



Review and Evaluation of Proposed Legislation Entitled: An Act Ensuring Access to Life-Saving Colorectal Cancer Screenings House Bill 2185

**Provided for
The Joint Committee on Public Health**

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Executive Summary

The Division of Health Care Finance and Policy (DHCFP) prepared this report pursuant to the provisions of M.G.L. c. 3 § 38C that requires DHCFP to evaluate the impact of mandated benefit bills referred by legislative committee for review, and to report to the referring committee. The Committee on Public Health referred House Bill 2185 (H.2185) “An Act Ensuring Access to Life-Saving Colorectal Cancer Screenings” to DHCFP for review.

Definition of Colorectal Cancer and the Role of Screening

Cancers that start in either the colon or the rectum are called colorectal cancer (CRC).¹ As defined by the National Cancer Institute of the National Institutes of Health (NIH), colon cancer is cancer that forms in the tissues of the colon (the longest part of the large intestine). The National Cancer Institute reports that most colon cancers are adenocarcinomas (that is, cancers that begin in cells that make and release mucus and other fluids). Rectal cancer is cancer that forms in the tissues of the rectum.²

In Context

Setting the Stage

CRC is currently the third most common type of cancer and the second leading cause of cancer mortality in the United States. According to the NIH, 50,000 people die from colorectal cancer each year and nearly 150,000 people are newly diagnosed. The American Cancer Society (ACS) estimates that the lifetime risk for developing colorectal cancer is about 1 in 19 (5.2%).

Regular screenings can ensure that polyps are found early and removed before they turn into cancer. Colorectal cancer is highly curable when it is found early. According to the ACS, 90 percent of patients with colorectal cancer that is localized will survive at least 5 years after diagnosis. If the cancer has spread to other parts of the body, then the 5-year survival rate falls to just 10 percent.

At least 26 states currently have separate laws requiring health insurers to cover colorectal screenings. At the federal level, the Patient Protection and Affordable Care Act of 2010 (federal health care reform) mandates that health plans, with certain exceptions, provide CRC screenings. In addition, this new federal law requires that health plans impose no cost-sharing requirements on this benefit to ensure maximum access to members. This provision of PPACA went into effect October 1, 2010.

However, the PPACA does not provide coverage access to computed tomographic colonography test (CT colonography or CTC), as proposed under House 2185.



The PPACA provides access to coverage based on the guidelines of the U.S. Preventive Services Task Force (USPSTF). The USPSTF guidelines exclude coverage of CT colonography (CTC). The PPACA requirements are consistent with those under Medicare. In May 2009, the Centers for Medicare and Medicaid (CMS) decided to exclude coverage of CTC for cancer screenings. The 2009 CMS decision was heavily based on age-specific considerations of clinical effectiveness and cost effectiveness of the population covered by CMS.

Coverage for CTC has been weighed by other states. The Washington State Health Care Authority, for example, has opted to exclude coverage of CTC for colorectal cancer screenings. As noted in the decision of the Authority's Health Technology Clinical Committee, August 2008, however, the decision to exclude coverage of the CTC test was heavily determined by costs. "A majority of the committee members found that the current scientific evidence [was] sufficient to demonstrate that in some or all cases, CTC is equivalent in efficacy."³

In Massachusetts, fully insured health plans have historically been providing CRC screenings to their members on a voluntary basis, well before the passage of the PPACA and in the absence of a state mandate in Massachusetts to provide CRC screenings. This statement is based on the results of the Division's survey of health plans.

H. 2185 proposes to include more tests than those covered by the health plans. More specifically, H. 2185 proposes to increase access to CRC screenings by requiring fully-insured commercial health plans and the Group Insurance Commission (GIC) to provide coverage for CRC screenings in compliance with the guidelines of the American Cancer Society (ACS). Using the ACS guidelines as a standard would provide access to the following new tests: the computed tomographic colonography test (CT colonography or CTC), and fecal or stool DNA test (sDNA).

The bill also proposes to require health plans to keep cost-sharing requirements for deductibles and coinsurance in line with those that are imposed by the plans for similar benefits and to pay providers at rates equal to or greater than Medicare levels. The handling of the proposed bill's requirement around payments at Medicare levels is discussed in the Appendix of this report.

Current Health Plan Practices on CRC Screenings

Fully insured commercial health plans in Massachusetts already provide coverage for CRC screenings on a voluntary basis. That finding is based on the results of DHCFP's survey of the health plans affected by this proposed mandate. (The GIC provides coverage for this benefit too, but DHCFP did not survey the GIC.)

Survey responses from the health plans indicated that current screening rates ranged from 72 to 78 percent, with the exception of one plan that trailed far behind the others. Discussions at the national level have converged around a goal of 80 percent.



In addition, commercial health plans already face a mandate to provide CRC screenings to their members. In March 2010, President Obama signed the Patient Protection and Affordable Care Act (PPACA). The PPACA, or federal health care reform law, pushes CRC screenings to the top of the nation's health care agenda. The federal health care reform law includes provisions to require health plans to provide coverage for CRC screenings at no cost to insured members. The law requires health plans to provide CRC screenings based on the guidelines of the U.S. Preventive Services Task Force.

H. 2185 Introduces Two New Tests

Should H. 2185 become law, health plans would be required to provide their members access to two additional types of screenings that are not routinely provided by health plans now, nor does federal law mandate them.

H. 2185 proposes to require that health plans provide CRC screening coverage in compliance with the guidelines of the ACS, which include more tests than the guidelines of the U.S. Preventive Services Task Force (USPSTF) and those used by the health plans. Using the ACS guidelines as a standard would provide access to the following new tests: the computed tomographic colonography test (CT colonography or CTC), and fecal or stool DNA test (sDNA).

Overview of Current Law and Proposed Mandate

House 2185 (H. 2185) would require that all fully-insured health plans and the GIC provide coverage for all colorectal examinations and laboratory tests for all persons who are at least 50 years of age or persons who are less than 50 years of age and at high risk for colorectal cancer in accordance with the current guidelines of the ACS for asymptomatic individuals, including "at a frequency identified in the current ACS guidelines for colorectal cancer."⁴

Current federal law mandates that health insurers provide coverage for CRC screenings – the Patient Protection and Affordable Care Act (PPACA) – based on the guidelines of the U.S. Preventive Services Task Force.

Current state laws do not mandate that health insurers provide coverage for CRC screenings and related services, but health insurers do provide this benefit to their members.

Prior to PPACA, with certain exceptions, most health plans have been providing screening for CRC screenings in accordance with the Massachusetts Health Quality Partners (MHQP) guidelines, which recommends routine screening for persons who are at least 50 years of age or persons who are less than 50 years of age and at high risk. In general, health plans report that they adhere to MHQP guidelines, which are largely based upon the USPSTF guidelines, endorsed by the Centers for Disease Control and Prevention (CDC).



There are differences between the ACS and the guidelines used by health plans, however. ACS guidelines are broader than the MHQP guidelines that the plans have been following in at least these three key ways:

- Definition of high-risk members under the age of 50. ACS guidelines call for CRC screening before age 50 and/or screening more often if you are at an increased or high risk of CRC. The ACS guidelines include several risk categories with specific recommended tests and frequencies. The MHQP guidelines are more generally written. For this reason, future adherence to ACS guidelines could lead to earlier screening for some people.
- CRC Screening options. ACS guidelines include recommendations for two screenings that are not generally offered by health plans today, including: (1) the computed tomographic colonography test (CT colonography or CTC); and, (2) fecal or stool DNA test (sDNA).
- No age restriction. ACS guidelines would also require health plans to remove the upper-age limitations on testing and test beyond age 75. This third difference, however, would have no impact on this review and evaluation of H. 2185, since this review applies only to the privately insured and those persons over the age of 65 generally have Medicare health coverage.

In addition, the proposed bill also includes two other provisions. The first provision addresses member cost sharing by requiring health plans to keep deductibles and coinsurance for CRC screenings in line with out of pocket costs for similar services. Although H. 2185 does not explicitly include copayments in its language, DHCFP assumed that this provision could also be interpreted to apply to health plans that charge copayments. It is important to note that adding copayments to the list of cost-sharing provisions is not expected to modify the analysis. The second provision addresses provider reimbursement. H. 2185 proposes to require that health plans reimburse health care providers at the same level or greater than Medicare levels.

The proposed bill would apply to the fully insured, commercial market. That market includes fully-insured plans offered by commercial insurers, health maintenance organizations, and Blue Cross Blue Shield plans. H. 2185 would also apply to the GIC.

Methodology for Financial Impact Analysis

DHCFP prepared this review and evaluation of H. 2185 by conducting interviews with legislative staff and insurers, reviewing the relevant literature about CRC, incidence, and types of screenings, interviewing experts relative to CRC, and conducting an actuarial analysis of the fiscal impact of H. 2185 (see Appendix).



DHCFP's analysis focused on how the use and cost of CRC screenings, including laboratory tests, would be affected by H. 2185. The analysis was based on the following information and assumptions: (1) the rate of CRC screenings among members today; (2) the menu of CRC screenings offered by health plans today; (3) the effect of ACS guidelines, and specifically, the requirement to provide members with coverage for the CT colonography and the sDNA; (4) the relative cost differential among screenings provided; (5) the effect of no change in deductibles and coinsurance (and copayments) over what is currently provided for similar services; and finally, (6) the measured effect of increasing provider reimbursement for a limited number of providers, depending upon the mix of services they provide. The analysis does not assume an increase in provider reimbursement due to the bill's requirement that health plans adopt Medicare payment levels.

Three different impact scenarios were developed – low, middle, and high – to present a range of the possible impact of the proposed mandate on premiums and total health plan expenditures.

Results of Financial Analysis

In 2011, the projected increase in spending that would result from H. 2185 ranges from 0 percent to .01 percent of premiums or \$0 to \$1.1 million. The impact on per member per month (PMPM) premiums ranges from \$0 to \$.04.

The five-year impact results are perhaps the more important results to examine with regard to H. 2185. The average impact on per member per month (PMPM) premiums, between 2011 and 2015, could range from \$0 to \$.21, reflecting key assumptions about how the use of CRC screenings would increase over time. DHCFP expects to see an increase in the use of screening but that these increases would start out slowly, gathering momentum over the course of the five years examined.

Over a five-year time horizon, three scenarios – low, middle and high – were modeled resulting in estimated increased total spending (including both claims spending and administrative expenses) of \$0 million, \$15 million, and \$30 million.

The results reflect the effect of the proposed mandate on all commercial fully-insured health plans, including the GIC. The results are displayed in Exhibit 1 (page 6). See the Appendix for more detail on the results, including results for the Group Insurance Commission.



Exhibit 1: Estimated Cost Impact of H. 2185 on Fully Insured Health Care Premiums

Plan Category	2011	2012	2013	2014	2015	All 5 Years
Fully-Insured Enrollment	2,356,000	2,354,000	2,352,000	2,351,000	2,350,000	—
Low Scenario						
Annual Impact Claims (000s)	-	-	-	-	-	-
Annual Impact Administration (000s)	-	-	-	-	-	-
Annual Impact Total (000s)	-	-	-	-	-	-
Premium Impact (PMPM)	-	-	-	-	-	-
Middle Scenario						
Annual Impact Claims (000s)	\$506	\$1,041	\$2,142	\$3,859	\$5,676	\$13,222
Annual Impact Administration (000s)	\$69	\$142	\$292	\$526	\$774	\$1,803
Annual Impact Total (000s)	\$574	\$1,182	\$2,434	\$4,385	\$6,449	\$15,025
Premium Impact (PMPM)	\$0.02	\$0.04	\$0.09	\$0.16	\$0.23	\$0.11
High Scenario						
Annual Impact Claims (000s)	\$1,011	\$2,081	\$4,283	\$7,718	\$11,351	\$26,444
Annual Impact Administration (000s)	\$138	\$284	\$584	\$1,052	\$1,548	\$3,606
Annual Impact Total (000s)	\$1,149	\$2,365	\$4,868	\$8,770	\$12,899	\$30,050
Premium Impact (PMPM)	\$0.04	\$0.08	\$0.17	\$0.31	\$0.46	\$0.21



Introduction

According to the National Cancer Institute of the National Institutes of Health (NIH), colorectal cancer (CRC) is the third most common cancer diagnosed among men and women in the United States and the second leading cause of cancer death. The National Cancer Institute reports that in 2008 there were close to 50,000 deaths in the United States related to colorectal cancer and close to 150,000 new cases of colorectal cancer.⁵

The intent of House 2185 is to encourage greater use of CRC screenings among those with average risk or higher-than-average risk by requiring health plans to provide coverage for colorectal screenings in accordance with American Cancer Society (ACS) guidelines. The bill also contains other provisions aimed at increasing the rate of screenings by mandating that health plans keep member deductibles and coinsurance in line with such deductibles or coinsurance for similar benefits, and reimbursing health care providers at the same level or greater than Medicare reimbursement.

Fully-insured commercial plans and the Group Insurance Commission (GIC) currently cover colorectal cancer screening in the absence of an insurance mandate. The rate of colorectal screenings among health plans affected by H. 2185 ranges between 72 and 78 percent, with one exception. Prior to the passage of PPACA, coverage among fully-insured plans is generally based on the recommendations of the Massachusetts Health Quality Partners (MHQP), however, which recommends that coverage begins at age 50 for the average-risk person and excludes coverage for the CT colonography and the sDNA tests. With regard to the other provisions of H. 2185, most individuals face little to no cost sharing today; and data show that most health care providers are reimbursed at or above Medicare levels of payment.

The remainder of this introductory section summarizes the scope of the current law and describes how private insurance coverage would change under the proposed bill.

Summary of Current Law

Current state law does not require that health plans cover CRC screenings and laboratory tests. The new federal health care reform law, the Patient Protection and Affordable Care Act of 2010 (PPACA), however, does. The PPACA requires that health plans, at a minimum, provide coverage for CRC screenings without any cost sharing in accordance with USPSTF guidelines.⁶ The PPACA does not require that health plans provide coverage for screenings based on ACS guidelines, however. ACS guidelines include two tests not covered under the USPSTF guidelines including the CT colonography test or CTC. The federal law is consistent with Medicare, which does not provide coverage for the CT colonography test.



Fully-insured commercial health plans surveyed for this report indicated that they currently cover CRC screenings and laboratory tests. Current health plan practice, as reported prior to the effective date of the PPACA, is to provide coverage for CRC screenings and laboratory tests based on the guidelines of the MHQP. The GIC also provides coverage for CRC screenings to its members.

Summary of Proposed Bill

House 2185 proposes to require that all fully-insured commercial health plans and the GIC provide coverage for all colorectal examinations and laboratory tests for all persons who are at least 50 years of age or persons who are less than 50 years of age and at high risk for CRC in accordance with the current guidelines of the ACS for asymptomatic individuals, including “at a frequency identified in the current ACS guidelines.”⁷

The proposed legislation also includes two other provisions aimed at boosting the rate of CRC screenings in the state. The first is to require that health plans keep member deductibles or coinsurance in line with those that are established for similar benefits. However, the effect of no cost sharing for CRC screenings under the nation’s new health care reform law is to make this provision irrelevant to DHCFP’s review and evaluation of the proposed legislation.

The second one is to require that health plans reimburse health care providers at the same level or greater than Medicare reimbursement. This requirement is addressed in the Appendix.

The proposed bill would apply to the fully insured, commercial market. That market includes fully-insured plans offered by commercial insurers, Health Maintenance Organizations, and Blue Cross Blue Shield plans. The proposed bill would also apply to the GIC.



Background

In this section, the DHCFP provides: (1) information about the incidence of CRC by geographic region and by race; (2) an overview of CRC screening guidelines and key differences between the guidelines of the ACS and other experts, including the USPSTF and the MHQP; (3) a synopsis of existing health insurance coverage by health plans in Massachusetts; (4) a discussion about ways to increase the rate of CRC screenings through targeted interventions in the primary care system; and (5) the state and federal landscape for CRC screenings and prevention of CRC including the potential effect of federal health care reform on coverage for colorectal screenings.

Colorectal Cancer

According to the ACS, CRC is a term used to refer to cancer that develops in the colon or the rectum. These cancers are sometimes referred to separately as colon cancer or rectal cancer, depending on where they start.⁸

CRC is currently the third most common type of cancer and the second leading cause of cancer mortality in the United States. In 2009, there were close to 150,000 new cases of cancer, and close to 50,000 deaths (colon and rectal combined). African Americans are disproportionately represented in these morbidity and mortality statistics.

A complete description of the disease is not provided here, but is available through several sources, including the ACS and the National Cancer Institute of the National Institutes of Health (NIH).

Incidence of Colorectal Cancer (CRC)

In recent years, the rates of CRC and deaths from CRC have decreased. Between 2002 and 2006, the CRC rate per 100,000 for the United States decreased from 53.4 to 46.8. See Exhibit 2 (page 10). Massachusetts experienced a higher rate of decline than the United States in both absolute and percentage terms. Federal statistics on the incidence of death show a similar pattern. High rates of health insurance coverage in Massachusetts combined with health plan emphasis on CRC screening can perhaps help to explain these improvements.

Racial Disparities in CRC Diagnosis and Survival

A closer examination of the data by race reveals significant health disparities among races. African Americans have the highest incidence of CRC and highest mortality rate of any racial or ethnic group.



Exhibit 2: Colorectal Cancer and Death Rates in 2002 and in 2006

Plan Category	2002	2006	Change
Incidence of Colorectal Cancer (rate per 100,000)			
United States	53.4	46.8	-12%
Northeast	58.6	49.0	-16%
New England	59.4	47.3	-20%
Massachusetts	59.4	45.8	-23%
Incidence of Death (rate per 100,000)			
United States	19.6	17.1	-13%
Northeast	20.9	17.5	-16%
New England	20.8	16.6	-20%
Massachusetts	21.5	17.0	-21%

Source: CDC. United States Cancer Statistics, 2002 and 2006

In Massachusetts and the nation, the mortality rate is highest among African Americans based on 2006 data. In Massachusetts, the mortality rate for “black,” as reported by the CDC, is 20.1 per 100,000 compared to 17 per 100,000 for all races. Exhibit 3 (page 11) highlights these differences in rates for the U.S., Northeast, New England and Massachusetts. This exhibit shows less disparity among the races in Massachusetts than for the nation. Higher rates of insurance coverage among African Americans in Massachusetts than for the nation may help to account for some or all of the lower mortality statistics for African Americans in Massachusetts than for the nation.

The high incidence of cancer among African Americans has been tied to a number of factors including dietary factors, rates of physical inactivity and obesity, variability in screening rates, lower use of diagnostic testing, and historical smoking rates.⁹

CRC Screenings and the Variation in Guidelines

This section on guidelines is not intended to provide a summary, in full, of the recommendations for CRC screenings but rather a perspective on how the guidelines issued by the various professional organizations differ in opinion on the most effective methods and ways to increase CRC screening rates.

CRC screenings can save lives through early detection and prevention of precancerous colorectal polyps, and detecting and treating cancer in its early stages. Several organizations including the National Cancer Institute of the NIH and the ACS provide lengthy descriptions of the entire list of CRC screenings, including their advantages and disadvantages.



Exhibit 3: Estimated Cost Impact of H.2185 on Fully-Insured Health Care Premiums (2011-2015)

Plan Category	All Races	White	Black	Hispanic
Incidence of Cancer (rate per 100,000)				
United States	46.8	45.8	54.7	39.3
Northeast	49.0	48.6	50.8	43.6
New England	47.3	47.1	44.7	47.2
Massachusetts	45.8	45.9	37.8	41.7
Incidence of Death (rate per 100,000)				
United States	17.1	16.6	24.3	12.8
Northeast	17.5	17.3	21.8	13.0
New England	16.6	16.6	18.3	11.2
Massachusetts	17.0	17.0	20.1	9.8

Source: CDC. United States Cancer Statistics, 2006

As written, House 2185 would mandate that all fully-insured health insurers and the GIC provide CRC screenings, including laboratory tests, to asymptomatic members who are at least 50 years of age or less than 50 years of age and at high risk for CRC. The proposed language requires that this benefit be provided to its insured members based on the guidelines of the ACS.

Historically, most of the health plans surveyed for this report provide coverage for CRC screenings based upon the 2007-2008 Adult Preventive Care Recommendations of the MHQP. The MHQP recommendations reflect the input of many sources, including the guidelines of the USPSTF. MHQP recommendations are broader than the USPSTF guidelines by covering the double-contrast barium enema screen but more narrow than ACS guidelines that recommend the “full menu” of screening options.

The ACS guidelines include two tests that are not covered under MHQP guidelines. They are:

- Computed tomographic colonography (CT colonography or CTC),
- Fecal Immunochemical Test (FIT), and
- Fecal or stool DNA tests (sDNA).

Under H. 2185 members would have access to these two screening options that are not currently provided by the health plans, (nor covered under the federal health care reform law).

While there is agreement throughout the health care system about the importance of CRC screenings, the variation in CRC screening guidelines among expert organizations does suggest that there is some difference in opinion about the medical effectiveness of the CTC or sDNA tests.



The ways in which the guidelines of the ACS, the American College of Gastroenterology, and the USPSTF differ are discussed below.

The American Cancer Society (ACS)

The ACS is the “nationwide community-based voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives, and diminishing suffering from cancer through research, education, advocacy, and service.”¹⁰

In conjunction with the U.S. Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology, the ACS has issued guidelines that reflect the belief that “preventing colorectal cancer (and not just finding it early) should be a major reason for getting tested.”

ACS guidelines recommend regular screening for adults older than age 50 who are at average risk and younger than age 50 for those at higher than average risk to reduce both the morbidity and mortality rates. The following tests are recommended: the flexible sigmoidoscopy every 5 years, colonoscopy every 10 years, double-contrast barium enema every 5 years, CT colonography every 5 years, fecal occult blood test (FOBT) every year, fecal immunochemical test (FIT) every year, and sDNA with an uncertain interval.

See Exhibit 4 (page 13) for a list of the types of colorectal cancer screening options, and the frequency of screening, as recommended by the American Cancer Society, compared to the screening options recommended through the guidelines of the ACG and USPSTF. Note that that the exhibit reflects the construct developed by ACS for categorizing tests that can find both colorectal polyps and cancer, and those tests that mainly find cancer.

Tests that can find both colorectal polyps and cancer look at the structure of the colon itself to find any abnormal areas. The test is done either with a scope inserted into the rectum or with special imaging (x-ray) tests. Polyps found before they become cancerous can be removed, so these tests may prevent colorectal cancer. Because of this, these tests are preferred if they are available and you are willing to have them. On the other hand, tests that mainly find cancer involve testing the stool (feces) for signs that cancer may be present. These tests are less invasive and easier to have done, but are less likely to detect polyps.

The American College of Gastroenterology

The American College of Gastroenterology (ACG) is another important organization with guidelines for CRC. The ACG is committed to serving the clinically oriented digestive disease specialist through its emphasis on scholarly practice, teaching and research.¹¹



Exhibit 4: Estimated Cost Impact of H.2185 on Fully-Insured Health Care Premiums (2011-2015)

	ACS a/	ACG b/	USPSTF c/
Routine Screenings for Average Risk	Beginning at age 50	Beginning at age 50, Except African Americans should begin at age 45.	Beginning at age 50 and continuing through age 75.
Screenings for Increased/High Risk	Beginning before age 50, if increased or high risk	Beginning before age 50, if increased or high risk	Beginning before age 50, if increased or high risk
ACS Guidelines:			
Tests that find polyps and cancer			
Flexible sigmoidoscopy every 5 years, or	Yes	Yes	Yes
Colonoscopy every 10 years, or	Yes	Yes	Yes
Double-contrast barium enema every 5 years, or	Yes	Yes	No
CT colonography every 5 years	Yes	Yes	No
Tests that mainly find cancer			
Fecal occult blood test (FOBT) every year, or	Yes	Yes	Yes
Fecal immunochemical test (FIT) every year, or	Yes	Yes	Yes
Fecal DNA (or stool DNA, or sDNA), interval uncertain	Yes	No	No

a/ ACS = American Cancer Society
 b/ ACG = American College of Gastroenterologists
 c/ USPSTF = United States Preventive Services Task Force

Overall, the ACG supports the policy of the ACS. However, the ACG endorses a ‘preferred’ strategy’ over the ACS ‘menu of options’ by specifying in its guidelines that the preferred prevention test should be colonoscopy every 10 years, and the preferred detection test should be annual fecal immunochemical test (FIT) for occult bleeding.

The ACG stands by the belief that a preferred strategy is better than a menu of options by simplifying the process of screening for both patients and clinicians. In addition, in 2005, the ACG issued a new recommendation that colorectal cancer screening in African Americans should start at age 45, rather than age 50.¹² In an update of the guidelines in 2009, the ACG endorsed the use of CTC only when patients refuse colonoscopy but maintains that colonoscopy is the “preferred method” of screening.¹³

Some health insurers and systems of care have adopted the guidelines of the ACG for their members in an effort to reduce the incidence of cancer and mortality among African Americans. Aetna, for example, considers CRC screening beginning at age 45 to be a medically necessary preventive service for African Americans, because of the high incidence of CRC in this population.¹⁴



The U.S. Preventive Services Task Force

The USPSTF is an independent panel of experts in prevention and primary care with responsibility for developing recommendations for clinical preventive services on behalf of the federal government.¹⁵ The USPSTF is known to apply a more rigorous standard of medical efficacy than other organizations, and as such is considered to be the “gold standard” for clinical preventive services.

The USPSTF guidelines, which are endorsed by the CDC, recommend screening individuals with average risk starting at age 50 until age 75 with one of the following tests: flexible sigmoidoscopy every 5 years, colonoscopy every 10 years, or fecal occult blood test (FOBT) every year. These guidelines do not recommend the use of the double-contrast barium enema, CT colonography, or sDNA, which are recommended by the ACS. The current USPSTF recommendation on Screening for Colorectal Cancer was published on October 7, 2008.

The USPSTF does not recommend routine screening for adults 75 to 85 years of age and recommends against screening in adults older than 85 years of age. The USPSTF concludes that there is insufficient evidence for CTC and sDNA tests to permit a recommendation.¹⁶

Furthermore, the USPSTF does not recommend colonoscopy over other screening options while ACS guidelines prefer tests that provide a full structural examination of the colon are preferred over other tests.

It is important to note that the guidelines developed by the MHQP are based upon the USPSTF. However, MHQP covers the double-contrast barium enema. The majority, if not all, of the health plans in Massachusetts adhere to the MHQP guidelines, with certain exceptions. For this reason, the guidelines of the USPSTF are not further examined in this report.

Health Insurers

The DHCFP’s consultants prepared a survey sent to seven fully-insured plans in Massachusetts. All seven plans responded to this survey, including Blue Cross Blue Shield Plans, Fallon Community Health Plan, Harvard Pilgrim Health Care, Neighborhood Health Plan, Tufts Health Plan, Unicare, and United Healthcare. DHCFP did not specifically analyze the GIC health plans.

The responses of the health plans were fairly similar. The following statements attempt to generalize the policies of the health insurers, prior to the effective date of the PPACA, and are intended to clarify current health insurance coverage overall with respect to: (1) coverage for CRC screenings and laboratory tests; (2) member cost sharing; and (3) provider reimbursement relative to Medicare.



Coverage for Colorectal Cancer Screenings

The proposed legislation requires all health insurers to provide CRCs and laboratory tests to all persons who are at least 50 years of age or persons who are less than 50 years of age and at high risk for colorectal cancer in accordance with the current guidelines of the ACS for asymptomatic individuals, including “at a frequency identified in the current ACS guidelines.”¹⁷

- None of the seven health insurers would currently meet the requirements of the mandate; however, all seven health insurers in Massachusetts cover CRC screenings and laboratory tests, with variation among health plans around the frequency of testing.
- Four of the seven health insurers indicated that they provide CRC coverage in accordance with the guidelines developed by the Massachusetts MHQP.
- Only one of the seven health insurers indicated coverage for CT colonography.
- None of the seven health insurers indicated coverage for the fecal DNA test.

Cost Sharing

The proposed legislation requires that health insurers reimburse health care providers at the same or greater than Medicare levels. As is further discussed in the Appendix, the Division assumed that this provision would not interfere with efforts on the part of the health plans to reduce costs.

- Most of the health plans do not charge for CRC screenings, since such screenings are considered preventive in nature.
- Five of the seven health insurers indicated no cost sharing for the member for colorectal screenings in a manner consistent with how cost sharing applies to other services that are considered to be preventive.
- Two of the seven health insurers indicated that members face some cost sharing in the form of a coinsurance and copayment.
- Screenings with diagnostic findings are generally treated as diagnostic care and subject to cost sharing.

Provider Reimbursement

The proposed legislation requires that health insurers reimburse health care providers at the same or greater than Medicare levels. As is further discussed in the Appendix, the Division assumed that this provision would not interfere with efforts on the part of the health plans to reduce costs.

- The responses of the health plans indicated that providers are reimbursed in a variety of ways, including on a fee-for-service basis and performance arrangements involving risk sharing.
- All health insurers indicated that the majority of payments were well above Medicare rates.



Ways to Increase the Rate of Colorectal Cancer Screenings

Increasing the rate of CRC is complicated. The patient has to be willing to undergo the examination, the provider has to recommend the procedure, and the health care system has to make screenings a priority.

Several professional organizations from across the country tend to converge around an expectation that the rate of CRC screenings should be at least 80 percent. The average rate of CRC screenings for the nation remains below 60 percent despite increases in the rate of screenings in recent years. The overall rate in Massachusetts is reported to be close to 70 percent. Massachusetts health plans that responded to the survey reported CRC screening rates that ranged between 72 and 78 percent, with one exception. The rate of CRC screenings in Massachusetts for African Americans compared to other races was not requested nor reported by the health plans.

In general, Massachusetts has a higher rate of screening than the reported rate of less than 60 percent for the nation as a whole. That may in part be explained by the nearly universal rate of health insurance coverage, as well as other factors, such as the emphasis on the part of health plans in Massachusetts to encourage screening. Additional investment into strategies to increase screenings rates might result in a direct benefit to African Americans, but the work is challenging and the outcome uncertain.

As the final statement of the panel of experts attending the NIH State-of-the-Science Conference on Enhancing Use and Quality of Colorectal Screening in 2010 suggests, the use of colorectal cancer screenings rates are affected by many factors including those that are patient-related, those that are provider-related and those that are related to the organization of the health care system.

Patient-related factors, such as insurance coverage, income, education, having a usual source of care, trust in the patient-doctor relationship, and the unpleasantness of the examination, all have an effect on screening rates. The recommendation of the provider to perform a screening also has an influence on the rate of screenings. And finally, the organization of the health care system has an effect on increasing the rate of screening among its members. Targeted interventions, including patient reminder systems and integrated systems of care, all play a role in increasing screening rates.

In a presentation at the NIH State-of-the-Science Conference on Enhancing Use and Quality of Colorectal Screening, medical expert and researcher Dr. John Ayanian discussed ways that primary care practices and health care systems can maximize colorectal cancer screenings.¹⁸ In brief, primary care practices can maximize screenings in a variety of ways including through integrated electronic health records, initiating multi-faceted interventions such as patient reminders, personalized counseling, and patient navigators to overcome barriers to screenings. Similarly, yet using different strategies, health systems can maximize screening through insurance coverage and low copayments, public reporting and benchmarking to monitor and improve performance, and by engaging in the community and building partnerships. See Box 1 (page 17) for more information about how New York City increased its rate of CRC screening.¹⁹



Box 1: "Take Care New York"

In 2004, New York City launched a comprehensive health policy for increasing the overall health and life expectancy of its residents. "Take Care New York" identified ten health issues that would improve the health of New Yorkers. The areas were given high priority and ambitious goals. Progress is tracked annually in a published report. One of the ten health issues is "Cancer Screening" for breast, cervical and colon cancers.

"Take Care New York" implements its strategies in the following ways by: promoting evidence-based interventions, building on existing programs, identifying and building partnerships, addressing policy barriers, reducing health disparities, and accelerating social and economic progress. As of 2008, "Take Care New York" had involved over 400 organizations. "Take Care New York's" objectives are to increase cancer screening by increasing public awareness of the value of cancer screening, particularly colonoscopy, by promoting strategies to increase referral for colonoscopy screenings, increasing the capacity of colonoscopy facilities to screen patients, promoting free or low-cost cancer screenings and promoting reimbursement policies to increase colonoscopy screening.

The strategies have been several, ranging from the launching of patient navigator programs at six hospitals, to assisting patients in getting colonoscopies, to the convening of two annual Citywide Colon Cancer Control Coalition (C5) Summits, in June 2007 and 2008. C5 working groups reviewed NYC CRC guidelines, focused on strategies to increase colonoscopy referrals, surveyed non-hospital based gastroenterology practices to identify barriers to colonoscopy, and launched a Navigator Program Network.

Has New York increased its CRC screening rate? Yes. The number of persons 50 years or older in New York receiving colorectal cancer screenings in the past ten years was 62 percent according to the 2008 report, surpassing its goal of 60 percent. In 2003, that percentage was only 42 percent. The target for 2011 is 80 percent.

Have CRC screening rates for minorities increased? Yes. According to the NYC Vital Statistics (2002-2007) and the NYC Community Health Survey (2003-2007), racial disparities in colonoscopy screening rates have decreased and death rates from colorectal cancer have reached a new low. The number of whites screened was 62 percent, Blacks 64 percent, Hispanics 63 percent, Asians 54 percent, and others 54 percent.



On a national level, the U.S. Department of Health and Human Services has focused on ways to increase the rate of colorectal cancer screening, ranging from appropriate follow up to the elimination of financial barriers to CRC screenings to widespread implementation of interventions that have proven effective at increasing CRC screening, including patient reminder systems and one-on-one interactions with providers, educators, or navigators.

Federal Activity

The following section outlines the two most significant initiatives relative to colorectal cancer and increasing the rate of screening in the United States.

Centers for Medicare and Medicaid Services (CMS)

It is important to note that Medicare does not currently cover CT colonography for colorectal cancer screening. In a decision memorandum, published in May 2009, CMS wrote that the evidence was inadequate to conclude that “CT colonography is an appropriate colorectal cancer screening test under §1861(pp)(1) of the Social Security Act.”²⁰

The “pivotal, overarching concern” on the part of CMS was “the fact that the findings of trials showing a benefit of screening with this method were not necessarily generalizable from the study populations to other groups of patients. In particular, the CMS noted that the mean age of participants in the studies that were cited in support of coverage was significantly lower than that of Medicare beneficiaries. There were no studies evaluating this technology in the elderly, nor were there analyses of subgroups of participants over 65 years of age.”²¹

Patient Protection and Affordable Care Act (P.L. 111-148)

On March 23, March 23, 2010, President Obama signed into law the PPACA. The PPACA requires that health plans, with some exceptions, provide coverage for CRC screenings based on the recommendations of the USPSTF. This new law requires that health plans provide, at a minimum, coverage without cost sharing for preventive services that are recommended by the USPSTF. CRC screenings are recommended by the USPSTF.²² This section of the law took effect on October 1, 2010.²³

The purpose of this federal mandate is to encourage more people to get screenings. However, the federal mandate is more limited in mandating the types of screenings than H. 2185. The PPACA does not mandate coverage for CT colonography test or CTC, consistent with the decision reached by CMS with regard to coverage under Medicare in a published memorandum, May 2009. Medicare does not provide coverage for the CT colonography test or CTC.



The Colorectal Cancer Control Program (CCCP)

In 2009, the CDC launched the Colorectal Cancer Control Program (CCC). Through this program, the CDC provides funding to states (22 in total) and tribes (4 in total) across the country. The purpose of the program is to support efforts to increase screening and provide CRC screenings to low-income men and women between 50 and 64 year of age who are under or uninsured.

State Activity

Overview of State Activity

- Across the country, there are as many as 26 states with laws in effect to mandate that health plans provide coverage for colorectal cancer screenings.²⁴
- 22 states have laws that provide coverage based on ACS guidelines. Twenty-two states, including Connecticut, Maine and Rhode Island, have laws to include coverage of future advances in screening methods by referencing the ACS guidelines. This number includes the District of Columbia.
- 4 states have laws that meet current screening guidelines with no reference to specific screening guidelines.
- 3 states have laws that cover preventative cancer screenings with no mention of the types of cancer screenings that are covered.
- 3 states have laws that recommend insurance providers offer coverage, but do not require coverage.
- 19 states, including Massachusetts and New Hampshire and Vermont, do not currently have any laws in effect that require insurance providers to cover preventative CRC screenings.

Washington State Health Care Authority

The Washington State Health Technology Clinical Committee

In 2008, the Health Technology Clinical Committee (HTCC) of the Washington State Health Care Authority considered and reviewed the question to cover CTC for colorectal cancer screening. The Washington State Health Care Authority oversees seven health care programs for the state of Washington. The HTCC is an independent committee that determines how selected health technologies are covered by several state agencies.

The HTCC voted to exclude coverage for CTC for colorectal screening, based on the following considerations of safety, efficacy and cost effectiveness as reported in the Authority's Health Technology Assessment report.²⁵ As indicated in its decision, however, the HTCC notes that its conclusion to exclude coverage for CTC is heavily influenced by the cost factor. The HTCC writes that: "Due to the close findings related to safety and effectiveness, cost outcomes were important, including; the cost of the procedure; referral rate to additional procedures (optical colonoscopy); and extra-colonic findings."



Methodological Approach

Overview of Approach

DHCFP engaged a consulting team for this project, including the economics and actuarial firm Compass Health Analytics, Inc. (Compass) to estimate the financial effects of the passage of H. 2185. Ellen Breslin Davidson of EBD Consulting Services, LLC (EBD) and independent consultant Tony Dreyfus were hired to write the main report, which included reviewing and evaluating the legislation. Anne Geoghegan, an independent consultant, researched, and wrote the case study on New York City. The Division, Compass and EBD worked together to evaluate the likely effects of the proposed bill on existing health insurance.

The following steps were taken to prepare the review and evaluation of H. 2185:

1. Conducted Interviews with Stakeholders.

DHCFP conducted interviews with stakeholders in the Commonwealth to ensure that it was accurately interpreting the proposed change in law, to understand the perceptions about how the law would be interpreted, if enacted, and expectations about its likely impacts. DHCFP completed interviews with legislative staff. Meetings were also held with health insurers including Blue Cross Blue Shield of Massachusetts, the Massachusetts Association of Health Plans including representatives of member health plans, Unicare Life & Health, and United Healthcare as well as with Dr. John Ayanian.²⁶

2. Reviewed Literature.

DHCFP reviewed the literature to determine the context of the proposed mandate, including issues relative to the rate of screenings, medical efficacy, and the federal and state landscape. This research included identification of parameters for estimating the cost impacts of H. 2185.

3. Prepared and Collected Survey Data from the Health Plans.

DHCFP requested that health plans respond to a survey developed by Compass and EBD to determine current coverage policies for CRC screenings.

4. Developed Baseline for Massachusetts.

Compass Health Analytics developed a baseline of costs for those services that are currently covered by health insurance plans.

5. Applied Assumptions and Sensitivity Analysis to Methodology.

Model parameters were developed to estimate the marginal premium cost impact of the proposed mandated benefits.



Approach for Determining Medical Efficacy

M.G.L. c. 3 § 38C (d) requires DHCFP to assess the “medical efficacy of mandating the benefit, including the impact of the benefit on the quality of patient care and the health status of the population and the results of any research demonstrating the medical efficacy of the treatment service compared to alternative treatments or services or not providing the treatment or services.” To determine the medical efficacy of H. 2185, DHCFP relied heavily upon the academic and professional literature on CRC screening.

Approach for Determining the Fiscal Impact of the Mandate

Legal Requirements

M.G.L. c. 3 § 38C (d) requires DHCFP to assess nine different measures in estimating the fiscal impact of a mandated benefit:

1. “financial impact of mandating the benefit, including the extent to which the proposed insurance coverage would increase or decrease the cost of the treatment or the service over the next 5 years;”
2. “extent to which the proposed coverage might increase the appropriate or inappropriate use of the treatment or service over the next 5 years;”
3. “extent to which the mandated treatment or service might serve as an alternative for more expensive or less expensive treatment or service;”
4. “extent to which the insurance coverage may affect the number and types of providers of the mandated treatment or service over the next 5 years;”
5. “effects of mandating the benefit on the cost of health care, particularly the premium, administrative expenses and indirect costs of large employers, small employers and nongroup purchasers;”
6. “potential benefits and savings to large employers, small employers, employees and nongroup purchasers;”
7. “effect of the proposed mandate on cost shifting between private and public payors of health care coverage;”
8. “cost to health care consumers of not mandating the benefit in terms of out of pocket costs for treatment or delayed treatment;” and
9. “effect on the overall cost of the health care delivery system in the commonwealth.”

Estimation Process

For more detailed information on the methodological approach used to calculate the impact of H. 2185, refer to the Appendix of this report.



Summary of Findings

Medical Efficacy

The proposed legislation raises a variety of questions related to the medical efficacy of CRC screening:

1. Will higher rates of screening increase early identification and treatment of cancers and reduce mortality?
2. What effect will the range of available screening techniques have in particular on increasing screening and reducing mortality among minority groups that have experienced lower rates of screening or higher rates of mortality than the overall population?
3. How much might cost considerations influence screening rates?
4. Finally, how effective in identifying disease are particular screening methods whose use might be encouraged by the legislation? How effective might they be in increasing overall and minority screening rates?

The first three questions are addressed briefly below. The remainder of this section on medical efficacy addresses the final questions on the effectiveness of particular screening methods.

CRC is common, dangerous and treatable, so that more widespread screening would be effective in reducing morbidity and mortality.²⁷ Current screening rates for CRC are far below the 80 percent rate for breast cancer, suggesting that increased colorectal screening is achievable. Screening rates for Hispanics are lower than for non-Hispanics, while incidence of CRC and mortality are higher among non-Hispanic blacks than for other groups.²⁸

Methods to increase screening

Increasing screening rates for the overall population and for specific groups, however, is not easy to accomplish. Large increases in screening rates probably require a comprehensive effort by public health authorities, insurers and providers. A multi-pronged effort might try to boost awareness among patients and providers, eliminate out-of-pocket costs for screening, expand supportive information and reminder systems, promote stronger doctor-patient relationships, and encourage innovation in screening technique.²⁹

It is possible that the availability of more screening methods could help efforts to increase screening. The legislation analyzed in this report seeks to expand the current range of screening techniques, adding several methods recommended by the ACS and others but not endorsed by the USPSTF recommendations of 2002 or 2008. In Massachusetts, most health insurers follow the recommendations of the USPSTF, which have been adopted by MHQP.³⁰ The analysis below examines what is known about the efficacy of some of these additional screening techniques.



The proposed legislation also seeks to ensure that individuals do not face higher out-of-pocket costs for CRC screening than they do for similar benefits. In principle, limiting out-of-pocket patient costs for screening makes good sense. While preventive care does not necessarily lead to reduced overall health care costs, keeping financial disincentives to cancer screening low should help to increase screening. Because national health care reform has eliminated cost-sharing for preventive services recommended by the USPSTF, the proposed legislation would apparently extend the elimination of cost-sharing to the additional screening techniques endorsed by the ACS and others.

The state may recognize both drawbacks and virtues of limiting out-of-pocket patient costs. On the one hand, the state should generally weigh possible disadvantages whenever it limits insurers from using cost-sharing arrangements to influence volume and provider choice. Such cost-sharing arrangements may allow insurers to direct patients to more appropriate health care services and providers.

On the other hand, it is also possible that insurers may unwisely limit the choice of screening technique and impose discouraging charges. The Legislature may be justified in mandating a wider choice of screening and reduced charges. A consideration of the scientific evidence about screening techniques should inform the issue.

Established methods: the variety of screening techniques

Screening for CRC includes a wide variety of techniques. Screening methods long in use include the fecal occult blood test, barium enema, and flexible sigmoidoscopy.

The fecal occult blood test detects blood that may have leaked into the stool as a result of polyps or cancer. Fecal blood tests may often have been inaccurate in identifying cancers, but evidence suggests that they have contributed significantly to the decline in cancer mortality by directing many patients toward additional examination and treatment. The fecal blood test may be unpleasant, because it requires the patient to obtain a stool sample.

The second method, barium enema, uses X-ray imaging enhanced by a barium solution moved into the bowel via enema. This method has become increasingly uncommon.³¹

The third method, sigmoidoscopy, allows a visual inspection of the rectum and lower colon with a flexible tube. It also allows the physician to remove observed growths, including precancerous polyps, thus combining screening with preventive treatment. Sigmoidoscopy may be unpleasant because it involves preparation to cleanse the bowel and an invasive procedure.

A fourth method, colonoscopy, allows a physician to examine visually the entire colon and to remove observed growths, including precancerous polyps. Like sigmoidoscopy, colonoscopy can thus combine screening with preventive treatment. Colonoscopy is also used with patients already identified by another screening method as having growths or cancer for further identification and removal of growths.



The advantage of colonoscopy as a combined method of screening and preventive treatment has to be balanced against its unpleasantness, risks and costs. Like sigmoidoscopy, colonoscopy is an invasive procedure. But compared with sigmoidoscopy, colonoscopy involves a more intensive laxative bowel cleansing, is more often performed with sedation, and takes more time. Colonoscopy also has risks of perforation of the bowel, bleeding or other complications that are much higher than the risks for sigmoidoscopy.³² Colonoscopy is also the most expensive of the screening options. These negative aspects of colonoscopy may discourage some people from undergoing screening.

Additional methods: colonography and new fecal tests

The ACS, however, now endorses additional screening techniques.³³ The proposed legislation would require insurers to cover these additional techniques: fecal immunochemical tests (FIT); fecal or stool DNA tests (sDNA); and computed tomographic colonography (CT colonography or CTC).³⁴

The new recommendations on CRC screening that included these techniques were issued jointly by the ACS, the U.S. Multisociety Task Force on Colorectal Cancer and the American Society of Radiology.³⁵ Among the seven recommended techniques, the new guidelines encourage use of tests that can detect polyps as well as cancers, judging them preferable to the stool tests that largely detect cancers. Colonoscopy, sigmoidoscopy, barium enema and colonography are thus favored over the fecal tests. The authors of the new guidelines concluded that accumulated evidence since 2002 was sufficient to include CTC as a recommended technique.³⁶

A number of studies have focused on the effectiveness of the new techniques, especially on colonography. Whitlock and colleagues reviewed this work for the USPSTF, updating the 2002 report for new 2008 clinical guidelines.³⁷

Colonography

The USPSTF noted various advantages, disadvantages and uncertainties about CTC. On the one hand, their review presented the argument that less invasive techniques offer the benefit of reducing the number of colonoscopies and their risks. The USPSTF noted specifically that the inclusion of colonography in a screening program could reduce mortality if patients who would refuse more invasive screening found it an attractive alternative.³⁸ And the evidence suggests that colonography is about as accurate as colonoscopy in identifying cancers and large growths.³⁹

On the other hand, the use of colonography raises other issues, including radiation exposure and findings outside the colon. The harm from the additional radiation exposure is uncertain. Similarly, the benefits and disadvantages of further investigation of abnormal findings outside the colon are not known.⁴⁰ Overall, the USPSTF concluded that for colonography the evidence is not sufficient to assess benefits and harms.

Numerous others have contributed to the evaluation of colonography. One supporting endorsement of note was the recent report of the Technology Evaluation Center of the Blue Cross Blue Shield Association, which concluded that current evidence supports



colonography as “effective in reducing mortality from colon cancer.”⁴¹ The American College of Gastroenterologists continues to endorse colonoscopy as its preferred method of screening but endorses other methods, including sigmoidoscopy, fecal blood test or colonography, when patients are not willing to undergo colonoscopy for screening purposes.⁴² But the debate about the safest and most cost-effective approaches to CRC screening is sure to continue as researchers and clinicians devise new screening technologies and methods for their use.

Fecal tests

Tests that look for small amounts of blood shed into the feces have long been an important part of CRC screening. The range of tests is evolving, with new, more sensitive tests for occult blood, including tests for immunochemical changes, and others for alterations in DNA that are associated with the development of cancer. Described briefly below, these new tests bear less heavily than does colonography on the controversy about new screening techniques.

The fecal immunochemical test (FIT), like the older fecal occult blood tests, identifies blood that may be shed from developing cancers but responds less to blood from higher up the digestive tract. The FIT can be seen as a variant on the fecal occult blood test with fairly similar accuracy, and insurers are likely to cover it without concern as it becomes more commonly used.

The stool DNA test (sDNA) is a more radical innovation. Current versions of the sDNA test are not yet in widespread use, but we can anticipate new science and technology to link changes in genetic activity with different forms of disease and their stages of development. Such genetic tests may bring substantial new costs along with the potential to greatly improve cancer treatment. Current opinion about the sDNA test is divided. The USPSTF finds that evidence for sDNA is not sufficient to recommend it; the ACS guidelines include it.

Potential for benefit from new techniques

Are some of these additional techniques likely to bring benefit in terms of increased screening and reduced rates of cancer mortality? Many issues beyond the strictly medical can be brought into consideration, including whether the growing array of tests will help health care providers encourage more patients to undergo screening. Neugut and Lebwohl, for example, acknowledge the argument that increasing the number of screening options may help bring more patients into screening and that any of the screening methods is preferable to none. But they also caution that too many screening options may overwhelm doctors and patients alike with the complexity of choosing among them.⁴³

The clinical evidence suggests that evolving screening techniques may bring benefits to some. Adding to the current array of screening techniques may bring substantial benefits if health care providers can use new techniques as part of an effort to expand screening. The Legislature will have to decide whether the decision about the addition of the new techniques should be left to insurers or to providers.



Financial Impact of Mandate

1. The DHCFP is required per M.G.L. c.3 § 38C(d) (1), to assess “the extent to which the proposed coverage would increase or decrease the cost of the treatment or the service over the next 5 years...”

The addition of two new tests, including the CT colonography and sDNA, would not likely amount to a substantial change in the cost of treatment or service over the next five years. The CT colonography and sDNA tests are less expensive than the more traditional method of screening such as the colonoscopy. It is possible that patients might also view the CT colonography as a substitute for a relatively more expensive and more traditional screening by colonoscopy. There may also be some effect if these less invasive tests are inconclusive and it is recommended that the patient receive the colonoscopy in addition. This may increase costs somewhat, but it is difficult to estimate how much the increased costs would be offset by a substitution effect.

DHCFP does not expect the bill to lead to rate increases for screenings on the part of the health plans. The responses by the health plans to the Division’s survey indicate that the majority of payments by health insurers were well above Medicare rates.

On the other hand, the proposed bill’s requirement that health plans reimburse for screenings at least at Medicare rates might constrain rate negotiations with providers, if commercial and Medicare rates ever converge, perhaps contrary to developing policy to encourage such negotiation. However, the Division does not expect this requirement to place a practical limitation on price negotiation, at least for the time horizon of 5 years, because commercial rates are currently considerably higher than Medicare rates.

2. DHCFP is required to assess “the extent to which the proposed coverage might increase the appropriate or inappropriate use of the treatment or service over the next 5 years...”

DHCFP does not expect that H. 2185 would have much effect on the appropriate or inappropriate use of CRC screenings, if any. This conclusion was reached on the basis of the following considerations.

The appropriate or inappropriate use of CRC screenings appears to be driven by, at least, two factors: the processes followed by the physician, and the extent to which patients can or will avail themselves of a screening.

- In a recently published study by the CDC, the author concluded that many primary care physicians “continue to use inappropriate FOBT [Fecal Occult Blood Testing] methods to screen for colorectal cancer,” along with other practices that diminished the value of screening.⁴⁴ H. 2185 includes no such provisions to ameliorate such a problem.



- Other studies have focused on ways to increase the appropriate access to screenings among poor and disadvantaged patients, thus underscoring the importance of having insurance coverage for tests that might otherwise be beyond reach for many patients.⁴⁵ DHCFP concludes that this factor is not relevant to its assessment of H. 2185, because the proposed legislation only applies to those with insurance coverage.

3. DHCFP is required to assess “the extent to which the mandated treatment or service might serve as an alternative to a more expensive or less expensive treatment or service...”

It is possible that the addition of the CT colonography and sDNA tests might serve as an alternative to a more expensive or less expensive treatment or service. However, DHCFP expects an overall increase in use.

However, consensus has not been reached about the use and validity of the CT colonography and sDNA tests. These two tests are not considered in this same category of such “tried and true” methods to reach a definitive conclusion about how their use might serve as an alternative to the use of such “tried and true” methods such as a colonoscopy examination.

4. DHCFP is required to assess “the extent to which the insurance coverage may affect the number or types of providers of the mandated treatment or service over the next 5 years...”

There is no information to indicate that proposed legislation would increase the number or types of providers of the mandated treatment or service over the next five years. However, it will be important to understand and consider the capacity to meet the statewide screening needs.

5. “DHCFP is required to assess the effects of mandating the benefit on the cost of health care, particularly the premium, administrative expenses and indirect costs of large employers, small employers and nongroup purchasers...”

DHCFP estimated the fiscal impact of the bill (see Appendix) relative to the effect H. 2185 would have on health insurers. H. 2185 may lead to an increase in the use of screenings and costs.

Estimated impacts of H. 2185 on Massachusetts health care premiums for fully-insured products were calculated assuming that the five-year average premium (2011-2015) for a fully-insured member is \$498 on a per member per month basis. Low, middle and high scenarios used varying assumptions of costs and use.

The five-year impact results are displayed in Exhibit 5 (page 28). The results include three sets of estimates based on low, medium, and high impact scenarios. The five-year total for these three scenarios resulted in estimated increased total spending (including both claims spending and administrative expenses) of \$0, \$15 million, and \$30 million, respectively.

6. DHCFP is required to assess the potential benefits and savings to large and small employers, employees, and non-group purchasers.

H. 2185 is not likely to produce benefits and savings to large and small employers, employees, and non-group purchasers.



Exhibit 5: Estimated Cost Impact of H. 2185 on Fully Insured Health Care Premiums

Plan Category	2011	2012	2013	2014	2015	All 5 Years
Fully-Insured Enrollment	2,356,000	2,354,000	2,352,000	2,351,000	2,350,000	—
Low Scenario						
Annual Impact Claims (000s)	-	-	-	-	-	-
Annual Impact Administration (000s)	-	-	-	-	-	-
Annual Impact Total (000s)	-	-	-	-	-	-
Premium Impact (PMPM)	-	-	-	-	-	-
Middle Scenario						
Annual Impact Claims (000s)	\$506	\$1,041	\$2,142	\$3,859	\$5,676	\$13,222
Annual Impact Administration (000s)	\$69	\$142	\$292	\$526	\$774	\$1,803
Annual Impact Total (000s)	\$574	\$1,182	\$2,434	\$4,385	\$6,449	\$15,025
Premium Impact (PMPM)	\$0.02	\$0.04	\$0.09	\$0.16	\$0.23	\$0.11
High Scenario						
Annual Impact Claims (000s)	\$1,011	\$2,081	\$4,283	\$7,718	\$11,351	\$26,444
Annual Impact Administration (000s)	\$138	\$284	\$584	\$1,052	\$1,548	\$3,606
Annual Impact Total (000s)	\$1,149	\$2,365	\$4,868	\$8,770	\$12,899	\$30,050
Premium Impact (PMPM)	\$0.04	\$0.08	\$0.17	\$0.31	\$0.46	\$0.21

7. DHCFP is required to assess the effect of the proposed mandate on cost shifting between private and public payers of health care coverage.

DHCFP does not expect a cost shift between private and public payers of health care coverage.

8. DHCFP is required to assess “the cost to health care consumers of not mandating the benefit in terms of out of pocket costs for treatment or delayed treatment...”

Should H. 2185 be enacted, certain people will experience lower out of pocket costs for those screening tests that are covered under the federal health care reform law and are presently covered at an out-of-pocket cost to the member.

9. DHCFP is required to assess “the effect on the overall cost of the health care delivery system in the commonwealth...”

The overall cost of the health care delivery system in the Commonwealth will increase as a result of the proposed mandate. Note that the analysis conducted by the Division’s actuaries does not estimate the impact on cost avoidance from increasing the rate of CRC screenings.



Endnotes

- ¹ <http://www.cancer.gov/cancertopics/wyntk/colon-and-rectal>
- ² National Cancer Institute, U.S. National Institutes of Health. <http://www.cancer.gov/cancertopics/types/colon-and-rectal>
- ³ The Washington State Health Technology Clinical Committee. 8/15/2008. <http://www.hta.hca.wa.gov/vc.html>
- ⁴ <http://www.mass.gov/legis/bills/house/186/ht02pdf/ht02185.pdf>
- ⁵ <http://consensus.nih.gov/2010/colorectalstatement.htm>
- ⁶ <http://www.kff.org/healthreform/upload/8061.pdf>
- ⁷ <http://www.mass.gov/legis/bills/house/186/ht02pdf/ht02185.pdf>
- ⁸ http://www.acsevents.org/docroot/CRI/content/CRI_2_6X_Colorectal_Cancer_Early_Detection_10.asp?sitearea=&level=
- ⁹ Source: American Cancer Society. For more information on racial disparities in colorectal cancer see SEER Cancer Statistics Review 1975-2
- ¹⁰ http://www.cancer.org/docroot/AA/content/AA_1_2_ACS_Fact_Sheet.asp
- ¹¹ <http://www.nature.com/ajg/journal/v104/n3/abs/ajg2009104a.html>
- ¹² <http://www.gi.org/media/releases/ACG2009CRCGuideline.pdf>
- ¹³ The ACG guideline on colorectal cancer screening was published in the March 2009 issue of The American Journal of Gastroenterology.
- ¹⁴ http://www.aetna.com/cpb/medical/data/500_599/0516.html
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- ¹⁷ <http://www.mass.gov/legis/bills/house/186/ht02pdf/ht02185.pdf>
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- ²⁰ Decision Memo for Screening Computed Tomography Colonography (CTC) for Colorectal Cancer (CAG-00396N), Centers for Medicare and Medicaid Services (CMS). <http://www.cms.gov/mcd/viewdecisionmemo.asp?from2=viewdecisionmemo.asp&id=220&>
- ²¹ Perspective. CMS's Landmark Decision on CT Colonography – Examining the Relevant Data Sanket S. Dhruva, M.D., Steve E. Phurrough, M.D., M.P.A., Marcel E. Salive, M.D., M.P.H., and Rita F. Redberg, M.D., M.Sc. *N Engl J Med* 2009; 360:2699-2701 June 25, 2009 <http://www.nejm.org/doi/full/10.1056/NEJMp0904408>
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- ²⁵ Health Technology Clinical Committee. http://www.hta.hca.wa.gov/documents/decision_finding_vc_final_090308.pdf
- ²⁶ Professor of Medicine and Health Care Policy at Harvard Medical School and Professor of Health Policy and Management at the Harvard School of Public Health.
- ²⁷ Wilkins T, and Reynolds PL, "Colorectal cancer: a summary of the evidence for screening and prevention," *American Family Physician*, 2008 Dec. 15; 78(12): 1385-92.
- ²⁸ Table 5 and p. 25 in Holden DJ and others Enhancing the Use and Quality of Colorectal Cancer Screening. Evidence Report/Technology Assessment No.190. Prepared by the RTI International–University of North Carolina Evidence-based Practice Center, for the Agency for Healthcare Research and Quality, February 2010.
- ²⁹ See a lengthy discussion of evidence for alternative approaches in Holden DJ, and others, Enhancing the Use and Quality of Colorectal Cancer Screening AHRQ report, February 2010.
- ³⁰ The MHQP is a "coalition of physicians, hospitals, health plans, purchasers, consumers, academics, and government agencies" to promote health care quality; <http://www.mhqp.org/aboutus/aboutus.asp>
- ³¹ Levin B, and others, "Screening and Surveillance for the Early Detection of Colorectal Cancer and Adenomatous Polyps," 2008, A Joint Guideline from the American Cancer Society, the US Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology, *CA: A Cancer Journal for Clinicians*; 58: 130-160, p. 132.



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- ³⁵ Levin B, and others, *supra*.
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- ³⁷ Whitlock EP, and others, "Screening for Colorectal Cancer: A Targeted, Updated Systematic Review for the U.S. Preventive Services Task Force," *Annals of Internal Medicine*, November 4, 2008, vol. 149 no. 9, 638-658.
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- ⁴⁴ The study, "Fecal Occult Blood Testing Beliefs and Practices of U.S. Primary Care Physicians: Serious Deviations from Evidence-Based Recommendations," is published online by the *Journal of General Internal Medicine* at <http://www.springerlink.com/content/p7q4n4114510574t/fulltext.pdf>
- ⁴⁵ <http://www.biomedcentral.com/1471-2296/10/37>. A multilevel intervention to promote colorectal cancer screening among community health center patients: results of a pilot study.





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DIVISION OF
Health Care
Finance and Policy

Appendix

**Actuarial Assessment of House Bill 2185:
An Act Ensuring Access to
Life-Saving Colorectal Cancer Screenings**

**Actuarial Assessment of House Bill 2185:
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Life-Saving Colorectal Cancer Screenings**

Prepared for

**Commonwealth of Massachusetts
Division of Health Care Finance and Policy**

Prepared by

Compass Health Analytics, Inc.

May 17, 2010



**Actuarial Assessment of House Bill 2185:
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Appendix A: Comparison of ACS and Other Guidelines for CRC Screening Options **17**

This report was prepared by Lars Loren, JD, James Highland, PhD, MHSA, Lisa Manderson, ASA, MAAA, and Joshua Roberts.

**Actuarial Assessment of House Bill 2185:
An Act Ensuring Access to
Life-Saving Colorectal Cancer Screenings**

EXECUTIVE SUMMARY

House Bill 2185, before the 2009-2010 session of the Massachusetts Legislature, mandates coverage for colorectal cancer screening procedures by health insurance plans regulated by the Commonwealth. The Massachusetts Division of Health Care Finance and Policy (the Division) engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect that enactment of the bill would have on the cost of health care insurance in Massachusetts.

Background

H.B. 2185 requires fully-insured health plans and plans operated for state employees to cover colorectal cancer (CRC) screening procedures, defined by the current colorectal cancer screening guidelines of the American Cancer Society (ACS), for asymptomatic persons who are at least 50 years of age; or who are less than 50 years and at high risk for colorectal cancer. The bill also requires health insurance plans to keep deductibles and coinsurance in line with deductibles and coinsurance for similar benefits; and to reimburse health-care providers at rates equal to or greater than Medicare rates.

Analysis

Compass estimated the impact of the mandate by taking the following steps:

- Analyze the provisions of the bill and compare the requirements of each to existing statutes and current widely-available benefit plan features.
- Measure insurers' current expenditures on CRC screening, drawing upon the Division's health care claims database.
- Estimate a range for the cost of complying with H.B. 2185's provisions requiring coverage for procedures currently not covered.

- Estimate the impact on premiums for fully-insured commercial plans by accounting for insurers' retention for administrative expense and risk/profit.

Summary results

Colorectal screening is already generally covered by plans used by the overwhelming majority of Massachusetts residents enrolled in fully-insured plans. Furthermore the new federal health reform act (Patient Protection and Affordable Care Act) requires coverage for preventive service, including CRC screening, starting later in 2010.

Comparing the specific procedures required by the American Cancer Society guidelines referenced in H.B. 2185 to the federal standard, and in turn to the current coverage level, identifies only a few procedures that are in H.B. 2185 but not in the federal standard and not covered currently. Most notably, these include coverage for computer tomography colonography as a first resort and for stool DNA testing, both newer procedures.

Evidence that coverage for these procedures will increase screening rates is not available; however the analysis allowed that some increase might occur. The potential for increased utilization of colonography and stool DNA testing, and potentially higher unit costs for stool DNA testing, lead us to assume that colorectal screening costs for the target population (aged 50 to 64) might eventually rise by up to ten percent.

The bill's other provisions, limiting cost-sharing and setting minimum provider reimbursement standards, will have negligible effect, as these requirements are already generally met.

Table ES-1 shows PMPM expenditures for CRC screening, along with estimated values after increases due to the effects of H.B. 2185. The Low scenario assumes the bill has no effect. Furthermore, we assume that because of the relative newness of the procedures contained in the ACS guidelines, but not currently covered widely, and controversy over their effectiveness and/or cost-effectiveness, it would take several years to see the displayed increases fully implemented. Therefore, we introduce the increases gradually, spread over the five-year time horizon of the analysis.

**Table ES-1: 2008 CRC Screening Cost per Member per Month
with Estimates of Effect of H.B. 2185**

	Current	Low	Mid	High
Fully Insured	\$ 4.55	\$ 4.55	\$ 4.71	\$ 4.88
Self Insured	\$ 5.80	\$ 5.80	\$ 6.02	\$ 6.24

The primary focus of our work is estimating the bill’s impact on premiums for fully-insured private plans. The average net premium cost of H.B. 2185 over the next five years for those plans ranges from zero to approximately \$6 million per year, depending on the degree to which coverage for colonography and sDNA testing might increase screening rates. The estimated mean PMPM cost over five years is \$0 to \$0.21. We estimate that H.B.2185 would increase fully-insured premiums up to 0.04 percent on average over five years.

Table ES-2 below summarizes the effect on premium costs for fully-insured plans, averaged over five years.

Table ES-2: Estimated Incremental Impact of H.B 2185 on Premium Costs

	-2011 -	-2012 -	-2013 -	-2014 -	-2015 -	- Mean
Members	2,356,000	2,354,000	2,352,000	2,351,000	2,350,000	
Med Exp Low (\$K) \$	-	\$ -	\$ -	\$ -	\$ -	\$ -
Med Exp Mid (\$K)	506	1,041	2,142	3,859	5,676	2,644
Med Exp High (\$K)	1,011	2,081	4,283	7,718	11,351	5,289
Premium Low (\$K) \$	-	\$ -	\$ -	\$ -	\$ -	\$ -
Premium Mid (\$K)	574	1,182	2,434	4,385	6,449	3,005
Premium High (\$K)	1,149	2,365	4,868	8,770	12,899	6,010
Low PMPM \$	-	\$ -	\$ -	\$ -	\$ -	\$ -
Mid PMPM	0.02	0.04	0.09	0.16	0.23	0.11
High PMPM	0.04	0.08	0.17	0.31	0.46	0.21
Est Mo. Premium \$	442	\$ 468	\$ 496	\$ 526	\$ 558	\$ 498
Premium % Rise Low	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Premium % Rise Mid	0.00%	0.01%	0.02%	0.03%	0.04%	0.02%
Premium % Rise High	0.01%	0.02%	0.03%	0.06%	0.08%	0.04%

**Actuarial Assessment of House Bill 2185:
An Act Ensuring Access to
Life-Saving Colorectal Cancer Screenings**

1. INTRODUCTION

House Bill 2185, before the 2009-2010 session of the Massachusetts Legislature, mandates coverage for colorectal cancer (CRC) screening procedures by health insurance plans regulated by the Commonwealth. The Massachusetts Division of Health Care Finance and Policy (the Division) engaged Compass Health Analytics, Inc. to provide an actuarial estimate of the effect that enactment of the bill would have on the cost of health care insurance in Massachusetts.

Assessing the cost impact entails analyzing the incremental effect of the bill on spending for insurance plans subject to the proposed law. This in turn requires estimating spending under the provisions of the proposed law and comparing that projection 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 discusses important considerations in translating H.B. 2185's language into estimates of its incremental impact on health care costs. Section 4 describes the basic methodology used for the calculations in Section 5, which steps through the analysis and its results.

2. INTERPRETATION OF H.B. 2185

Interpreting H.B. 2185 entails identifying the insured populations it covers and the benefit requirements it adds beyond existing mandates. The Division's report, to which this actuarial analysis is attached, contains more detailed descriptions of the provisions and an analysis of the efficacy of the proposed procedures. This analysis will focus on the financial implications of the mandate.

2.1 Insurance entities subject to H.B. 2185

H.B. 2185 amends the statutes that regulate insurers providing health insurance in Massachusetts. The bill has the following five sections, each addressing statutes dealing with a particular type of health insurance policy:

- Section 1: Accident and sickness insurance policies (creating G.L. c. 175, § 110N)
- Section 2: Contracts with non-profit hospital service corporations (creating G.L. c. 176A, § 8BB)
- Section 3: Certificates under medical service agreements (creating G.L. c. 176B, § 4BB)
- Section 4: Health maintenance contracts (creating G.L. c. 176G, § 4T)
- Section 5: Plans operated by the Group Insurance Commission (GIC) for the benefit of state, and participating county and local, employees (creating G.L. c. 32A, § 24)

The bill covers “people with insurance issued, delivered or renewed within the Commonwealth”, and does not limit its effects to residents. Residents who commute to other states and are insured in those states are generally not included in Massachusetts insurance roles, nor in this analysis.

Health insurance plans operated as self-insured entities (i.e., the employer policy holder retains the risk for medical expenditures and uses the insurer to provide administrative functions) are subject to federal law, and not to state-level mandates. The mandate would apply to GIC self-insured plans, since the Legislature can direct the commissioners of the GIC to follow the mandate.

For the purposes of analyzing the effects of mandate legislation on premiums for commercial fully-insured plans, we generally exclude members who are 65 and older because they are covered by Medicare and federally-regulated “medigap” policies are not subject to state law.

2.2 Services mandated by H.B. 2185

H.B. 2185 requires all health plans to cover colorectal screening examinations and laboratory tests, defined by the current colorectal cancer screening guidelines of the American Cancer Society (ACS), for asymptomatic persons. The mandate applies to persons who are at least 50 years of age, or who are less than 50 and at high risk for colorectal cancer.

Current ACS guidelines¹ include:

- Tests that find polyps and cancer
 - Flexible sigmoidoscopy every five years, or
 - Colonoscopy every ten years, or
 - Double-contrast barium enema every five years, or
 - Computer tomography (CT) colonography every five years
- Stool Tests
 - Annual guaiac-based fecal occult blood test (gFOBT), or
 - Annual fecal immunochemical test (FIT), also called an immunochemical fecal occult blood test (iFOBT)², or
 - Stool DNA (sDNA) test (optimal interval between tests unknown)

2.3 Cost-sharing and provider reimbursement

H.B. 2185 provides that plans may not require patients to meet burdensome criteria to secure coverage. In particular it forbids a plan from requiring a patient to pay an “additional deductible or coinsurance for testing that is greater than an annual deductible or coinsurance established for similar benefits”. It makes no mention of copayments.

¹ American Cancer Society Guidelines for the Early Detection of Cancer

<http://www.cancer.org/docroot/ped/content/ped_2_3x_acs_cancer_detection_guidelines_36.asp>

² For purposes of this analysis, we regard the FIT test as a variety of FOBT, so that when other guidelines say they cover FOBT, we will assume the FIT is an option along with the guaiac-based FOBT. See, e.g., American Cancer Society, “Colorectal Cancer Early Detection”,

<http://www.cancer.org/docroot/cri/content/cri_2_6x_colorectal_cancer_early_detection_10.asp>, or

.National Cancer Institute, “New Fecal Occult Blood Test (FOBT) Promising for Detection of Colon Cancer”, <<http://www.cancer.gov/cancertopics/screening/colon-and-rectal/FOBT0907>>.

Finally, the bill requires insurers to reimburse providers for the mandated procedures at a rate “equal to or greater than reimbursement to health care providers provided under Title XVII of the Social Security Act (Medicare)”.

2.4 Existing colorectal cancer screening benefit mandates

We found no existing state or federal statute requiring insurers to cover colorectal cancer screening explicitly within the terms of the statute. However, the 2010 federal health care reform law, the Patient Protection and Affordable Care Act (PPACA), will require plans to cover preventive care, and refers to guidelines that include standards for colorectal cancer screening.

The PPACA requires health plans, with some exceptions, to provide coverage for, and to not impose any cost-sharing requirements on, “evidence-based items or services that have in effect a rating of ‘A’ or ‘B’ in the current recommendations of the United States Preventive Services Task Force”.³ The Task Force recommends (with an ‘A’ rating), for adults age 50 to 75 years, screening for colorectal cancer using:

- Annual fecal occult blood testing (FOBT)
- Flexible sigmoidoscopy every 5 years (with annual FOBT), or
- Colonoscopy every 10 years.⁴

Note this recommendation excludes tests included in the ACS guidelines, including barium enemas⁵, colonography, and sDNA testing, and limits the age range of candidate patients.

³ Title I, Subtitle A (Immediate Improvements in Health Care Coverage for All Americans), Part A (Individual and Group Market Reforms), Subpart II, enacting Section 2713. Section 1004 makes the subtitle effective for plan years beginning after 6 months after the date of enactment.

⁴ Agency for Healthcare Research and Quality, U.S. Preventive Services Task Force, Screening for Colorectal Cancer, <<http://www.ahrq.gov/clinic/uspstf/uspscolo.htm>>.

⁵ Barium enemas will not play a role in the analysis. They are generally covered currently, rarer than colonoscopies in the Division’s claim data, and appear to be increasingly uncommon. See, e.g., Bernard Levin et al., “Screening and Surveillance for the Early Detection of Colorectal Cancer and Adenomatous Polyps,” 2008, A Joint Guideline from the American Cancer Society, the US Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology, *CA Cancer J Clin*; 58: 130-160, p.132.

3. FACTORS AFFECTING THE ANALYSIS

Several issues arise in translating the provisions of H.B. 2185 and existing law discussed in Section 2 into an analysis of incremental cost.

3.1 Mandated procedures vs. current coverage

Current coverage levels

Even without considering the effect of H.B. 2185 or the new federal mandate, coverage for colorectal screening is largely in place among Massachusetts health plans. Responses to a survey of plans by the Division indicate that all plans cover colonoscopy, sigmoidoscopy, and fecal occult blood testing (FOBT). Most plans refer to the standards of the Massachusetts Health Quality Partners (MHQP), which include:

- Colonoscopy at age 50 and then every 10 years, or
- Annual fecal occult blood test (FOBT) plus sigmoidoscopy every 5 years, or
- Double-contrast barium enema every 5 years, or
- Annual FOBT.

For the plans covering the majority of Massachusetts members, coverage for colonography is limited to cases where a colonoscopy cannot be completed. Coverage for sDNA testing, included in the ACS-recommended procedures, is generally absent. Note that the GIC did not provide information on current coverage. GIC plans generally provide coverage at least on par with the average commercial benefits.

Data from the Division's all-payer claim database confirm coverage for CRC screening. Reimbursement amounts appear in Section 5 of this report. The Division's data contain very few paid claims for colonography.

Appendix A compares screening procedures under the ACS guidelines to those listed under other guidelines, and to current coverage and claim data.

Because coverage for CRC screening is largely in place, the incremental effect of H.B. 2185 on the procedures for which insurers will pay will be limited. Examination of the comparison in Appendix A makes clear that the only differences between the ACS guidelines and current coverage for most members are the extent to which colonography is used as a potential first resort, and the use of sDNA.

Colonography

A requirement that plans cover colonography regardless of whether the patient could complete a colonoscopy might affect treatment costs in two ways. First, some patients might prefer the colonography procedure, despite its disadvantages, and would shift to that procedure from the more invasive colonoscopy. Second, the availability of colonography might increase overall screening rates, i.e., utilization.

For purposes of this analysis, we will not assume an increase in per-procedure costs solely due to a shift from colonoscopy to colonography. The tradeoff in total costs to insurers among varieties of CRC screening, in particular between colonoscopy and colonography, is complicated, involving not only the base procedure cost, but also the difference in recommended intervals, the need for anesthesia, the risk of complications, and the need for follow-up procedures.⁶ Evaluation of the relative cost of the various potential procedure sequences is beyond the scope of this analysis, and we assume the cost per screening procedure for colonography and colonoscopy is roughly similar and not a factor in cost impact of the bill.

Note that H.B. 2185 invokes the ACS guidelines as a set of alternative treatments, and an insurer might argue that it meets the guidelines if it provides coverage for at least one of the alternatives appropriate for each member. If this argument prevails, it might limit the ability of a member to choose among the ACS options, and specifically to choose colonography if he or she can successfully complete a colonoscopy. We cannot know at

⁶ See, for example, Jadvar, Hossein, "Is Computed Tomography Colonography Cost-Effective for Screening Colon Cancer and Aortic Aneurysm in the Medicare Population?", <<http://www.medscape.com/viewarticle/709262>>.

this time whether insurance regulations will allow the insurer to choose not to reimburse colonography when colonoscopy is an option. For purposes of this analysis, we will assume the bill will be interpreted less narrowly and insurers will have to cover all alternatives.

If we interpret H.B. 2185 as either allowing colonography as a first choice or loosening the rules that make it available even when colonoscopy is an option, the bill might have the effect of allowing more people to feel comfortable with CRC screening and therefore lead to higher screening rates. We have no data on the effect on screening rates of the availability of colonography, but will assume it might increase utilization of screening procedures (other than FOBTs) by a maximum of ten percent. This increase in screening rates, and not in per-procedure costs, is the only factor related to colonography influencing the estimate of the bill's cost.

Furthermore we assume that any increase in colonographic screening rates will be solely among the general population aged 50 to 64 years. Screening required by H.B. 2185 for younger people applies to those at risk and the choice between procedures is more likely to be driven by factors other than patient preference.

sDNA

Stool DNA (sDNA) testing is generally not currently covered. According to responses to the Division's survey, most insurers regard it as not yet proven. It is not yet approved by the FDA.⁷ The ACS guidelines indicate the optimal interval between sDNA tests is unknown.

As noted above, the ACS guidelines allow for a set of alternatives, insurers will maintain some degree of review for medical efficacy, and it is unlikely invasiveness or other personal preference issues will drive patients toward use of a particular stool test. Nonetheless, the sDNA test may prove more effective, and more expensive, than other

⁷ See, e.g., <<http://www.mayoclinic.com/health/dna-stool-test/MY00623>>.

stool tests, and we will allow that it may replace some of these tests over time. We will include the potential effect of increased use of this tool in our estimates of potential cost increases.

3.2 Cost-sharing provisions

H.B. 2185 forbids a plan from requiring a patient to pay an “additional deductible or coinsurance for testing that is greater than an annual deductible or coinsurance established for similar benefits”. Assuming common definitions for deductible (an annual amount of money patients pay for services, before any amount is paid by the insurer) and coinsurance (the percentage of provider reimbursement paid by the patient, e.g., 20 percent, typically up to a plan-year maximum dollar limit), the bill makes no mention of the third common element of patient cost-sharing: copayments (per-visit or per-procedure payments the patient makes to the provider).

Responses to the Division’s survey indicate that many plans, and those covering the majority of members, have no cost-sharing requirements for preventive procedures, including colorectal cancer screening. And while some plans may still have cost-sharing requirements, even for those, survey responses indicated that cost-sharing requirements for CRC screening are no more burdensome than the corresponding requirements for similar benefits. Therefore we assume there will be no additional cost to premium payers due to this provision of H.B 2185.

Furthermore, the federal reform act (PPACA) eliminates cost-sharing entirely for identified preventive services, including most of those in the ACS CRC screening guidelines. Even if the cost-sharing standard in H.B. 2185 differed from those in current benefit packages, the federal law has already established a new standard higher than that proposed in H.B. 2185, and therefore H.B. 2185 will have no effect on cost-sharing.

3.3 Provider reimbursement

H.B. 2185 requires insurers to reimburse providers for the mandated procedures at a rate equal to or greater than what Medicare pays.

Responses to the Division's survey indicate that most payments already exceed Medicare rates. The two largest plans state that payments use Medicare as a benchmark and most physician reimbursements are above Medicare rates (i.e., the plans use the Medicare resource-based relative value scale, RBRVS, values, but use a higher dollar multiplier that raise rates above Medicare levels in most cases).

Some providers are reimbursed on the basis of various performance arrangements including shared risk arrangements and isolating the charge for one procedure may not be useful. We will assume the bill's authors do not intend to interfere with payment arrangements that attempt to move beyond fee-for-service.

According to the Division's 2008 claim data, the average payment for most common colonoscopy procedures was between \$600 and \$800, varying by payer and the complexity of the procedure. In contrast, the 2008 national average Medicare rate was between \$250 and \$550, and would vary depending on several factors including place of service (i.e. facility vs. non-facility) and region.⁸ This difference is confirmed by other sources.⁹ While we cannot rule out that some Massachusetts commercial payments may have slipped below the Medicare limits, most are likely well above. Therefore we assume that the effect of the provider reimbursement provision of H.B. 2185 is negligible.

⁸ See, e.g., "Upper GI/Colonoscopy Reimbursement Facts – 2008", <http://www.ethiconendo.com/docs/2008Upper_GI_Colonoscopy1_rev_1.pdf>.

⁹ See, e.g., Burkhardt, J., et. al., "Variation in Charges and Reimbursement for Colorectal Cancer Screening Procedures", <<http://gateway.nlm.nih.gov/MeetingAbstracts/ma?f=103624474.html>>, finding that commercial claims "reimbursed a much larger proportion of a much larger amount for both flexible sigmoidoscopy and colonoscopy. Payments to commercial providers were nearly three times greater than to Medicare or M2 providers".

4. METHODOLOGY

4.1 Analysis steps

Compass estimated the impact of H.B. 2185 with the following steps:

- Estimate the populations covered by the mandate; i.e., identify the types of policies affected and estimate the number of covered individuals
- Measure past use and insurers' expenditures for CRC screening procedures
- Estimate (ranges for) the additional cost for screening procedures if the bill passes
- Estimate changes in per member cost over the next 5 years
- Estimate the impact on premiums by accounting for insurers' retention

4.2 Data sources

The primary data sources used in the analysis were:

- Interviews with legislative and Division staff regarding legislative intent
- Government reports and data and academic literature, cited as appropriate
- Claims: The Division provided Massachusetts data from its all-payer claim database for claims containing any colorectal cancer screening services for most private plans
- Membership data: The Division provided membership data for the plans represented in the all-payer claim data. We also used other studies prepared for the Division, supplemented with U.S. Census data to derive trends by age group

The step-by-step description of the estimation process below addresses limitations in some of these sources.

5. ANALYSIS

5.1 Insured population affected by the mandate

Table 1 shows the number of people potentially affected by the mandate. Self-insured populations not subject to the mandate are included only for reference. Estimates of the

impact of the bill are derived below by applying the fully insured population membership numbers to estimated PMPM values derived in part from the Division’s claim database.¹⁰ This analysis does not include individuals with Medicare coverage and federally-regulated “medigap” policies. We have excluded populations over age 64.

Table 1: Projected Membership

	2011	2012	2013	2014	201
Fully Insured	2,356,000	2,354,000	2,353,000	2,351,000	2,350,00
Self Insured GIC	198,000	198,000	198,000	198,000	197,000
Other Self Insured	1,899,000	1,897,000	1,896,000	1,895,000	1,894,00
Commercial Total	4,453,000	4,449,000	4,447,000	4,444,000	4,441,00

5.2 Claim costs for colorectal cancer screening procedures

Using carrier claim data, provided by the Division, we measured the amount paid per member for 2008 claims for CRC screening procedures. Table 2 provides a brief summary, showing the per-member-per-month dollars paid for 2008.¹¹ As noted above, self-insured plans are, in general, not subject to H.B. 2185; however we will use the PMPM costs for self-insured plans to estimate part of the effect of the bill on GIC plans.

¹⁰ The Division’s membership data, representing the plans contributing to its all-payer claim database, contains 2.9 million, of which 1.7 million are fully-insured and 1.2 million self-insured. Non-residents who work in Massachusetts and are insured by policies issued in Massachusetts are not included in the Division’s count. They may, however, be present in some of the membership numbers gathered from insurance data, and so the member counts in the analysis may include insured non-residents. H.B. 2185 effectively applies to insurance regulated by (issued in) Massachusetts, and Massachusetts residents who commute to other states and are insured in those states are generally not included in insurance roles. As a cross-reference, according to the Kaiser Family Foundation, approximately 4.1 million Massachusetts residents are covered under non-government health plans. Kaiser Family Foundation, “Massachusetts: Health Insurance Coverage of the Total Population, states (2007-2008)”, accessed 1/26/10, <<http://www.statehealthfacts.org/profileind.jsp?ind=125&cat=3&rgn=23>>

¹¹ Note age-level lines on Table 2 express the ratio between the cost of services for the age subgroup and the number of members in the age subgroup.

Table 2: 2008 Colorectal Screening Cost per Member per Month

Fully Insured	
Age 50-64	\$ 14.48
Age 0-49	\$ 1.65
Total	\$ 4.55
Self Insured	
Age 50-64	\$ 17.31
Age 0-49	\$ 1.94
Total	\$ 5.80

We attempted to isolate screening procedures for asymptomatic patients from tests used for patients with symptoms, however screening procedure coding rules are complex and we must allow for some uncertainty in these values.

5.3 Changes in CRC screening costs due to H.B. 2185

As discussed in Section 3 above, we allow that increased screening utilization due to coverage of less-invasive procedures such as colonography, and a potential increase in sDNA testing, might lead to an increase in screening costs. Data informing quantification of such a potential increase are not available. We assume an increase could be material but limited, and would vary somewhere between zero and ten percent. As noted in Section 3, we assume the increase would apply only to procedures done for the population aged 50 to 64, meaning the percentage increase, when measured cross the entire population, will appear smaller (zero to seven percent). Furthermore, we assume that because of the relative newness of these procedures and controversy over their effectiveness and/or cost-effectiveness, even in the high-end scenario in which we assume these technologies become more common, it would take several years to see this increase fully implemented. Therefore, we phase-in the increase gradually, spread over the five-year time horizon of the analysis. The accelerating ramp-up pattern assumes that changes in practice patterns, if they were to shift, would start slowly and then gain momentum. Finally, as noted in Section 3, we assume the other provisions of the bill will have a negligible effect on costs.

Applying these assumptions to screening costs and combining the two yields Table 3, expressed in cost per member per month. The PMPM at its current level is displayed, followed by the PMPM that results from application of each of three scenarios, the lowest of which assumes no incremental effect. Note this table shows the non-inflation-adjusted PMPM costs given the full effect of the increase, although it will take effect gradually over the five-year time frame of the analysis.¹²

Table 3: CRC Screening Cost per Member per Month after Change Factors (in 2008 dollars)

	Current	Low	Mid	High
Fully Insured	\$ 4.55	\$ 4.55	\$ 4.71	\$ 4.88
Self Insured	\$ 5.80	\$ 5.80	\$ 6.02	\$ 6.24

5.4 Increase in covered costs to be paid by health insurers

Applying the estimated increase in per-member per-month costs over current levels, as shown in Table 3, to the projected annual insured membership for the next five years yields the range of estimates in Tables 4A for fully-insured plans. The table reflects changes in projected membership and an assumption of three percent per year¹³ for inflation in service cost (over the 2008 base year for costs reflected in previous tables).

Table 4A: Estimated Cost of Mandated Services – Fully-insured Plans

	-2011 -	-2012 -	-2013 -	-2014 -	-2015 -	- Total
Members	2,356,000	2,354,000	2,352,000	2,351,000	2,350,000	
Low estimate (\$K)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mid estimate (\$K)	506	1,041	2,142	3,859	5,676	13,222
High estimate (\$K)	1,011	2,081	4,283	7,718	11,351	26,444

¹² The PMPM costs in this report are expressed as the ratio of costs and the entire membership under age 65. However, over the five-year timeframe of the analysis, the portion of the under-65 population falling into the 50-64 range will grow, probably increasing the post-mandate PMPM slightly more. We examined the projected increase in the size of the 50-64 population and the effect of that increase is immaterial relative to the variation in the estimates due to other factors.

¹³ Roughly the 3.5 percent trend reported for HMO's in www.mass.gov/lhqcc/.../2009_04_01_Trends_for_Fully-Insured_HMOs.doc and <http://www.mass.gov/Eoca/docs/doi/Consumer/MAHMOTrendReport.pdf>.

Applying the PMPM changes to the fully- and self-insured membership components of the GIC plans, we derive a similar set of values, shown below in Table 4B. Note the small GIC fully-insured membership is also included in the general fully-insured results.

Table 4B: Estimated Cost of Mandated Services – GIC Plans

	-2011 - 223,000	-2012 - 223,000	-2013 - 223,000	-2014 - 223,000	-2015 - 222,000	- Total
Members						
Low estimate (\$K) \$	-	\$ -	\$ -	\$ -	\$ -	\$ -
Mid estimate (\$K)	62	127	262	473	692	1,616
High estimate (\$K)	124	255	524	945	1,385	3,233

5.5 Effect of the mandate on health insurance premiums

To convert medical cost estimates to premiums, we added insurer retention, i.e., the portion of premiums that represent administration costs and profit for bearing risk on covered members. Using historical retention data, we estimated a retention ratio of approximately 12 percent. Table 5 displays the resulting net effect on premiums for fully-insured plans, showing the net increase measured on a per-member per-month (PMPM) basis and an increase as a percentage of estimated premiums.

Table 5: Estimated Incremental Impact of H.B. 2185 on Fully-Insured Plan Premiums

	-2011 - 2,356,000	-2012 - 2,354,000	-2013 - 2,352,000	-2014 - 2,351,000	-2015 - 2,350,000	- Mean
Members						
Med Exp Low (\$K) \$	-	\$ -	\$ -	\$ -	\$ -	\$ -
Med Exp Mid (\$K)	506	1,041	2,142	3,859	5,676	2,644
Med Exp High (\$K)	1,011	2,081	4,283	7,718	11,351	5,289
Premium Low (\$K) \$	-	\$ -	\$ -	\$ -	\$ -	\$ -
Premium Mid (\$K)	574	1,182	2,434	4,385	6,449	3,005
Premium High (\$K)	1,149	2,365	4,868	8,770	12,899	6,010
Low PMPM \$	-	\$ -	\$ -	\$ -	\$ -	\$ -
Mid PMPM	0.02	0.04	0.09	0.16	0.23	0.11
High PMPM	0.04	0.08	0.17	0.31	0.46	0.21
Est Mo. Premium \$	442	\$ 468	\$ 496	\$ 526	\$ 558	\$ 498
Premium % Rise Low	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Premium % Rise Mid	0.00%	0.01%	0.02%	0.03%	0.04%	0.02%
Premium % Rise High	0.01%	0.02%	0.03%	0.06%	0.08%	0.04%

CONCLUSION

For fully-insured plans, the estimated mean PMPM cost of the mandate provision of H.B. 2185 over five years is \$0.00 in the low scenario to \$0.21 in the high scenario. We estimate that H.B.2185 would increase premiums by up to 0.04 percent on average over the five-year period. Analysis of the cost-effectiveness of this additional screening is beyond the scope of this analysis, but to the extent that CRC screening is cost-effective, this cost increase would be balanced by benefits in the form of early detection.

Because H.B. 2185 addresses procedures already largely covered by insurers, the effect of the bill is limited, especially compared to the large amount of money spent on colorectal screening. Incremental costs estimated in this analysis stem solely from the inclusion of colonography and sDNA testing in the mandated benefits. If regulators interpret the ACS guidelines in such a way that existing coverage fully meets them, the cost of the bill will be at the low end of the estimate, that is, zero.

APPENDICES

Appendix A: Comparison of ACS and Other Guidelines for Colorectal Cancer Screening Options

Appendix A: Comparison of ACS and Other Guidelines for CRC Screening Options

American Cancer Society	US Preventive Service Force (cited in PPAC)	Massachusetts Health Partners (MHQP)	Insurer survey responses	Aspayer claim data
Testing options that find polyps and cancer				
Flexible sigmoidoscopy every 5 years	Sigmoidoscopy every 5 years (with annual FOBT)	Annual FOBT plus sigmoidoscopy every 5 years	Covered, as often as every 5 years	High count of procedures in the claim data
Colonoscopy every 10 years	Colonoscopy every 10 years	Colonoscopy at 50, then every 10 years	Covered	High count of procedures in the claim data
Double-contrast barium enema every 5 years	Not listed	Double-contrast barium enema every 5 years	Covered as often as every 5 years; most plans follow MHQP guidelines	Moderate count (2-3 thousand) in the claim data
CT colonography every 5 years	Not listed	Not listed	For plans covering the vast majority of members, only covered when colonoscopy cannot be completed	Very rare in the claim data
Stool testing options				
Annual guaiac-based fecal occult blood test (gFOBT)	Annual FOBT	Annual FOBT	Annual FOBT covered	High count of procedures in the claim data
Annual fecal immunochemical test (FIT, or iFOBT)	Annual FOBT	Annual FOBT	Annual FOBT covered	Moderate count of procedures in the claim data
Stool DNA (sDNA) test (optimal interval unknown)	Not listed	Not listed	Not covered	Very rare in the claim data

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