existing insurance payments and billing rules for cervical cytology screenings vary widely across and within carriers and plans
- It is unfeasible to predict how carriers would change required billing codes and practices, adding uncertainty to the estimates which is captured by having a wider range of impact
- Estimates of the number of women who will change the way in which they access these screenings will vary both because of changes in clinical screening guideline recommendations, as well as the passage of this proposed mandate, making marginal estimates of behavioral changes in response to this mandate more variable

## Summary results

Table ES-1 summarizes the effect of H.B. 847 on premium costs for fully-insured plans, averaged over five years. The bill, if enacted, is estimated to increase fully-insured premiums by as much as 0.07% on average over the next five years, although a more likely increase is in the range of 0.05%.

The impact of H.B. 847 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 mandate.

**Table ES-1:  
Summary Results**

	2015	2016	2017	2018	2019	Average	5 Yr Total
Members (000s)	2,144	2,121	2,096	2,071	2,045		
Medical Expense Low (\$000s)	\$2,059	\$2,129	\$2,200	\$2,270	\$2,340	\$2,199	\$10,997
Medical Expense Mid (\$000s)	\$6,544	\$6,769	\$6,993	\$7,215	\$7,439	\$6,992	\$34,960
Medical Expense High (\$000s)	\$8,791	\$9,092	\$9,393	\$9,692	\$9,993	\$9,392	\$46,961
Premium Low (\$000s)	\$2,326	\$2,406	\$2,485	\$2,565	\$2,644	\$2,485	\$12,426
Premium Mid (\$000s)	\$7,395	\$7,648	\$7,901	\$8,153	\$8,406	\$7,901	\$39,503
Premium High (\$000s)	\$9,933	\$10,274	\$10,613	\$10,952	\$11,292	\$10,613	\$53,064
PMPM Low	\$0.09	\$0.09	\$0.10	\$0.10	\$0.11	\$0.10	\$0.10
PMPM Mid	\$0.29	\$0.30	\$0.31	\$0.33	\$0.34	\$0.31	\$0.31
PMPM High	\$0.39	\$0.40	\$0.42	\$0.44	\$0.46	\$0.42	\$0.42
Estimated Monthly Premium	\$512	\$537	\$564	\$592	\$622	\$566	\$566
Premium % Rise Low	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Premium % Rise Mid	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
Premium % Rise High	0.08%	0.08%	0.07%	0.07%	0.07%	0.07%	0.07%

# **Actuarial Assessment of House Bill 847: “An Act relative to promoting women’s health”**

## **1. Introduction**

Massachusetts House Bill 847 (H.B. 847) requires health insurance plans to separately pay for annual cytology screening performed and billed at the same time as an annual physical exam.<sup>3</sup> Massachusetts General Laws (M.G.L.) c. 3 § 38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with, among other duties, reviewing the potential impact of proposed mandated health care insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect enactment of the bill would have on the cost of health insurance in Massachusetts.

Assessing the impact of this bill entails analyzing the incremental effect of the bill on spending by insurance plans. This in turn requires comparing spending under the provisions of the proposed law to spending under current statutes and current benefit plans, for the relevant services.

Section 2 of this analysis outlines the provisions of the bill. Section 3 summarizes the methodology used for the estimate. Section 4 discusses important considerations in translating the bill’s language into estimates of its incremental impact on health care costs. Finally, Section 5 describes the calculation of the estimate.

## **2. Interpretation of H.B. 847**

The following subsections describe the provisions of H.B. 847, as drafted for the 188th General Court.

### **2.1. Plans affected by the proposed mandate**

The bill amends the statutes that regulate carriers of health insurance in Massachusetts, amending chapters affecting each of the following types of health insurance policies:<sup>4</sup>

- Accident and sickness insurance policies (M.G.L. c. 175)
- Contracts with non-profit hospital service corporations (M.G.L. c. 176A)
- Certificates under medical service agreements (M.G.L. c. 176B)
- Health maintenance contracts (M.G.L. c. 176G)
- Insurance for persons in service of the Commonwealth (M.G.L. c. 32A)

Section 1 of the bill (amending M.G.L. c. 118E) imposes the mandate on the Division of Medical Assistance. While the bill might, depending on current coverage under MassHealth and related

programs, affect Medicaid spending, CHIA instructed Compass not to include that potential spending in this analysis.

All sections of the proposed bill mandate coverage for members covered under the relevant plans, regardless of whether they reside within the Commonwealth or merely have their principal place of employment in the Commonwealth.

Self-insured plans are subject to federal law and not to state-level health insurance benefit mandates. State mandates do not apply to Medicare, and this analysis assumes this proposed mandate does not affect Medicare extension/supplement plans even to the extent they are regulated by state law.

## 2.2. Covered services

H.B. 847 states that “[a]nnual cytologic screenings performed at the same time as an annual physical exam may be separately billed by the health care provider and shall be paid by the insurer.”

A cytologic screening in this case refers to a ‘Pap smear,’ a method to detect abnormal cells in a woman’s cervix in either the precancerous stage or in the early stage of non-invasive cervical cancer. Detection in either of these phases can almost always prevent development of invasive cervical cancer. Routinely part of a woman’s gynecological exam, which also includes pelvic and breast examinations, the screening involves the removal of cervical cells for microscopic review and the identification of abnormalities, which can then be treated as necessary.<sup>5</sup>

Clinical guidelines regarding Pap smears changed as of March 2012, and major medical societies and advocacy organizations have reached consensus regarding the timing of the screenings. The U.S. Preventive Services Task Force (USPSTF)<sup>6</sup>, the American Cancer Society<sup>7</sup>, American Academy of Family Physicians<sup>8</sup>, American Congress of Obstetricians and Gynecologists<sup>9,10</sup>, American Society for Colposcopy and Cervical Pathology and the American Society for Clinical Pathology<sup>11,12</sup> recommend cervical cytology screening every three years for asymptomatic women ages 21 to 65 with average cervical cancer risk, regardless of the onset of sexual activity.<sup>13,14,15,16</sup> For women ages 30 to 65, cervical cytology screening may be conducted every five years in combination with testing for the human papillomavirus (HPV). Screening is not recommended for anyone under 21 years of age, nor for women over 65 years of age with screening and general medical histories that are adequate per the guidelines and do not indicate a high risk of cervical cancer.

One significant revision in the recent guidelines is the agreement across organizations that average-risk, asymptomatic “[w]omen of any age should NOT be screened every year by any screening method,”<sup>17,18</sup> and “that the annual Pap is no longer the standard of care.”<sup>19</sup> This comes as a result of numerous studies which conclude that while annual screenings may prevent a small number of cervical cancers, the tests would identify changes and abnormalities that would not ultimately become cancer, and would increase the number of unnecessary procedures and treatments performed.<sup>20</sup>

In a recent survey of eight of the largest insurance carriers in Massachusetts, all note that cervical cytology screenings are covered in their plans. The frequency of such exams is left to the discretion of a woman's provider, but is reimbursable at least annually. The carriers vary, however, on whether payment for cytologic screening is included in reimbursement for other examinations:

- For some insurers, the cervical cytology screening is a procedure that may be separately reimbursed when billed by a provider.
- Other insurers include the screening in the payment for a gynecological examination, which includes a pelvic and breast exam as well as a Pap smear. For some plans, this gynecological examination may be reimbursed separately from an annual wellness physical when performed on the same day and separately billed by the same provider.
- Still other insurers include the cervical cytology screening in the reimbursement payment for an annual well-woman physical examination. For these insurers, a gynecological visit and/or cervical cytology screening is only separately reimbursed when provided on a separate day from the wellness visit.

Preventive visit codes are defined by the American Medical Association's Current Procedural Terminology (AMA-CPT); this nomenclature is the most widely accepted system used to report medical services and procedures to both private and public health insurance programs.<sup>21</sup> Codes for preventive services are divided by age categories, but are generally defined as follows:<sup>22</sup>

[Re]Evaluation and management of an individual including an age and gender appropriate history, examination, counseling/anticipatory guidance/risk factor reduction interventions, and the ordering of laboratory/diagnostic procedures.

The inclusion/exclusion of a cervical cytology screening is not specifically defined in the CPT publication. However, several medical societies, including the American Congress of Obstetricians and Gynecologists and the American Academy of Family Physicians, explicitly state that "[t]he collection of a Pap smear is included in the E/M or preventive medicine service."<sup>23,24</sup> However, carrier reimbursement for these codes varies and is complex, as illustrated by the volume of online forums for professional certified coders dedicated solely to discussion of billing codes and practices for these services.<sup>25,26,27</sup>

### 2.3. Existing laws affecting the cost of H.B. 847

Massachusetts already requires insurance plans to "provide for an annual cytologic screening for women eighteen years of age and older."<sup>28</sup> However, current law does not require separate payment for the procedure on the same day as an annual wellness visit.

The federal Affordable Care Act (ACA)<sup>29</sup> requires coverage for certain preventive health services with no cost-sharing by all health insurance plans,<sup>30</sup> including self-insured, individual, and small and large group market plans.<sup>31</sup> Plans must cover, at a minimum, evidence-based preventive health services or items that have an "A" or "B" rating in the current recommendations of the United States Preventive Services Task Force (USPSTF) with no deductible, copayment or coinsurance payments



by the beneficiary. The previously outlined recommendation of the USPSTF regarding cervical cancer screening received an “A” rating.<sup>32</sup>

Taken together, the Massachusetts mandates already in place require coverage for cervical cytology screening on a more frequent basis than does the ACA. Again, however, neither existing Massachusetts law nor federal law mandates the basis on which payment for the service must be made, and whether it should be separately reimbursable.

## 3. Methodology

### 3.1. Steps in the analysis

Compass estimated the marginal cost impact of H.B. 847 by performing the following steps:

- Estimate the number of women age 21-64 in the fully-insured Massachusetts population, projected for the next five years
- Estimate the number who received a cervical cytology screening
- Estimate the number of these visits that will be impacted by the mandate
- Estimate the average current cost of reimbursement for preventive visits and cervical cytology screening
- Calculate the marginal cost resulting from this mandate
- Calculate the proposed mandate’s incremental effect on carrier medical expenses
- Estimate the impact on premiums of insurer’s retention (administrative costs and profit)
- Project the estimated cost over the next five years
- Estimate the impact on the self-insured population for the GIC

### 3.2. Data sources

The primary data sources used in the analysis were:

- Interviews with legislative staff regarding legislative intent
- Information from clinical providers and billing staff
- Information from a survey of the largest private health insurance carriers in Massachusetts
- Academic literature, including population data
- Massachusetts insurer claim data from CHIA’s Massachusetts All-Payer Claim Database (APCD) for calendar years 2010 to 2012, for plans covering the overwhelming majority of the under-65 fully-insured population subject to the proposed mandate<sup>33</sup>

Below, the step-by-step description of the estimation process addresses limitations in some of these sources and the uncertainties they contribute to the cost estimate.

## 4. Factors Affecting the Cost Analysis

Several issues arise in translating the provisions of H.B. 847 into an analysis of incremental cost.

### 4.1. Existing coverage for cervical cytology screening

As previously described, all carriers in the state currently cover cervical cytology screening, as required by existing Massachusetts mandates. However, the methods of paying providers for this coverage are complex, and vary across carriers and plans per their billing rules and provider practices. Determining exactly how these screenings are covered in the context of existing provider practices is key to estimating the marginal impact of the proposed mandate on future premiums. Moreover, at least one carrier has recently changed its coverage policy (March 2013) for cervical cytology screenings when conducted by primary care providers; such changes will not be captured in the claim data used for this analysis, and may cause a slight overstatement of the marginal impact of the proposed mandate.

According to the survey of insurance carriers, as well as testimony presented to the Legislature regarding this proposed mandate and provider and billing staff interviews, these coverage rules influence provider practice and therefore the behavior of patients. Some women receive their wellness visit from one provider and their cervical cytology screening from a different provider by choice (e.g., an annual physical from a primary care provider and an annual gynecological exam from a gynecologist). For other women, the provider of their wellness visit has instructed them that their gynecological examination cannot be conducted on the same day as their wellness visit, as it is not separately reimbursable on the same day. For these women, a second office visit may be scheduled on a different day with that same provider to complete the gynecological examination with or without a cervical cytology screen; some women might choose not to schedule this second visit and therefore do not receive their gynecological examination or cervical cytology screening.

This analysis will attempt to quantify the proportion of women in the population who received a cervical cytology screening in the period studied (2010 to 2012) and, of those patients, the portion who also received a wellness visit during the same time period. The marginal cost of the mandate will focus on those women who received a cervical cytology screen and a wellness visit (which does not include payment for collecting the cytology sample) from the same provider.

This analysis also contains an estimate of the number of women who received a wellness visit but no cervical cytology screening during this timeframe. These women may have chosen not to receive this screening, or such screening may not be necessary for a variety of medical reasons. This analysis will not attempt to estimate the number of women who chose not to return for a second visit to receive their cervical cytology screening, as no data to support such an estimate are available. Further, to the extent that these additional visits are taking place, they may be masked by

a decrease in the number of screenings performed annually in response to the updated clinical guidelines extending the recommended screening interval to three to five years.

## 4.2 Complexity of billing codes for cervical cytology screening

Billing codes and billing practices related to cervical cytology screening are complex, resulting in wide variation in the services appearing in claim data for cervical cytology screening. For purposes of this analysis, women who had a cervical cytology examination, or Pap smear, were identified by billing codes used by laboratories to bill for pathology services related to the cytology sample.

This laboratory analysis of the sample was assumed not to be the screening referred to in the language of this proposed mandate, as it is billed by and reimbursed to the laboratory for processing and evaluating the cytology specimen. Instead, the analysis assumed the screening in the proposed mandate referred specifically to the collection of the tissue sample, which is a service included in a separate gynecological examination code (typically including a breast examination, pelvic examination and cervical cytology screening if needed), or in a code typically used for Medicare reimbursement for obtaining, preparing and conveying a cervical smear.<sup>34</sup>

And although, as previously described, a cervical cytology screening is now recommended for most women every three to five years, a gynecological examination is recommended annually. Therefore, if a woman follows the USPSTF recommendations, she will have a gynecological examination annually, including a pelvic and breast exam, but a Pap smear every third or fifth year. This examination can be performed as part of a woman's wellness visit, or separately by the same or another clinician; the choice of the provider is left to the woman and is not specified by insurance carrier rules.

The proposed mandate will only impact the visits of women who receive a wellness visit and receive a cervical cytology screening from the same provider. In some cases, these visits occur on the same day; for others, providers have instructed women to schedule a second appointment for their gynecological examination.

To understand which visits will be impacted by the proposed mandate, women who were identified through paid laboratory claims as having received a cervical cytology screening were divided into the following cases present in the claim data:

1. Wellness visit with a separate gynecological or evaluation and management code paid to a different provider. These visits are presumed to be made by women choosing to receive their gynecological examination from a separate provider than the one who conducts their wellness visit. Payments for these visits would not be impacted by the proposed mandate.
2. Wellness visit with separate gynecological examination code paid to the same provider on the same day. These visits are presumed to conform with the proposed mandate and therefore payment for them would not be impacted.
3. Wellness visit with no separate gynecological examination code paid. These visits will be impacted by the proposed mandate; the marginal cost will be separate

reimbursement for obtaining a cervical smear (low-end estimate) or for a gynecological examination (high-end estimate).

4. Wellness visit and gynecological examination (or other office visit/evaluation and management code) paid on separate days to the same provider. This analysis assumes that if the proposed mandate is enacted, some women will receive their gynecological examination on the same day as their wellness visit, both of which will be separately paid, but will eliminate the cost of a separate office visit on a different day.

### 4.3. Per-patient average cost of cervical cytology screening

Estimating the marginal cost of separate payment for cervical cytology screening based on passage of the proposed mandate is challenging, given that implementation of the mandate may vary by carrier. If the proposed mandate becomes law, some carriers may instruct their providers to use a code defined by the Healthcare Common Procedure Coding System (HCPCS)<sup>35</sup> as Q0091 (Screening Papanicolaou smear obtaining preparing and conveyance of cervical or vaginal smear to laboratory). While generally used in the Medicare population, this code has been reimbursed by Massachusetts carriers in their fully-insured population, but at a lower volume than for codes more broadly defined as gynecological visits. Other carriers may instruct providers to use these broader codes, such as HCPCS G0101 (Cervical or Vaginal Cancer Screening; Pelvic and Clinic Breast Examination), S0610 (Annual gynecological exam, new patient) or S0612 (Annual gynecological exam, established patient). Still other carriers may use other code or modifier combinations, and the level at which separate payment would be made cannot be accurately predicted from claim data. Moreover, carriers may compensate for the use of these additional billing codes by adjusting their global payments for preventive wellness visits, in an effort to minimize the marginal cost resulting from billing separate components of these visits in response to this proposed mandate.

These two effects, the manner of implementing the mandated additional billing code and a potential downward adjustment in a global payment for preventive wellness visits, are difficult to estimate and move in opposite directions. This analysis therefore uses historical average service patterns and volumes as a starting point, and then presents ranges across three scenarios that may reasonably capture these net effects.

This analysis uses 2012 claim data as a baseline year, and projects the costs of the mandate five years into the future (2015 to 2019), using 4.5% annual medical inflation, based upon historical figures provided by the U.S. Bureau of Labor Statistics.<sup>36</sup>

This analysis does not attempt to account for the effect on future premiums of trends toward capitated or other payment arrangements for providers that push reimbursement away from the traditional fee-for-service model. Rapid and comprehensive implementation of these newer models would tend to reduce the cost of this proposed mandate, assuming the mandate itself was not an obstacle to such an implementation.

Finally, the analysis does not expect member cost-sharing to reduce significantly the impact of the mandate.

## 5. Cost Analysis

To estimate the overall impact of the proposed legislation, the following calculations were executed. The analysis includes development of a best estimate “mid-level” scenario, as well as a low-level scenario using assumptions that produced a lower estimate, and a high-level scenario using more conservative assumptions that produced a higher estimated impact.

### 5.1. Projected fully-insured population in Massachusetts, ages 21 to 64

Table 1 shows the fully-insured female population in Massachusetts ages 21 to 64 for 2012, as well as projected for the five years relevant to the mandate, 2015 to 2019. Appendix A describes the sources of these values.

**Table 1:**  
**Projected female fully-insured population**  
**in Massachusetts, Ages 21-64**

<u>Year</u>	<u>Females (21-64)</u>
2012	851,356
2015	789,881
2016	781,770
2017	772,849
2018	763,136
2019	752,949

The five-year projection required in this analysis uses estimates of utilization and cost in the following subsections. These are measured/estimated for the specified baseline period and are then adjusted appropriately when incorporated into the final forward-looking projections.

### 5.2. Estimated number of women receiving various screenings

To estimate the marginal impact of the proposed mandate on insurance premiums, APCD claim data from 2012 were used to identify the number of women who received a preventive wellness visit, as identified by preventive medicine visit codes, as well as those women who received a cervical cytology screening, as identified by cervical cytology screening laboratory codes.

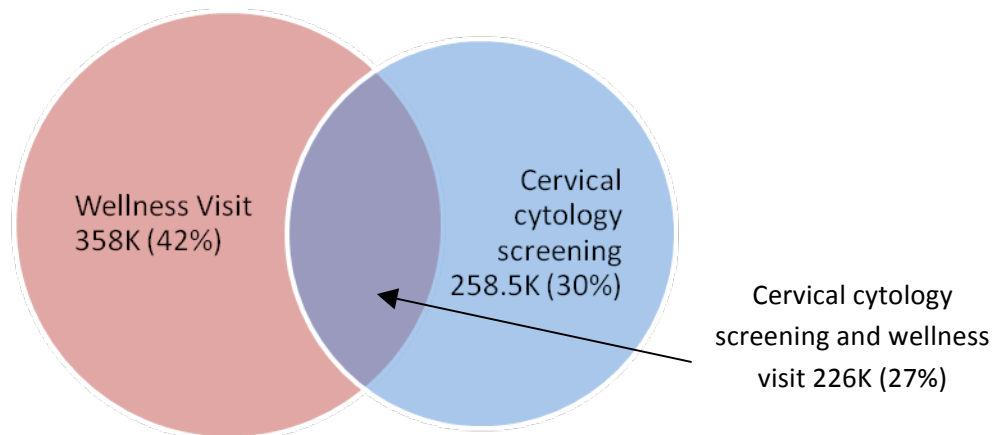
In 2012, 30%<sup>i</sup> of the 2012 population of 851,000 Massachusetts commercially fully-insured females ages 21 to 64, or approximately 258,500 women, received a cervical cytology screening. In the same year, approximately 42% (358,000) of these women received a wellness visit. It is the intersection of these two groups, women who received both types of screenings, which the proposed mandate will affect. In 2012, this group included approximately 226,000 women

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<sup>i</sup> Current consensus clinical guidelines recommend a Pap smear every 3-5 years for most women. Over the period 2010 to 2012, Pap smear claims were found in the APCD for approximately 618,000 women aged 21 to 64 (or about 73% of the Massachusetts population of fully commercially insured women in the age range). During the same years, approximately 708,000 women (83%) in the same population received a wellness visit.

(comprising 27% of all commercially fully-insured women aged 21 to 64, 88% of commercially fully-insured women aged 21 to 64 receiving a Pap smear in 2012 and 63% of commercially fully-insured women aged 21 to 64 receiving a wellness visit that year).

**Figure 1: 2012 Wellness Visit and Cervical Cytology Screening Rates for Women 21 to 64**



As previously described, women access their wellness and cervical cytology screenings in various ways; claim data were used to define these behaviors to isolate visit combinations that will be impacted by this proposed mandate. For women receiving both a wellness visit and a cervical cytology screening, visits were analyzed to determine if women received both their wellness visit and cervical cytology screening from the same provider, or from different providers. The results are summarized in Table 2. The visits of women who received their wellness appointment from one provider and their cervical cytology screening from a different provider will not be impacted by the proposed mandate, as this analysis assumes that this small population of women will continue to choose to see these separate providers.

**Table 2:  
Estimated Wellness and Cervical Cytology Screening  
Visit Combinations, 2012 Baseline**

Total women in population ages 21-64	851,000	<u>% Women</u>
Total women with wellness and cervical screenings	226,400	26.6%
Wellness visit and cervical screening visit paid to different providers*	1,200	0.1%
Wellness and cervical screening visit received from the same provider	225,200	26.5%

\*Visits will not be impacted by the proposed mandate

The claims of women who received both a wellness visit and a cervical cytology screening from the same provider were then further analyzed. For this group, first the service date for the cervical cytology screening laboratory payment was identified for each woman. Going backward in time, the closest office visit code proximal to the laboratory test was then identified by date and assigned; these were delineated as a preventive wellness visit, a gynecology exam, or an evaluation and management (E&M) visit. Table 3 displays the results. For a small portion of these women, some carriers already pay separately for a wellness exam and a cervical cytology screening as part of a gynecological exam billed by the same provider on the same day; these visits (approximately 29,000) will not be impacted by this proposed mandate.

**Table 3:  
Estimated Wellness and Cervical Cytology Screening from Same Provider  
Visit Combinations, 2012**

	851,000	<u>% Women</u>
Total women in population ages 21-64	851,000	26.5%
Total women with wellness and cervical visit received from the same provider	225,200	26.5%
Wellness visit AND gynecology exam on same day paid separately*	29,000	3.4%
Wellness visit paid only	181,200	21.3%
Wellness visit paid on separate day from gynecology exam	300	0.0%
Wellness visit paid on separate day from Proximate Evaluation and Management (E&M) visit	11,800	1.4%
Wellness visit paid on separate day from E&M visit and gynecology exam	2,900	0.3%

\*Visits will not be impacted by the proposed mandate

The remainder of this analysis focuses on the approximately 196,200 women in the last four rows of Table 3. In these cases, a single physician is involved and collects a cervical tissue specimen (i.e., laboratory test payments indicate that a cervical cytology screening was conducted), either during a wellness visit or during gynecology/E&M exams delivered on a different day proximate to the wellness visit.

### 5.3. Estimated number of visits impacted by the mandate

The four scenarios just described are assumed to be impacted by the proposed mandate, although to varying degrees. For those women who received a cervical cytology screening on the same day as a wellness visit from the same provider, but for whom only the wellness visit was paid, 100% of visits will be impacted by the proposed mandate, and an additional payment will be made to the provider. This case is by far the most frequent (181,200) and drives nearly all of the estimated cost impact of the proposed mandate.

For women who received their cervical cytology screening exam on a separate day from their wellness visit, the impact of the mandate is more complex but also nearly immaterial from a cost perspective. For some of these women, the screening may have been conducted on a separate day per provider practice, as some providers ask women to return for a second visit in order to receive separate reimbursement for the cervical cytology screen specimen acquisition. For other women,

the screening may have been conducted on a separate day from a wellness visit by patient choice, or may be a follow-up to a previous screen or another identified problem.

Differentiating between the two scenarios is not possible from claim data; however, to understand the impact of the proposed mandate, the analysis introduced assumptions as to how many separate visits will be combined into a single visit if the cervical cytology screening is reimbursed separately from a wellness visit on the same day.

This analysis assumed that, for the previously described cases of separate visits as a result of provider instruction due to billing rules, a gynecological visit code alone (which includes a bundled cervical cytology specimen collection) was billed by the provider on a separate day from the wellness visit. These visits, averaging only 300 as shown in Table 3, are very likely to be combined into single visits under the proposed mandate. Therefore, the analysis assumes that 50% to 80% of these separate visits will now become single visits with separately billed services, as outlined in Table 4.

For those women for whom the screening was conducted on a separate day from a wellness visit by choice or as a follow-up to a previous screen or another identified problem, combining visits is a less likely outcome as a result of this mandate. These types of visits were assumed to take place when claims included a E&M billing code.<sup>37</sup> This analysis assumes, however, that some of these visits are the result of provider response to billing rules. For these visits, at least some portion will be impacted by the mandate in that the cervical cytology screen will now be performed as part of the wellness visit, and the separate E&M office visit will be eliminated. The analysis assumed that 5% to 10% of these visits will now be combined with a wellness visit. Assumptions about the degree to which each scenario is impacted by the mandate are displayed in Table 4.

**Table 4:  
Percent of Visits Impacted by Mandate**

	Low	Mid	High
Wellness visit paid only	100%	100%	100%
Wellness visit paid on separate day from gynecology exam	50%	65%	80%
Wellness visit paid on separate day from E&M visit	5%	7.5%	10%
Wellness visit paid on separate day from E&M visit and gynecology exam	5%	7.5%	10%

Based on visit patterns in 2012, the number of visits impacted under the various case types and scenarios is calculated in Table 5.

**Table 5:  
Number of Visits Impacted by Mandate**

	Low	Mid	High
Wellness visit paid only	181,200	181,200	181,200
Wellness visit paid on separate day from gynecology exam	130	170	210
Wellness visit paid on separate day from E&M visit	590	880	1,180
Wellness visit paid on separate day from E&M visit and gynecology exam	150	220	290



## 5.4. Average current cost per case by visit type

Each case type defined in Table 4 is comprised of a combination of up to three separate codes, or combination of codes, each of which results in a different baseline cost. On average, the baseline wellness cost in 2012 was equal to \$153, and was paid under each scenario described. When an additional gynecology code was billed on the same day as a wellness visit, the average additional payment was \$59, for an overall average payment of \$212 for those cases. When a wellness visit was conducted on one day, and the cervical cytology screening was associated with an E&M visit on a separate day, \$153 was paid on average for the wellness visit, and \$99 was additionally paid for the E&M visit, for a total average cost of \$252 in those cases. Similarly, when a wellness visit was conducted on one day, and the cervical cytology screening was associated with both an E&M visit and a gynecology examination, \$153 was paid for the wellness visit, and an additional \$112 for the E&M/Gyn visit, for a total payment of \$265.

**Table 6:  
Average Cost per Case by Visit Type (2012 Baseline)**

	Wellness	GYN	E&M	Total
Wellness visit paid only	\$153			\$153
Wellness visit paid on separate day from gynecology exam	\$153	\$59		\$212
Wellness visit paid on separate day from E&M visit	\$153		\$99	\$252
Wellness visit paid on separate day from E&M visit and gynecology exam	\$153	\$112		\$265

## 5.5. Average cost of marginal cervical cytology screening code

As previously described, the marginal cost of separate payment for cervical cytology screening will be based on the carrier rules for implementation. In order to estimate these marginal payments, several procedure codes which are currently used when separate payment is made were analyzed. At the lower end of the spectrum was code Q0091, Screening Papanicolaou smear obtaining preparing and conveyance of cervical or vaginal smear to laboratory. At the upper end of the spectrum were the codes separately billed and paid for gynecological examinations, including G0101 (Cervical or Vaginal Cancer Screening; Pelvic and Clinic Breast Examination), S0610 (Annual gynecological exam, new patient) or S0612 (Annual gynecological exam, established patient). Payments for these codes were combined and averaged to determine an upper level bound for estimation of the marginal payment for a separate cervical cytology screening, and are displayed in Table 7.

**Table 7:  
High-End Estimate of Marginal Cost for Screening**

Q0091	\$33.30
G0101, S0610, S0612	\$58.75
Average	\$46.05

This high-end estimate was then adjusted downward to estimate the level to which carriers may adjust the payment rates for the separately reimbursed cervical cytology screening, or for the preventive wellness visit.

**Table 8:  
Estimates of Marginal Cost for Screening**

Low Scenario	25%	\$11.51
Mid Scenario	75%	\$34.53
High Scenario	100%	\$46.05

## 5.6. Average cost of wellness visit and separate screening payment

The marginal cost in Table 8 would then be added to the \$153 average cost of a preventive wellness visit, as outlined in Table 6, producing the total payments shown in Table 9 under the various scenarios.

**Table 9:  
Estimates of Total Cost for Wellness and Screening**

Low Scenario	\$164
Mid Scenario	\$187
High Scenario	\$199

These new payment levels are then compared to the total payment levels of the various scenarios as outlined in Table 6, resulting in the marginal cost to each case type with passage of the proposed mandate. Note that in those cases where a subsequent second office visit was made to obtain separate reimbursement for the cervical cytology screening, the marginal cost may be negative (shown in parentheses) as the additional E&M or gynecology code payments are replaced by the new marginal payments outlined in Table 8.

**Table 10:  
Marginal Cost per Case by Visit Type (2012 Baseline)**

	Old Total Payments	New Total Payments		
		Low	Mid	High
		Marginal Cost		
Wellness visit paid only	\$153	\$12	\$35	\$46
Wellness visit paid on separate day from gynecology exam	\$212	(\$47)	(\$24)	(\$13)
Wellness visit paid on separate day from E&M visit	\$252	(\$87)	(\$64)	(\$53)
Wellness visit paid on separate day from E&M visit and gynecology exam	\$265	(\$100)	(\$77)	(\$66)

## 5.7. Net increase in carrier medical expense

All cost information previously outlined was projected from the baseline year of 2012 to the study period 2015 to 2019 using 4.5% annual medical inflation. Annual cases were trended against projected population information for fully-insured women ages 21 to 64 in Massachusetts during

the same time periods. Multiplying the marginal costs outlined in Table 10 by the number of visits impacted annually in Table 5 yields the medical expense per member per month (PMPM) displayed in Table 11.

**Table 11:**  
**Estimate of Increase in Carrier Medical Expense PMPM**

Low Scenario	\$0.09
Mid Scenario	\$0.28
High Scenario	\$0.37

## 5.8. Net increase in premium

Assuming an average retention rate of 11.5 percent, based on CHIA’s analysis of carrier administrative costs and profit in Massachusetts,<sup>38</sup> the increase in medical expense was adjusted upward to approximate the total impact on premiums. Table 12 shows the result.

**Table 12:**  
**Estimate of Increase in Premium PMPM**

Low Scenario	\$0.10
Mid Scenario	\$0.31
High Scenario	\$0.42

## 5.9. Five-year estimated impact

For each year in the five-year analysis period, Table 13 displays the projected net impact of the proposed mandate on medical expense and premiums using a projection of Massachusetts fully-insured membership. This analysis estimates that the mandate, if enacted, would increase fully-insured premiums by as much as 0.07% on average over the next five years; a more likely increase is in the range of 0.05%.

The degree of precision achievable in this analysis is hampered by the issues outlined in section 4. This report makes no attempt to estimate the number of women who have previously not received a cervical cytology screen due to physician instruction that such screening must be completed during a separate visit on a different day from the wellness visit, as there are no estimates available of the number of these women. However, if a small number of additional women now receive these screenings, this impact may be diminished by new clinical guidelines which instruct women to increase the interval for these screenings to every three to five years.

Finally, the impact of the bill 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 mandate.

**Table 13:  
Summary Results**

	2015	2016	2017	2018	2019	Average	5 Yr Total
Members (000s)	2,144	2,121	2,096	2,071	2,045		
Medical Expense Low (\$000s)	\$2,059	\$2,129	\$2,200	\$2,270	\$2,340	\$2,199	\$10,997
Medical Expense Mid (\$000s)	\$6,544	\$6,769	\$6,993	\$7,215	\$7,439	\$6,992	\$34,960
Medical Expense High (\$000s)	\$8,791	\$9,092	\$9,393	\$9,692	\$9,993	\$9,392	\$46,961
Premium Low (\$000s)	\$2,326	\$2,406	\$2,485	\$2,565	\$2,644	\$2,485	\$12,426
Premium Mid (\$000s)	\$7,395	\$7,648	\$7,901	\$8,153	\$8,406	\$7,901	\$39,503
Premium High (\$000s)	\$9,933	\$10,274	\$10,613	\$10,952	\$11,292	\$10,613	\$53,064
PMPM Low	\$0.09	\$0.09	\$0.10	\$0.10	\$0.11	\$0.10	\$0.10
PMPM Mid	\$0.29	\$0.30	\$0.31	\$0.33	\$0.34	\$0.31	\$0.31
PMPM High	\$0.39	\$0.40	\$0.42	\$0.44	\$0.46	\$0.42	\$0.42
Estimated Monthly Premium	\$512	\$537	\$564	\$592	\$622	\$566	\$566
Premium % Rise Low	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Premium % Rise Mid	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
Premium % Rise High	0.08%	0.08%	0.07%	0.07%	0.07%	0.07%	0.07%

### 5.10. Impact on the GIC

Because the benefit offerings of GIC plans are similar to most other commercial plans in Massachusetts, the estimated effect of the proposed mandate on GIC coverage is not expected to differ from that calculated for the other fully-insured plans in Massachusetts. Note that the total medical expense and premium numbers displayed in Table 13 include the GIC fully-insured membership. To calculate the medical expense separately for the self-insured portion of the GIC, the medical expense per member per month was applied to the GIC self-insured membership; the results are displayed in Table 14.

**Table 14:  
GIC Self-Insured Summary Results**

	2015	2016	2017	2018	2019	Average	5 Yr Total
Members (000s)	259	259	259	258	258		
Medical Expense Low (\$000s)	\$21	\$22	\$23	\$24	\$25	\$23	\$113
Medical Expense Mid (\$000s)	\$66	\$69	\$72	\$75	\$79	\$72	\$360
Medical Expense High (\$000s)	\$89	\$93	\$97	\$101	\$105	\$97	\$483

## Appendix A: Membership Affected by the Proposed Mandate

Membership potentially affected by a proposed mandate may include Massachusetts residents with fully-insured employer-sponsored health insurance (including through the GIC), non-residents with fully-insured employer-sponsored insurance issued in Massachusetts, Massachusetts residents with individual (direct) health insurance coverage, and, in some cases, lives covered by GIC self-insured coverage. Membership projections for 2015 to 2019 are derived from the following sources.

Total Massachusetts population estimates for 2012 and 2013 from U. S. Census Bureau data<sup>39</sup> form the base for the projections. Distributions by gender and age, also from the Census Bureau,<sup>40</sup> were applied to these totals. Projected growth rates for each gender/age category were calculated from Census Bureau population projections to 2030.<sup>41</sup> The resulting growth rates were then applied to the base amounts to project the total Massachusetts population for 2015 to 2019.

The number of Massachusetts residents with employer-sponsored or individual health insurance coverage was estimated using Census Bureau data on health insurance coverage status and type of coverage<sup>42</sup> applied to the population projections.

To estimate the number of Massachusetts residents with fully-insured employer-sponsored coverage, projected estimates of the percentage of employer-based coverage that is fully-insured were developed using historical data from the Medical Expenditure Panel Survey Insurance Component Tables.<sup>43</sup>

To estimate the number of non-residents covered by a Massachusetts policy – typically cases in which a non-resident works for a Massachusetts employer offering employer-sponsored coverage – the number of lives with fully-insured employer-sponsored coverage was increased by the ratio of the total number of individual tax returns filed in Massachusetts by residents<sup>44</sup> and non-residents<sup>45</sup> to the total number of individual tax returns filed in Massachusetts by residents.

The number of residents with individual coverage was adjusted further to remove the estimated number of people currently covered by Commonwealth Care who will shift into MassHealth due to expanded Medicaid eligibility under the Affordable Care Act beginning in 2014.<sup>46</sup>

Projections for the GIC self-insured lives were developed using GIC base data for 2012<sup>47</sup> and 2013<sup>48</sup> and the same projected growth rates from the Census Bureau that were used for the Massachusetts population. Breakdowns of the GIC self-insured lives by gender and age were based on the Census Bureau distributions.

## Endnotes

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<sup>1</sup> The 188<sup>th</sup> General Court of the Commonwealth of Massachusetts. Bill H. 847: “An Act relative to promoting women’s health” Accessed 13 February 2014: <https://malegislature.gov/Bills/188/House/H847>.

<sup>2</sup> American Cancer Society (ACS): What is cancer? Last Medical Review and Revision: 04/11/2013; accessed 6 January 2014. <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-what-is-cancer>.

<sup>3</sup> The 188<sup>th</sup> General Court of the Commonwealth of Massachusetts. Bill H. 847: “An Act relative to promoting women’s health” Accessed 13 February 2014: <https://malegislature.gov/Bills/188/House/H847>.

<sup>4</sup> The bill as originally drafted did not reach all of these insurance plans, but sponsors and legislative staff communicated that the intent of the bill was to do so. Meeting to review legislative intent with sponsors and legislative and CHIA staff. December 9, 2013.

<sup>5</sup> American Cancer Society (ACS): What is cancer? Last Medical Review and Revision: 04/11/2013; accessed 6 January 2014. <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-what-is-cancer>.

<sup>6</sup> American College of Obstetricians and Gynecologists (ACOG): New Cervical Cancer Screening Recommendations from the U.S. Preventive Services Task Force and the American Cancer Society/American Society for Colposcopy and Cervical Pathology/American Society for Clinical Pathology. Released March 14, 2012; accessed 7 January 2014: [http://www.acog.org/About\\_ACOG/Announcements/New\\_Cervical\\_Cancer\\_Screening\\_Recommendations](http://www.acog.org/About_ACOG/Announcements/New_Cervical_Cancer_Screening_Recommendations).

<sup>7</sup> D. Saslow, D. Solomon, H.W. Lawson, et.al and ACS-ASCCP-ASCP Cervical Cancer Guideline Committee (2012). American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology screening guidelines for the prevention and early detection of cervical cancer. *CA: A Cancer Journal for Clinicians*, 62: 147–172. doi: 10.3322/caac.21139. Accessed 7 January 2014:<http://onlinelibrary.wiley.com/doi/10.3322/caac.21139/full>.

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<sup>9</sup> American Congress of Obstetricians and Gynecologists (ACOG): Patient Education Fact Sheet: PFS004 New Guidelines for Cervical Cancer Screening. Published September 2013; accessed 7 January 2014:[http://www.acog.org/For\\_Patients/Search\\_FAQs/documents/New\\_Guidelines\\_for\\_Cervical\\_Cancer\\_Screening](http://www.acog.org/For_Patients/Search_FAQs/documents/New_Guidelines_for_Cervical_Cancer_Screening).

<sup>10</sup> ACOG Practice Bulletin No. 131: Screening for Cervical Cancer. *Obstetrics & Gynecology*. 120(5):1222-1238, November 2012. Accessed 7 January 2014: [http://journals.lww.com/greenjournal/Abstract/2012/11000/Practice\\_Bulletin\\_No\\_\\_131\\_\\_\\_Screening\\_for\\_Cervical.49.aspx](http://journals.lww.com/greenjournal/Abstract/2012/11000/Practice_Bulletin_No__131___Screening_for_Cervical.49.aspx).

<sup>11</sup> U.S. Department of Health and Human Services (US-DHHS), Agency for Healthcare Research and Quality (AHRQ), National Guideline Clearinghouse (NGC). Guideline synthesis: Screening for cervical cancer. Revised March 2013; accessed 7 January 2014: <http://www.guideline.gov/syntheses/synthesis.aspx?id=43606>.

<sup>12</sup> U.S. Department of Health and Human Services (US-DHHS), Agency for Healthcare Research and Quality (AHRQ), National Guideline Clearinghouse (NGC). Guideline synthesis: Screening for cervical cancer. Revised March 2013; accessed 7 January 2014: <http://www.guideline.gov/syntheses/synthesis.aspx?id=43606>.

<sup>13</sup> ACS: Can cervical cancer be prevented? Last Medical Review and Revision: 04/11/2013; accessed 6 January 2014: <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-prevention>.

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- <sup>16</sup> ACS/ASCCP/ASCP, USPSTF and ACOG recommendations apply to all women who have a cervix, regardless of sexual history, who are not immunocompromised, have never received a diagnosis of cervical cancer or a high-grade precancerous cervical lesion, and have not had in utero exposure to diethylstilbestrol.
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- <sup>22</sup> Codes 99381-99387 and 99391-99397: Evaluation and Management/Preventive Medicine Services. AMA: CPT, Current Procedural Terminology.
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<sup>43</sup> Agency for Healthcare Research and Quality. Percent of private-sector enrollees that are enrolled in self-insured plans at establishments that offer health insurance by firm size and State (Table II.B.2.b.1), years 1996-2012: 1996 (Revised March 2000), 1997 (March 2000), 1998 (August 2000), 1999 (August 2001), 2000 (August 2002), 2001 (August 2003), 2002 (July 2004), 2003 (July 2005), 2004 (July 2006), 2005 (July 2007), 2006 (July 2008), 2008 (July 2009), 2009 (July 2010), 2010 (July 2011), 2011 (July 2012), 2012 (July 2013) ; accessed 23 January 2014: Medical Expenditure Panel Survey Insurance Component Tables. Generated using MEPSnet/IC. [http://www.meps.ahrq.gov/mepsweb/data\\_stats/MEPSnetIC.jsp](http://www.meps.ahrq.gov/mepsweb/data_stats/MEPSnetIC.jsp).

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