

**CENTER FOR HEALTH  
INFORMATION AND ANALYSIS**

---

**MANDATED BENEFIT REVIEW OF H.536/S.499  
SUBMITTED TO THE 190<sup>TH</sup> GENERAL COURT:  
AN ACT RELATIVE TO ADVANCING  
CONTRACEPTIVE COVERAGE AND ECONOMIC  
SECURITY IN OUR STATE (ACCESS)**

---

**OCTOBER 2017**





**Center for  
Health Information and Analysis**

**Mandated Benefit Review of  
Senate Bill 499 and House Bill 536  
Submitted to the 190<sup>th</sup> General Court:  
An Act relative to advancing contraceptive coverage and  
economic security in our state (ACCESS).**

**October 2017**



---

## Table of Contents

1.0	Benefit Mandate Overview: S.B. 499/H.B. 536: An Act Relative to Advancing Contraceptive Coverage and Economic Security in Our State .....	1
1.1	History of the Bill .....	1
1.2	What Does the Bill Propose? .....	1
1.3	Medical Efficacy of S.B. 499.....	2
1.4	Current Coverage.....	2
1.5	Cost of Implementing the Bill.....	3
1.6	Plans Affected by the Proposed Benefit Mandate.....	3
1.7	Plans Not Affected by the Proposed Benefit Mandate .....	3
1.8	Hormone Replacement Therapy .....	3
2.0	Medical Efficacy Assessment .....	4
2.1	Contraceptive Services .....	4
2.2	Medical Effectiveness of Contraception .....	5
2.3	The Role of Access .....	7
2.4	Impact of Dispensing a 12-Month Supply of Contraceptives.....	9
2.5	Conclusion.....	9
	Endnotes.....	11

## **1.0 Benefit Mandate Overview: S.B. 499/H.B. 536: An Act Relative to Advancing Contraceptive Coverage and Economic Security in Our State**

### **1.1 History of the Bill**

The Joint Committee on Financial Services referred Senate Bill (S.B.) 499, “An Act relative to advancing contraceptive coverage and economic security in our state (ACCESS),” sponsored by Senator Harriette L. Chandler in the 190<sup>th</sup> General Court, to the Center for Health Information and Analysis (CHIA) for review.<sup>1</sup> The bill is identical to House Bill (H.B.) 536,<sup>2</sup> sponsored by Representative Patricia A. Haddard and Representative John W. Scibak. Therefore the two bills will be referenced as one (S.B. 499). Massachusetts General Laws, chapter 3, section 38C requires CHIA to review and evaluate the potential fiscal impact of each mandated benefit bill referred to the agency by a legislative committee.

### **1.2 What Does the Bill Propose?**

S.B. 499,<sup>3</sup> as submitted in the 190<sup>th</sup> General Court, requires coverage of certain drugs, devices, procedures, and services without member cost sharing. The bill overlaps significantly with the contraception requirements of the Affordable Care Act (ACA), although S.B. 499 requires coverage for additional contraceptives without cost sharing and a full year’s supply of contraceptives in a single dispensing.

In summary, S.B. 499 requires carriers to provide the following:

- For Food and Drug Administration (FDA)-approved oral contraceptive drugs, devices, or products, with more than one therapeutic equivalent, for each group of equivalents, coverage, without cost sharing, of one of the therapeutic equivalents in that group
- For FDA-approved oral contraceptives without a therapeutic equivalent, coverage of the drug is not required, except when recommended by a provider, subject to carrier utilization review, in which case it will be covered without cost sharing.
- Coverage of a 12-month supply of prescription contraception after a 3-month trial.
- Coverage of all FDA-approved emergency contraception (EC).
- Coverage of voluntary female sterilization procedures.
- Coverage of patient education and counseling on contraception.
- Coverage of follow-up services related to covered contraceptive drugs, devices, products, and procedures.

In addition, S.B. 499 prohibits unreasonable restrictions or delays in coverage, and exempts employers that are churches or qualified church-controlled organizations. It does not require coverage for male condoms.

### **1.3 Medical Efficacy of S.B. 499**

In general, when used correctly and consistently, contraceptives are effective at preventing unintended pregnancies and related negative health impacts on women and children.<sup>4</sup> Contraceptive effectiveness varies by method: permanent sterilization is most effective, and the next most effective contraceptives are long-acting reversible methods.<sup>5</sup> Increasing the dispensing period of contraceptives to a year facilitates access and may lead to a more consistent contraceptive use.<sup>6</sup> Consistent and effective use of contraception can be improved by reducing cost and addressing other barriers to access, as well as by providing women with access to methods that are medically appropriate and consistent with their social, cultural, emotional, and sexual lifestyles.<sup>7,8,9</sup>

### **1.4 Current Coverage**

Current Massachusetts law requires carriers to cover outpatient contraceptive services, including “consultations, examinations, procedures and medical services provided on an outpatient basis and related to the use of all contraceptive methods to prevent pregnancy that have been approved by the United States Food and Drug Administration.”<sup>10</sup> Under the ACA, non-grandfathered health insurance plans must fully cover the costs of contraceptive methods and counseling for all women, as prescribed by a healthcare provider.<sup>11</sup> When provided by an in-network provider, these services shall require no patient cost sharing. Coverage must include at least one method from each of the 18 categories<sup>12</sup> of clinician-prescribed contraception for women approved by the FDA, and, if the method covered without cost sharing within a given category is not medically appropriate, the plan must have a mechanism for waiving the cost sharing applicable to a method that is appropriate.<sup>13</sup> Over-the-counter contraception obtained without a prescription, drugs to induce abortions, and sterilization surgery for men are not included in the ACA benefit language. Health plans sponsored by certain exempt religious organizations may not be covered and may require out-of-pocket payment. Some non-profit religious organizations that certify religious objections do not have to contract, arrange, pay, or refer for contraceptive coverage; for these types of organizations, carriers, or third-party administrators may make separate payments for contraceptive services to in-network providers without patient cost sharing.

In responses to a recent survey of insurance carriers in Massachusetts, the majority reported that they cover at least one method of prescribed contraception per FDA category without cost sharing, and one carrier currently covers all prescribed contraceptive methods as well as EC without a prescription. Generic oral contraceptives and single-source brand names (where no generic equivalent is available) are also generally covered without cost sharing, while brand-name oral contraceptives are most often covered and subject to each plan’s pharmacy tier cost

sharing. Some carriers report a small number of religiously exempted groups; members of a portion of these groups do receive contraception coverage under carrier administrative benefits.

### **1.5 Cost of Implementing the Bill**

Requiring coverage for this benefit by fully insured health plans would result in an average annual increase, over five years, to the typical member's monthly health insurance premiums of between \$0.07 PMPM (0.014%) and \$0.20 PMPM (0.042%). The increase is driven largely by the provisions of S.B. 499 requiring that carriers cover at least one drug in each therapeutically equivalent grouping of FDA-approved oral contraceptives without cost sharing, its coverage for ECs with no prescription, and also by its coverage for oral contraception dispensed for a 12-month supply.

The Massachusetts Division of Insurance and the Commonwealth Health Insurance Connector Authority are responsible for determining any potential state liability associated with the proposed mandate under Section 1311 of the ACA.

### **1.6 Plans Affected by the Proposed Benefit Mandate**

S.B. 499 applies to commercial health insurance plans, hospital service corporations, medical service corporations, HMOs, and to both fully and self-insured plans operated by the Group Insurance Commission (GIC) for the benefit of public employees. It applies to plans grandfathered as exempt from the essential health benefit requirements of the ACA. The proposed mandate as drafted affects Medicaid/MassHealth; however, CHIA's analysis does not estimate the potential effect of the mandate on Medicaid expenditures.

### **1.7 Plans Not Affected by the Proposed Benefit Mandate**

This analysis excludes members of commercial fully insured plans over 64 years of age. Self-insured plans (i.e., where the employer or policyholder retains the risk for medical expenses and uses a third-party administrator or insurer only to provide administrative functions), except for those provided by the GIC, are not subject to state-level health insurance mandates. State mandates do not apply to Medicare and Medicare Advantage plans, the benefits for which are determined by or under rules set by the federal government. State mandates also do not apply to other federally funded plans, including TRICARE (covering military personnel and dependents), the Veterans Administration, and the Federal Employee's Health Benefit Plan.

### **1.8 Hormone Replacement Therapy**

S.B. 499, as drafted, would leave untouched the effect of the existing mandate statute on coverage for hormone replacement therapy (HRT). Therefore, the intent of the bill is to have no effect on the use of HRT, or on the quality of patient care or the health status of the population related to HRT.

---

## 2.0 Medical Efficacy Assessment

### 2.1 Contraceptive Services

The United States has an estimated 61 million women ages 15 – 44;<sup>14</sup> of these, 70% are sexually active but do not want to become pregnant.<sup>15</sup> In the United States, nearly half of all pregnancies are estimated to be unintended.<sup>16</sup> Massachusetts’s unintended pregnancy rate in 2010 was 40 per 1,000 women aged 15 – 44.<sup>17</sup> Family planning is one of the major objectives of Healthy People 2020, the set of evidence-based national health promotion and disease prevention goals outlined for the next decade by the U.S. Department of Health and Human Services.<sup>18</sup> According to Healthy People, “Family planning is one of the 10 great public health achievements of the 20th century. The availability of family planning services allows individuals to achieve desired birth spacing and family size and contributes to improved health outcomes for infants, children, and women.”<sup>19</sup>

The benefits of contraception include improved women’s health and well-being, reduced maternal mortality, health benefits for mother and child associated with spacing pregnancy, female workforce engagement, and economic self-sufficiency.<sup>20</sup> Additionally, contraceptive use may decrease menstrual period pain and bleeding, and reduce gynecological disorder risks, including those for ovarian and endometrial cancers.<sup>21</sup> The negative consequences of unintended pregnancies are numerous. They include: delays in initiating prenatal care; the increased risk of tobacco and alcohol use, and physical violence, during pregnancy; premature birth and low birth weight; reduced likelihood of breastfeeding; poor maternal mental health; and lower relationship quality between mother and child.<sup>22,23</sup> Some studies show that children born from an unintended pregnancy may be more likely to suffer from poor physical and mental health in childhood, and may attain lower educational and behavioral outcomes.<sup>24,25,26,27,28,29,30</sup>

Outcomes are worse for unintended pregnancies in teen mothers; 82% of pregnancies among mothers age 15 – 19 are unintended.<sup>31</sup> An adolescent who experiences an unintended pregnancy is less likely to graduate from high school or attain a GED by age 30, and will earn approximately \$3,500 less per year on average than her peers who delay having children; teen fathers experience similarly lower educational achievement and income.<sup>32,33</sup> Teen mothers, on average, receive twice as much federal aid for twice as long as non-parent teens.<sup>34</sup> Finally, children of teenagers have more behavioral problems and lower cognitive abilities than others, on average; in fact, sons of teen mothers are more likely to be incarcerated, while daughters are more likely to become pregnant as teens.<sup>35</sup>

Furthermore, adequate pre-pregnancy planning allows women to receive appropriate preconception care, the importance of which is becoming increasingly evident. Care provided before pregnancy allows providers to reduce the risks of pregnancy to women, as well as some pre-term births and their associated birth defects.<sup>36</sup>

## 2.2 Medical Effectiveness of Contraception

Contraceptive drugs and devices, used consistently and correctly, and paired with appropriate associated examination and consultation services, can play a significant role in family planning. While 30% of women do not need a contraceptive method,<sup>37</sup> 10% of women are at risk of unintended pregnancy but are not using contraception.<sup>38</sup> Of the women not using contraception and at risk of unintended pregnancy, larger percentages are under 20 years of age, have never married, and are black.<sup>39</sup>

While almost half of women with an unintended pregnancy report using some form of contraception,<sup>40</sup> 68% of women at risk of unintended pregnancy use contraception consistently and correctly, and account for only 5% of unintended pregnancies.<sup>41</sup> Proper use of the most effective methods of contraception “virtually eliminates” the risk of unintended pregnancy, while using any method reduces the chances by 85%.<sup>42</sup>

Slightly less than half of pregnancies in the United States each year are unintended; of these, research shows that 95% experienced by women either not using contraception or using it inconsistently.<sup>43</sup> Most women (67%) who use contraception rely on non-permanent methods, while the remainder rely on male or female sterilization.<sup>44</sup>

Success rates depend on either permanency or consistency of use; permanent sterilization methods result in a failure rate of less than 1% with typical use, while other methods vary widely, from 1% failure rates for implants to 28% failure rates for spermicide alone with typical use. However, by preventing unintended pregnancies, “[c]ompared with nonuse, even with a time horizon as short as 1 year, use of any method [of contraception] . . . results in financial savings and health gains.”<sup>45</sup> Table 1, which begins on the following page, summarizes the estimated number of users of each type of contraception and the expected proportion of pregnancies expected for each.



**Table 1: Methods of Birth Control**<sup>46,47,48</sup>

Method	Users # (000s) Percent		Number of Pregnancies Expected Per 100 women <sup>49</sup>	
			Perfect Use	Typical Use
<b>FDA-APPROVED METHODS</b>				
<b>Permanent</b>				
Sterilization Implant for Women (Transcervical Surgical Sterilization Implant)	492 <sup>i</sup>	1.3 <sup>1</sup>	0.05	0.05
Sterilization Surgery for Men	3,084	8.2	0.10	0.15
Sterilization Surgery for Women, Surgical Implant (Transabdominal Surgical Sterilization)	9,443	25.1	0.5 (Tubal Only)	0.5 (Tubal Only)
<b>Implant</b>				
Implantable Rod	492 <sup>1</sup>	1.3 <sup>1</sup>	<1	N/A
Intrauterine Device (IUD) W/Progestin	3,884	10.3	0.2	0.2
IUD Copper			0.6	0.8
<b>Hormonal</b>				
Shot/Injection	1,697	4.5	0.2	6
Oral Contraceptives/Combined Pill, Progestin Only and Extended/Continuous Use	9,720	25.9	0.3	9
Patch	217	0.6	0.3	9
Vaginal Contraceptive Ring	759	2.0	0.3	9
<b>Barrier</b>				
Diaphragm W/Spermicide	133 <sup>ii</sup>	0.4 <sup>2</sup>	6	12
Sponge W/Spermicide			9/20	12/24
Cervical Cap W/Spermicide			N/A	17/23
Male Condom	5,739	15.3	2	18
Female Condom	N/A	N/A	5	21

<sup>i</sup> User number combines permanent sterilization implant and removable implantable rod.

<sup>ii</sup> Also includes female condom, foam, suppository, jelly/cream, and other methods.

Method	Users # (000s) Percent		Number of Pregnancies Expected Per 100 women <sup>49</sup>	
			Perfect Use	Typical Use
Spermicide Alone	N/A	N/A	18	28
<b>Emergency Contraception</b>				
Plan B, Plan B One Step, Next Choice	91	0.2	Prevents pregnancy in 88% who would have otherwise become pregnant	
Ella			Prevents pregnancy in 60 – 70% who would have otherwise become pregnant	
<b>OTHER METHODS</b>				
Withdrawal	1,817	4.8	4	22
Fertility Awareness-Based <sup>iii</sup>	509	1.4	0.4-5	24
No Method, at Risk of Unintended Pregnancy	4,175	N/A	85	85
No Method, Not at Risk	19,126	N/A	N/A	N/A

### 2.3 The Role of Access

For non-permanent means of contraception, consistency of use directly impacts success in preventing unintended pregnancy; in particular, for oral contraceptives (OCPs), use must be continuous to be effective. Barriers to consistent use for OCPs include associated out-of-pocket costs; dispensing restrictions, such as monthly pharmacy visits, which many women find inconvenient; and other access issues.<sup>50,51</sup> Given the efficacy of contraception described in the previous section, to the extent enactment of S.B. 499 would improve access to contraceptives and encourage consistent use, it would have a positive effect on public health.

Overall, insurance coverage is associated with increased use of contraception.<sup>52</sup> Since implementation of the ACA's contraceptive coverage as a preventive service, fewer women have to pay out-of-pocket for contraceptives.<sup>53</sup> Research has shown that when the co-pay for contraceptives has fallen to \$0, contraceptive use has risen among women, and there is an increased probability of these women choosing a long-term contraceptive method above the general increasing trend for these methods.<sup>54</sup> No-cost contraception has been shown to increase use of effective birth control methods, and reduce unintended pregnancy and abortion.<sup>55</sup>

<sup>iii</sup> Includes cervical mucus methods, body temperature methods, and periodic abstinence.

However, in one prospective study that removed financial barriers and offered women their choice of OCPs for three years, many women were still inconsistent in filling their prescriptions.<sup>56</sup> Research indicates that women are less consistent in their contraceptive use when they are not involved in the choice of contraception prescribed by their doctor, and that, to improve consistent use and thus efficacy, addressing women's contraceptive preferences and needs should consider their social, emotional, and sexual lifestyles.<sup>57</sup>

For long-acting reversible contraception (LARC) methods, which are the most effective non-permanent contraceptive methods, the American College of Obstetricians and Gynecologists (ACOG) recommends increasing access to, and removing barriers to providing, contraceptive implants and intrauterine devices (IUDs).<sup>58</sup> These methods are associated with the highest continuation rates of contraceptives, requiring “a single act of motivation for long-term use, eliminating adherence and user dependence from the effectiveness equation.”<sup>59</sup> However, research has found that out-of-pocket costs are a barrier to use, even for privately insured women,<sup>60,61</sup> with one analysis finding that once these barriers were removed, the majority of women choose LARC methods for contraception.<sup>62</sup> These studies, though, were conducted prior to the implementation of the ACA, which has significantly reduced out-of-pocket expenses for these methods and may increase their utilization.<sup>63,64</sup> Therefore, while provisions of S.B. 499 that reduce cost sharing may further improve use, incremental effects on access and use will more likely be attributable to the ACA.

Research on utilization of permanent sterilization focuses most often on the postpartum period (first 6 – 12 months following childbirth), when women are more likely to choose these methods. A study examining women's contraception in this period found that, while 78% preferred either sterilization or LARC, only 30% accessed these methods.<sup>65</sup> These researchers concluded that “[w]omen's contraceptive needs could be better met by counseling about all methods, by reducing cost barriers and by making [LARC and permanent sterilization] available at more sites.”<sup>66</sup> In a study comparing long-term contraceptive choices for women based on insurance status, researchers found that, of women who received a LARC IUD placement or sterilization within one year of pregnancy, those with public insurance (Medicaid) were more likely to choose permanent sterilization over LARC.<sup>67</sup> Other researchers found that the use of sterilization and LARC varied widely geographically, possibly due to “state policies and funding for family planning services, local medical norms surrounding contraceptive practice, and women's and couples' demand or preference for different methods.”<sup>68</sup> These researchers found that women with Medicaid coverage for their delivery were more likely to access female sterilization, LARC, or injectables in the post-partum period than were women with private insurance.<sup>69</sup> Again, however, these studies used data prior to the implementation of the ACA and the mandated expansion of insurance to include permanent sterilization methods for women without cost sharing. It is unclear how the federal mandates for insurance coverage will impact access to these methods or the decisions of women to choose them, or how S.B. 499 would further change utilization of permanent sterilization.

In a review of the public health impact of EC<sup>70</sup> on unintended pregnancy rates, one group of researchers concluded that, while EC is effective in preventing pregnancy following unprotected sex or contraceptive failure, and that use has increased “markedly” where EC is available over-the-counter (OTC), “barriers to availability and use remain.”<sup>71</sup> For example, one study analyzing adolescent access to EC through prescription found that teens were denied access to EC by pharmacists who introduced false barriers to acquiring EC, explained EC availability policies in personal or religious ethical terms, or erroneously informed teens that confidentiality of use was not guaranteed and that their parents must be informed of their use of EC.<sup>72</sup> Other research has shown that, while most but not all pharmacies have EC in stock for immediate access, many provide erroneous information on age restrictions for purchase.<sup>73</sup> While EC is effective at pregnancy prevention, one study concluded that increased access to EC increased the rate of sexually risky behaviors in young people, including unprotected sex and the number of sexual encounters, as well as the rate of sexually transmitted diseases (STDs).<sup>74</sup> However, other research found no overall change in unprotected sexual activity and a decrease in multiple partnerships resulting from increased EC access,<sup>75</sup> and no differences in the rate of STDs between women whose access to EC varied.<sup>76,77</sup> This review did not identify research related to issues of access and insurance coverage in relation to EC.

#### **2.4 Impact of Dispensing a 12-Month Supply of Contraceptives**

Research has shown that receiving more cycles of OCPs at a time is associated with more continuous use of the contraceptive, thus increasing the effectiveness of the medication.<sup>78,79</sup> One study found that women receiving 13 cycles at a time (one year plus one month) were also more likely to receive routine recommended Pap and chlamydia tests and were less likely to have a pregnancy test than women dispensed fewer cycles of medication.<sup>80</sup> Women who receive a year’s supply have been found to be 30% less likely to have an unintended pregnancy compared to women receiving a one – three month supply.<sup>81</sup>

In September 2016, California passed legislation requiring health plans and insurers to cover a 12-month supply of FDA-approved self-administered hormonal contraceptives, such as pills, patches, and vaginal rings. A case study published in May 2017 reported the shift in dispensing patterns was estimated to have resulted in a reduction of 15,000 unintended pregnancies, 2,000 fewer miscarriages, and 7,000 fewer abortions in California, decreasing total net healthcare expenditures by 0.03%.<sup>82</sup>

#### **2.5 Conclusion**

In general, when used correctly and consistently, contraceptives are effective at preventing unintended pregnancies and related negative health impacts on women and children. Contraceptive effectiveness varies by method: permanent sterilization is most effective, and the next most effective contraceptives are long-acting reversible methods. Consistent and effective use of contraception, as well as use of more effective methods, can be improved by reducing cost and other barriers to access, as well as by providing women with access to methods that

are medically appropriate and consistent with their social, cultural, emotional, and sexual lifestyles.

---

## Endnotes

<sup>1</sup> The 190<sup>th</sup> General Court of the Commonwealth of Massachusetts, Senate Bill 499, “An Act advancing contraceptive coverage and economic security in our state (ACCESS).” Accessed 24 October 2017: <https://malegislature.gov/Bills/190/S499>.

<sup>2</sup> The 190<sup>th</sup> General Court of the Commonwealth of Massachusetts, House Bill 536, “An Act advancing contraceptive coverage and economic security in our state (ACCESS).” Accessed 24 October 2017: <https://malegislature.gov/Bills/190/H536>.

<sup>3</sup> The 189<sup>th</sup> General Court of the Commonwealth of Massachusetts, Senate Bill 499, “An Act relative to women’s health and economic equity.” Accessed 12 January 2016: <https://malegislature.gov/Bills/189/Senate/S499>. The bill is identical to House Bill 536, “An Act relative to women’s health and economic equity.” Accessed 12 January 2016: <https://malegislature.gov/Bills/189/House/H536>.

<sup>4</sup> Guttmacher Institute. Contraceptive Use in the United States: Who Needs Contraceptives? Accessed 24 October 2017: <https://www.guttmacher.org/fact-sheet/contraceptive-use-united-states>.

<sup>5</sup> U.S. Food and Drug Administration (FDA). Birth Control Guide. Accessed 24 October 2017: <https://www.fda.gov/downloads/forconsumers/byaudience/forwomen/freepublications/ucm517406.pdf>.

<sup>6</sup> Steenland MW, Rodrigues MI, Marchbanks PA, Curtis KM. How does the number of oral contraceptive pill packs dispensed or prescribed affect continuation and other measures of consistent and correct use? A systematic review. *Contraception*. 2013 May;87(5):605-10. Accessed 27 October 2017: <https://www.ncbi.nlm.nih.gov/pubmed/23040121>.

<sup>7</sup> Phillips KA, Stotland NE, Liang SY, et. al. Out-of-pocket expenditures for oral contraceptives and number of packs per purchase. *J Am Med Womens Assoc*. 2004 Winter;59(1):36-42. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/14768985>.

<sup>8</sup> ACOG, Committee on Gynecologic Practice. Committee Opinion: Over-the-Counter Access to Oral Contraceptives. Number 544. *Obstet Gynecol*. 2012 Dec;120(6):1527-31. Released December 2012 (reaffirmed 2014); accessed 24 October 2017: [http://www.acog.org/Resources\\_And\\_Publications/Committee\\_Opinions/Committee\\_on\\_Gynecologic\\_Practice/Over-the-Counter\\_Access\\_to\\_Oral\\_Contraceptives](http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Gynecologic_Practice/Over-the-Counter_Access_to_Oral_Contraceptives).

<sup>9</sup> Moreau C, Bouyer J, Gilbert F, et. al. Social, demographic and situational characteristics associated with inconsistent use of oral contraceptives: evidence from France. *Perspect Sex Reprod Health*. 2006 Dec;38(4):190-6. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/17162311>.

<sup>10</sup> Massachusetts General Law (M.G.L.) c.175 §47W, c.176A §8W, c.176B §4W, c.176G §4O: Accessed 28 October 2017: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXXII/Chapter175/Section47W>.

<sup>11</sup> Healthcare.gov. Individuals and Families, Health benefits & coverage, Birth control benefits. Accessed 24 October 2017: <https://www.healthcare.gov/coverage/birth-control-benefits/>. See also: Coverage of Certain Preventive Services Under the Affordable Care Act; Final Rules. 26 CFR Part 54, 29 CFR Parts

---

2510 and 2590, 45 CFR Parts 147 and 156. Federal Register 78:127; 2 July 2013. Accessed 24 October 2017: <http://www.gpo.gov/fdsys/pkg/FR-2013-07-02/pdf/2013-15866.pdf>.

<sup>12</sup> Centers for Medicare & Medicaid Services. FAQs about Affordable Care Act Implementation (Part XXVI). Published 11 May 2015; accessed 24 October 2017: [https://www.cms.gov/CCIO/Resources/Fact-Sheets-and-FAQs/Downloads/aca\\_implementation\\_faqs26.pdf](https://www.cms.gov/CCIO/Resources/Fact-Sheets-and-FAQs/Downloads/aca_implementation_faqs26.pdf). FAQ Q4 refers in footnote 12 to the FDA Birth Control Guide:

U.S. Food and Drug Administration (FDA). Birth Control Guide. Accessed 27 October 2017: <https://www.fda.gov/downloads/ForConsumers/ByAudience/ForWomen/FreePublications/UCM517406.pdf>.

The contraceptive methods for women currently identified by the FDA include: (1) sterilization surgery for women; (2) surgical sterilization implant for women; (3) implantable rod; (4) IUD copper; (5) IUD with progestin; (6) shot/injection; (7) oral contraceptives (combined pill); (8) oral contraceptives (progestin only); (9) oral contraceptives extended/continuous use; (10) patch; (11) vaginal contraceptive ring; (12) diaphragm; (13) sponge; (14) cervical cap; (15) female condom; (16) spermicide; (17) emergency contraception (Plan B/Plan B One Step/Next Choice); and (18) emergency contraception (Ella). The FDA Birth Control Guide additionally lists sterilization surgery for men and male condoms, but the HRSA Guidelines exclude services relating to a man's reproductive capacity.

<sup>13</sup> EBSA: FAQs about Affordable Care Act Implementation Part XII. Published 20 February 2013; accessed 24 October 2017: <http://www.dol.gov/ebsa/faqs/faq-aca12.html>.

<sup>14</sup> Daniels K, Daugherty J, Jones J. Current contraceptive status among women aged 15-44: United States, 2011-2013. NCHS Data Brief. 2014 Dec;(173):1-8. Accessed 24 October 2017: <http://i2.cdn.turner.com/cnn/2016/images/10/04/contraceptive.use.stats.pdf>.

<sup>15</sup> Guttmacher Institute. Contraceptive Use in the United States: Who Needs Contraceptives? Accessed 27 October 2017: <https://www.guttmacher.org/fact-sheet/contraceptive-use-united-states#7a>.

<sup>16</sup> Guttmacher Institute. Unintended Pregnancy in the United States. Accessed 27 October 2017: <https://www.guttmacher.org/fact-sheet/unintended-pregnancy-united-states>.

<sup>17</sup> Guttmacher Institute. State Reproductive Health Profile: Massachusetts 2013. Accessed 25 October 2017: <http://www.guttmacher.org/datacenter/profiles/MA.jsp>.

<sup>18</sup> Healthy People 2020. Washington DC. U.S. Department of Health & Human Services. Accessed 25 October 2017: <http://www.healthypeople.gov/>.

<sup>19</sup> Healthy People 2020. 2020 Topics & Objectives: Family Planning. Washington DC. U.S. Department of Health & Human Services. Updated 25 October 2017; accessed 25 October 2017: <http://www.healthypeople.gov/2020/topics-objectives/topic/family-planning?topicid=13>.

<sup>20</sup> American College of Obstetricians and Gynecologists (ACOG), Committee on Healthcare for Underserved Women. Committee Opinion: Access to Contraception. Number 615. Obstet Gynecol. 2015 Jan;125(1):250-5. Released January 2015; accessed 25 October 2017: <http://www.acog.org/Resources->

---

And-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Access-to-Contraception#26.

<sup>21</sup> *Op. cit.* ACOG Committee Opinion: Access to Contraception.

<sup>22</sup> Finer LB, Kost K. Unintended pregnancy rates at the state level. *Perspect Sex Reprod Health*. 2011 Jun;43(2):78-87. Accessed 26 October 2017: <http://onlinelibrary.wiley.com/doi/10.1363/4307811/abstract>.

<sup>23</sup> *Op. cit.* Healthy People 2020. 2020 Topics & Objectives: Family Planning.

<sup>24</sup> David HP. Born unwanted, 35 years later: the Prague study. *Reprod Health Matters*. 2006 May;14(27):181-90. Accessed 25 October 2017: <http://www.jstor.org/stable/3775864>.

<sup>25</sup> Baydar N. Consequences for children of their birth planning status. *Fam Plann Perspect*. 1995 Nov-Dec;27(6):228-34, 245. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/8666086>.

<sup>26</sup> Crissey SR. Effect of Pregnancy Intention on Child Well-Being and Development: Combining Retrospective Reports of Attitude and Contraceptive use. *Popul Res Policy Rev*. 2005 Dec;24(6):593-615. Accessed 25 October 2017: <http://link.springer.com/article/10.1007%2Fs11113-005-5734-1>.

<sup>27</sup> Axinn WG, Barber JS, Thornton A. The long-term impact of parents' childbearing decisions on children's self-esteem. *Demography*. 1998 Nov;35(4):435-43. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/9850468>.

<sup>28</sup> Hummer RA, Hack KA, Raley RK. Retrospective Reports of Pregnancy Wantedness and Child Well-Being in the United States. *J Fam Issues*. 2004 Apr;25(3):404-28. Accessed 25 October 2017: <http://jfi.sagepub.com/content/25/3/404.abstract>.

<sup>29</sup> de La Rochebrochard E, Joshi H. Children born after unplanned pregnancies and cognitive development at 3 years: social differentials in the United Kingdom Millennium Cohort. *Am J Epidemiol*. 2013 Sep 15;178(6):910-20. Accessed 25 October 2017: <http://aje.oxfordjournals.org/content/early/2013/08/04/aje.kwt063.full>.

<sup>30</sup> Myhrman A, Olsén P, Rantakallio P, et. al. Does the wantedness of a pregnancy predict a child's educational attainment? *Fam Plann Perspect*. 1995 May-Jun;27(3):116-9. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/7672102>.

<sup>31</sup> Finer LB, Henshaw SK. Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. *Perspect Sex Reprod Health*. 2006 Jun;38(2):90-6. Accessed 25 October 2017: <https://www.guttmacher.org/pubs/journals/3809006.pdf>.

<sup>32</sup> Hotz VJ, McElroy SW, Sanders SG. Chapter Three: The Impacts of Teenage Childbearing on the Mothers and the Consequences of Those Impacts for Government. In *Kids having kids: Economic costs and social consequences of teen pregnancy* (2nd ed.). Hoffman, S. D., & Maynard, R. A. (Eds.). (2008). Washington, DC: Urban Institute Press. Accessed 25 October 2017: [http://public.econ.duke.edu/~vjh3/e195S/readings/Hotz\\_McElroy\\_Sanders.pdf](http://public.econ.duke.edu/~vjh3/e195S/readings/Hotz_McElroy_Sanders.pdf).



- 
- <sup>33</sup> Hoffman, S. *By the Numbers: The Public Costs of Teen Childbearing*. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy. October 2006. Accessed 25 October 2017: <https://thenationalcampaign.org/resource/numbers>.
- <sup>34</sup> *Op. cit.* Hotz VJ, McElroy SW, Sanders SG.
- <sup>35</sup> Elfenbein DS, Felice ME. Adolescent pregnancy. *Pediatr Clin North Am*. 2003 Aug;50(4):781-800, viii. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/12964694>.
- <sup>36</sup> *Op. cit.* Healthy People 2020. 2020 Topics & Objectives: Family Planning.
- <sup>37</sup> These women do not need contraception because they (or their partner) are infertile; are pregnant, trying to become pregnant, or are postpartum; or are not sexually active.
- Guttmacher Institute. Fact Sheet: Contraceptive Use in the United States, September 2016. Accessed 26 October 2017: [http://www.guttmacher.org/pubs/fb\\_contr\\_use.html](http://www.guttmacher.org/pubs/fb_contr_use.html).
- <sup>38</sup> *Op. cit.* Guttmacher Institute. Fact Sheet: Contraceptive Use in the United States, September 2016.
- <sup>39</sup> Jones J, Mosher W, Daniels K. Current contraceptive use in the United States, 2006-2010, and changes in patterns of use since 1995. *Natl Health Stat Report*. 2012 Oct 18;(60):1-25. Table 3. Current use of a method of contraception by women aged 15–44 years, all women, and women at risk of unintended pregnancy, by selected characteristics: United States, 2006–2010. Accessed 3 February 2016: <http://www.cdc.gov/nchs/data/nhsr/nhsr060.pdf>.
- <sup>40</sup> Burkman RT, Sonnenberg FA. Health Economics of Contraception *Obstet Gynecol Clin North Am*. 2000 Dec;27(4):917-31. Accessed 25 October 2017: <http://www.sciencedirect.com/science/article/pii/S0889854505701777>.
- <sup>41</sup> Guttmacher Institute, Unintended Pregnancy in the United States. September 2016 Fact Sheet. Accessed 27 October 2017: <https://www.guttmacher.org/fact-sheet/unintended-pregnancy-united-states>.
- <sup>42</sup> *Op. cit.* Guttmacher Institute, Unintended Pregnancy in the United States. September 2016 Fact Sheet.
- <sup>43</sup> *Op. cit.* Guttmacher Institute, Unintended Pregnancy in the United States. September 2016 Fact Sheet.
- <sup>44</sup> Guttmacher Institute, Contraceptive Use in the United States. Who needs contraceptives? September 2016 Fact Sheet. Accessed 27 October 2017: <https://www.guttmacher.org/fact-sheet/contraceptive-use-united-states>.
- <sup>45</sup> Sonnenberg FA, Burkman RT, Hagerty CG, et.al. Costs and net health effects of contraceptive methods. *Contraception*. 2004 Jun;69(6):447-59. Accessed 25 October 2017: [http://www.contraceptionjournal.org/article/S0010-7824\(04\)00102-7/abstract](http://www.contraceptionjournal.org/article/S0010-7824(04)00102-7/abstract).
- <sup>46</sup> U.S. Food and Drug Administration (FDA). Birth Control Guide. Accessed 27 October 2017: <https://www.fda.gov/downloads/forconsumers/byaudience/forwomen/freepublications/ucm517406.pdf>.

---

<sup>47</sup> *Op. cit.* Guttmacher Institute. Fact Sheet: Contraceptive Use in the United States. September 2016 Fact Sheet. Contraception Method Choice, Most effective method used in the past month by U.S. women, 2012.

<sup>48</sup> U.S. Centers for Disease Control and Prevention. Effectiveness of Family Planning Methods. Accessed 27 October 2017:  
[http://www.cdc.gov/reproductivehealth/unintendedpregnancy/pdf/contraceptive\\_methods\\_508.pdf](http://www.cdc.gov/reproductivehealth/unintendedpregnancy/pdf/contraceptive_methods_508.pdf).

<sup>49</sup> *Op. cit.* Guttmacher Institute. Fact Sheet: Contraceptive Use in the United States. September 2016 Fact Sheet. Contraceptive Effectiveness, Proportion of women who will become pregnant over one year of use by method.

“Perfect use” denotes effectiveness among couples who use the method both consistently and correctly; “typical use” refers to effectiveness experiences among all couples, including inconsistent and incorrect use. The effectiveness of emergency contraception (EC) is not measured on a one-year basis like other methods EC is estimated to reduce the incidence of pregnancy by approximately 90% when used to prevent pregnancy after one instance of unprotected sex. For sponge, first figure is for women who have not given birth and second is for women who have given birth. Fertility awareness methods includes cervical mucus methods, body temperature methods, and periodic abstinence.

<sup>50</sup> Phillips KA, Stotland NE, Liang SY, et. al. Out-of-pocket expenditures for oral contraceptives and number of packs per purchase. *J Am Med Womens Assoc.* 2004 Winter;59(1):36-42. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/14768985>.

<sup>51</sup> ACOG, Committee on Gynecologic Practice. Committee Opinion: Over-the-Counter Access to Oral Contraceptives. Number 544. *Obstet Gynecol.* 2012 Dec;120(6):1527-31. Released December 2012 (reaffirmed 2014); accessed 25 October 2017:  
[http://www.acog.org/Resources\\_And\\_Publications/Committee\\_Opinions/Committee\\_on\\_Gynecologic\\_Practice/Over-the-Counter\\_Access\\_to\\_Oral\\_Contraceptives](http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Gynecologic_Practice/Over-the-Counter_Access_to_Oral_Contraceptives).

<sup>52</sup> Culwell KR, Feinglass J. The association of health insurance with use of prescription contraceptives. *Perspect Sex Reprod Health.* 2007 Dec;39(4):226-30. Accessed 25 October 2017:  
<http://www.ncbi.nlm.nih.gov/pubmed/18093039>.

<sup>53</sup> Kim NH, Look KA. Effects of the Affordable Care Act’s contraceptive coverage requirement on utilization and out-of-pocket costs of prescribed oral contraceptives. *ScienceDirect.* Available online 17 June 2017 Accessed 27 October 2017:  
<http://www.sciencedirect.com/science/article/pii/S1551741117300761>.

<sup>54</sup> Fertig AR, Carlin CS, Dowd B. Contraceptive choice after the Affordable Care Act. *J Patient Cent Res Rev.* 2016;3:209-10. Accessed on 27 October 2017:  
<http://digitalrepository.aurorahealthcare.org/jpcrr/vol3/iss3/99/>.

<sup>55</sup> Peipert, JF, Madden T, Allsworth, JE, and Secura GM. Preventing Unintended Pregnancies by Providing No-Cost Contraception. *Obstet Gynecol.* 2012 Dec; 120(6): 1291-1297. Accessed 27 October 2017: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4000282/>.

- 
- <sup>56</sup> Pittman ME, Secura GM, Allsworth JE, et. al. Understanding prescription adherence: pharmacy claims data from the Contraceptive CHOICE Project. *Contraception*. 2011 Apr;83(4):340-5. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3058146/>.
- <sup>57</sup> Moreau C, Bouyer J, Gilbert F, et. al. Social, demographic and situational characteristics associated with inconsistent use of oral contraceptives: evidence from France. *Perspect Sex Reprod Health*. 2006 Dec;38(4):190-6. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/17162311>.
- <sup>58</sup> ACOG, Committee on Gynecologic Practice, Long-Acting Reversible Contraception Working Group. Committee Opinion: Increasing Access to Contraceptive Implants and Intrauterine Devices to Reduce Unintended Pregnancy. Number 642. *Obstet Gynecol* 2015;126:e44–8. Released October 2015; accessed 25 October 2017: <http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Gynecologic-Practice/Increasing-Access-to-Contraceptive-Implants-and-Intrauterine-Devices-to-Reduce-Unintended-Pregnancy>.
- <sup>59</sup> *Op. cit.* ACOG, Committee on Gynecologic Practice, Long-Acting Reversible Contraception Working Group. Committee Opinion: Increasing Access to Contraceptive Implants and Intrauterine Devices to Reduce Unintended Pregnancy.
- <sup>60</sup> Pace LE, Dusetzina SB, Fendrick AM, et. al. The impact of out-of-pocket costs on the use of intrauterine contraception among women with employer-sponsored insurance. *Med Care*. 2013 Nov;51(11):959-63. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/24036995>.
- <sup>61</sup> Broecker J, Jurich J, Fuchs R. The relationship between long-acting reversible contraception and insurance coverage: a retrospective analysis. *Contraception*. 2015 Nov 11. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/26577755>.
- <sup>62</sup> Secura GM, Allsworth JE, Madden T, et. al. The Contraceptive CHOICE Project: reducing barriers to long-acting reversible contraception. *Am J Obstet Gynecol*. 2010 Aug;203(2):115.e1-7. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2910826/>.
- <sup>63</sup> Under the ACA, non-grandfathered health insurance plans must fully cover the costs of contraceptive methods and counseling for all women, as prescribed by a healthcare provider. When provided by an in-network provider, these services will require no patient cost sharing (no deductibles, coinsurances or co-payments). Coverage must include at least one method from each category of FDA-approved prescribed contraception, including female sterilization procedures, implanted devices, barrier and hormonal methods, and emergency contraception, as well as related education and counseling; over-the-counter contraception, drugs to induce abortions and sterilization surgery for men is not included in this benefit. Health plans sponsored by certain exempt religious organizations may not be covered and may require out-of-pocket payment. Some non-profit religious organizations that certify religious objections do not have to contract, arrange, pay, or refer for contraceptive coverage; for these types of organizations, insurers or third-party administrators may make separate payments for contraceptive services to in-network providers without patient cost sharing. *Healthcare.gov*. Individuals and Families, Health benefits & coverage, Birth control benefits. Accessed 1 December 2015: <https://www.healthcare.gov/coverage/birth-control-benefits/>. See also: Coverage of Certain Preventive Services Under the Affordable Care Act; Final Rules. 26 CFR Part 54, 29 CFR Parts 2510 and 2590, 45

---

CFR Parts 147 and 156. Federal Register 78:127; 2 July 2013. Accessed 25 December 2017: <https://www.gpo.gov/fdsys/pkg/FR-2013-07-02/pdf/FR-2013-07-02.pdf>.

<sup>64</sup> Bearak JM, Finer LB, Jerman J, et. al. Changes in out-of-pocket costs for hormonal IUDs after implementation of the Affordable Care Act: an analysis of insurance benefit inquiries. *Contraception*. 2016 Feb;93(2):139-44. Accessed 25 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/26386444>.

<sup>65</sup> Potter JE, Hopkins K, Aiken AR, et. al. Unmet demand for highly effective postpartum contraception in Texas. *Contraception*. 2014 Nov;90(5):488-95. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/25129329>.

<sup>66</sup> *Op. cit.* Potter JE, Hopkins K, Aiken AR, et. al.

<sup>67</sup> Baldwin MK, Rodriguez MI, Edelman AB. Lack of insurance and parity influence choice between long-acting reversible contraception and sterilization in women postpregnancy. *Contraception*. 2012 Jul;86(1):42-7. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/22240179>.

<sup>68</sup> White K, Potter JE, Hopkins K, et. al. Variation in postpartum contraceptive method use: results from the Pregnancy Risk Assessment Monitoring System (PRAMS). *Contraception*. 2014 Jan;89(1):57-62. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/24237967>.

<sup>69</sup> *Op. cit.* White K, Potter JE, Hopkins K, et. al.

<sup>70</sup> Sometimes called the “morning-after” pill, emergency contraception (EC) is taken to prevent pregnancy after a woman has had unprotected sex or after her birth control method has failed. Mayo Clinic. Morning-after pill. Accessed 28 October 2017: <https://www.mayoclinic.org/tests-procedures/morning-after-pill/basics/definition/prc-20012891>.

<sup>71</sup> Baird DT, Cameron S, Evers JL, et. al.; ESHRE CapriWorkshop Group. Emergency contraception. Widely available and effective but disappointing as a public health intervention: a review. *Hum Reprod*. 2015 Apr;30(4):751-60. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/25678571>.


<sup>72</sup> Wilkinson TA, Vargas G, Fahey N. "I'll see what I can do": What adolescents experience when requesting emergency contraception. *J Adolesc Health*. 2014 Jan;54(1):14-9. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/24360593>.

<sup>73</sup> Orr KK, Lemay VA, Wojtusik AP, et. al. Availability and Accuracy of Information Regarding Nonprescription Emergency Contraception. *J Pharm Pract*. 2015 Jan 29. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/25637393>.

<sup>74</sup> Mulligan K. Access to Emergency Contraception and its Impact on Fertility and Sexual Behavior. *Health Econ*. 2015 Feb 8. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/25663392>.

<sup>75</sup> Atkins DN, Bradford WD. Association between Increased Emergency Contraception Availability and Risky Sexual Practices. *Health Serv Res*. 2015 Jun;50(3):809-29. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/25367046>.

- 
- <sup>76</sup> Raine TR, Harper CC, Rocca CH, et. al. Direct access to emergency contraception through pharmacies and effect on unintended pregnancy and STIs: a randomized controlled trial. *JAMA*. 2005 Jan 5;293(1):54-62. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/15632336>.
- <sup>77</sup> Raine-Bennett T, Merchant M, Sinclair F, et. al. Reproductive health outcomes of insured adolescent and adult women who access oral levonorgestrel emergency contraception. *Obstet Gynecol*. 2015 Apr;125(4):904-11. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/25751211>.
- <sup>78</sup> Steenland MW, Rodriguez MI, Marchbanks PA, et. al. How does the number of oral contraceptive pill packs dispensed or prescribed affect continuation and other measures of consistent and correct use? A systematic review. *Contraception*. 2013 May;87(5):605-10. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/23040121>.
- <sup>79</sup> Steenland MW, Rodrigues MI, Marchbanks PA, Curtis KM. How does the number of oral contraceptive pill packs dispensed or prescribed affect continuation and other measures of consistent and correct use? A systematic review. *Contraception*. 2013 May;87(5):605-10. Accessed 27 October 2017: <https://www.ncbi.nlm.nih.gov/pubmed/23040121>.
- <sup>80</sup> Foster DG, Parvataneni R, de Bocanegra HT, et. al. Number of oral contraceptive pill packages dispensed, method continuation, and costs. *Obstet Gynecol*. 2006 Nov;108(5):1107-14. Accessed 24 October 2017: <http://www.ncbi.nlm.nih.gov/pubmed/17077231>.
- <sup>81</sup> Op. Cit. Foster DG, Parvataneni R, de Bocanegra HT, et. al. Number of oral contraceptive pill packages dispensed, method continuation, and costs.
- <sup>82</sup> McMenamin SB, Charles SA, Tabatabaeeepour N, Shigekawa E, Corbett G. Implications of dispensing self-administered hormonal contraceptives in a 1-year supply: a California case study *Contraception*. 2017 May; 95(5): 449-451. Accessed 27 October 2017: <http://www.sciencedirect.com/science/article/pii/S0010782416305467>.



**Actuarial Assessment of  
House Bill 536 and Senate Bill 499  
Submitted to the 190<sup>th</sup> General Court:  
“An act relative to advancing contraceptive coverage and  
economic security in our state  
(ACCESS)”**

**Prepared for:**  
Commonwealth of Massachusetts  
Center for Health Information and  
Analysis

**Prepared by:**  
BerryDunn

October 2017



## Table of Contents

Table of Contents .....	i
1.0 Executive Summary .....	1
1.1 Background .....	1
1.2 Contraception .....	3
1.3 Existing Laws Regarding Contraception .....	3
1.4 Analysis .....	4
1.5 Summary Results .....	5
1.6 Executive Summary Endnotes .....	6
2.0 Introduction .....	8
3.0 Interpretation of S.B. 499 .....	8
3.1 Plans Affected by the Proposed Mandate .....	10
3.2 Covered Services .....	10
3.3 Existing Laws Affecting the Cost of S.B. 499 .....	11
4.0 Methodology .....	12
4.1 Overview .....	12
4.2 Data Sources.....	13
4.3 Steps in the Analysis .....	13
4.4 Limitations .....	17
5.0 Analysis.....	18
5.1 Therapeutic Equivalents.....	18
5.2 EC .....	20
5.3 Immediate Dispensing.....	24
5.4 Eliminating Cost Sharing for Non-Oral Contraception (Medical Claims).....	27
5.5 Adjustments to Pharmacy Membership.....	28
5.6 Marginal Cost Per Member Per Month.....	29
5.7 Projected Fully Insured Population in Massachusetts.....	30
5.8 Total Marginal Medical Expense .....	30
5.9 Carrier Retention and Increase in Premium .....	30
6.0 Results .....	31
6.1 Five-Year Estimated Impact.....	31

---

6.2 Impact on the GIC .....	32
Appendix A: Comparison of H.B. 536/S.B. 499 to the Affordable Care Act.....	35
Appendix B: Contraception Coverage by Carrier for Fully Insured Plans.....	41
Appendix C: Membership Affected by the Proposed Mandate .....	52
Endnotes.....	53



This report was prepared by Valerie Hamilton, RN, MHA, JD; Larry Hart; Andrea Clark, MS; James Highland, PhD; and Jeffrey Stock, FSA, MAAA.

## 1.0 Executive Summary

Massachusetts House Bill (H.B.) 536<sup>1</sup> and Senate Bill (S.B.) 499,<sup>2</sup> as submitted in the 190<sup>th</sup> General Court, would expand health insurance of contraceptives and contraceptive services in the Commonwealth.

Under S.B. 499, carriers would be required to cover all Food and Drug Administration (FDA)-approved contraceptive drugs, devices, or at least one therapeutic alternative for each, and would not be required to cover oral contraceptives without a therapeutic equivalent (unless recommended by an attending provider and subject to utilization management procedures). Carriers would be required to cover a single dispensing of a 12-month supply of prescription contraceptive after up to a 3-month trial, cover voluntary female sterilization procedures, and cover education and follow-up for any provided contraceptive drugs and devices. These coverage requirements are intended to improve women's access to contraceptives.

Massachusetts General Laws (M.G.L.) c.3 §38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the potential impact of proposed mandated healthcare insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged BerryDunn to provide an actuarial estimate of the effect that enactment of the bill would have on the cost of health insurance in Massachusetts.

For this analysis, BerryDunn was given one copy of the bill (H.B. 536/S.B. 499); the online versions the bills have not been updated to date to reflect changes that occurred after they were drafted. BerryDunn asked follow-up questions of the sponsoring legislators to clarify that the intent of the bill is followed in this analysis. The two bills will hereafter be referenced as one bill (S.B. 499).

### 1.1 Background

Current Massachusetts state law requires insurers to cover contraceptive drugs, devices, and services under the same terms and conditions as for other outpatient services.

S.B. 499 requires coverage of certain drugs, devices, procedures, and services without member cost sharing. There is significant overlap with the requirements of the Affordable Care Act (ACA), limiting the bill's cost impact. A comparison of S.B. 499 and<sup>3</sup> the ACA is provided in Section 3 of this report.

S.B. 499 includes the following provisions:

- Requires coverage for Food and Drug Administration ("FDA")-approved contraceptive drugs, devices and other products for enrollees, enrollee's covered spouse, and enrollee's covered dependents. The following apply:

- If there is one or more therapeutic equivalents of an FDA-approved drug, device, or product, the insurer is not required to include all therapeutic equivalents in its formulary, as long as at least one is included and covered without cost sharing.
- If an individual's attending provider recommends a particular FDA-approved contraceptive drug, device, or product, based on a medical determination with respect to that individual, the insurer shall provide coverage subject to utilization management procedures, for the prescribed contraceptive drug, device, or product.
- If an FDA-approved oral contraceptive has no therapeutic equivalent, coverage shall not be required unless the individual's attending provider recommends the particular FDA-approved oral contraceptive, based on a medical determination with respect to that individual and subject to utilization management procedures for the FDA-approved oral contraceptive.
- Requires coverage for all FDA-approved emergency contraception (EC) available over the counter (OTC), either with a prescription, or dispensed consistent with the requirements of section 19A of chapter 94C.
- Requires coverage for contraceptives intended to last for the following time periods:
  - Up to a 3-month period of time for the first time the prescription contraceptive is dispensed to the covered person.
  - Up to a 12-month period of time for subsequent dispensing of the same prescription, which may be dispensed all at once or over the course of the 12-month period, regardless of whether the covered person was enrolled in a plan or policy under this chapter at the time the prescription contraceptive was first dispensed; provided that the insured may not fill more than one 12-month prescription in a single dispensing per plan year.
- Requires coverage of voluntary female sterilization procedures.
- Requires coverage of patient education and counseling on contraception.
- Requires coverage of follow-up services related to the drugs, devices, products, and procedures covered, including, but not limited to, management of side effects, counseling for continued adherence, and device insertion and removal.
- Prohibits member cost sharing for the mandated contraceptive services, drugs, devices, and products.
- Prohibits the imposition of any unreasonable restrictions or delays in coverage; provided that reasonable medical management techniques may be applied to coverage within a method category, as defined by the FDA, but not across types of methods.
- Exempts employers that are churches or qualified church-controlled organizations from the provisions regarding contraceptive services, drugs, and devices.

S.B. 499 does not:

- Change the effect of the existing state mandate statute on coverage for Hormone Replacement Therapy (HRT) drugs and related services for peri- and post-menopausal women.
- Mandate or alter existing coverage for contraceptive drugs, devices, products, and procedures prescribed by a provider for reasons other than contraceptive purposes.
- Require coverage for male condoms.
- Require carriers to cover experimental investigational treatments.

## 1.2 Contraception

The bill's intent is to establish in Massachusetts law many of the contraception protections provided by the ACA and federal regulatory inclusion of contraceptives as a preventive measure and to ensure that women in Massachusetts do not face unnecessary hurdles to obtaining the contraception of their choice.

Contraceptive drugs and devices, with appropriate associated examination and consultation services, can play a significant role in family planning. Nationally, nearly all women of reproductive age in 2006 – 2010 who had ever had sexual intercourse have used at least one contraceptive method at some point in their lifetime (99%, or 53 million women aged 15 – 44).<sup>4</sup> 88% of these women have used a highly effective, reversible method such as birth control pills, an injectable method, a contraceptive patch, or an intrauterine devices.<sup>5</sup> Typical use<sup>1</sup> of these highly effective birth control methods results in the following risk of unintended pregnancy: birth control pills 9%, injectable methods 6%, contraceptive patch 9%, and an IUD 0.2% – 0.8%.<sup>6</sup>

## 1.3 Existing Laws Regarding Contraception

Current Massachusetts law requires carriers to cover outpatient contraceptive services, including “consultations, examinations, procedures and medical services provided on an outpatient basis and related to the use of all contraceptive methods to prevent pregnancy that have been approved by the United States Food and Drug Administration.”<sup>7</sup> The requirements related to contraception placed on insurance plans by existing Massachusetts laws have been expanded for some plans by more recent federal law. Under the ACA, non-grandfathered health insurance plans must fully cover the costs of contraceptive methods and counseling for all women, as prescribed by a healthcare provider.<sup>8</sup> When provided by an in-network provider, these services will require no patient cost sharing (no deductibles, co-insurance, or co-payments). Coverage must include at least one method from each of the 18 categories<sup>9</sup> of clinician-prescribed contraception (even methods available OTC) and related services for

<sup>1</sup> “Typical” use differs from “perfect use.” Typical use accounts for inconsistent and incorrect use of a method while perfect use indicates the method is used consistently and correctly every time. For example, while the rate of unintended pregnancy is 9% over a year of typical use of oral contraceptives, this rate drops less than 1% with perfect use. Cooper; D, Adigun, R. Oral Contraceptive Pills. National Center for Biotechnology Information. 20 April 17. Accessed 23 October 2017: <https://www.ncbi.nlm.nih.gov/books/NBK430882/>.

women approved by the FDA. The ACA provides that, if the method covered without cost sharing within a given category is not medically appropriate, the plan must accommodate the individual's need "by having a mechanism for waiving the otherwise applicable cost-sharing . . ." <sup>10</sup> Appendix B summarizes current coverage by carrier, as described by the carriers, for non-grandfathered plans.

For the insurance plans to which it applies, S.B. 499, as intended by the sponsors, would require coverage in several respects broader than that required under the ACA. Specifically, S.B. 499 would require coverage over and above the ACA in the following ways.

- *Therapeutic Equivalents.* Expand prohibitions on cost sharing to cover one therapeutic equivalent of all 39 FDA-approved oral contraception products, not just one per each of the three ACA oral contraceptive categories (i.e., combined pill, Progesterin-only, and extended/continuous use). <sup>11</sup>
- *EC.* Require coverage beyond the two products required by the ACA to all FDA-approved EC obtained OTC or by prescription, and prohibit cost sharing on all.
- *Immediate Dispensing.* Allows up to 3 months dispensed at once for new prescriptions, and up to 12 months for renewed prescriptions.
- *Contraceptive Services.* Prohibit cost sharing on all services associated with evaluation and management related to contraception.

In addition to these areas of coverage added by S.B. 499, all the provisions of the bill apply to plans grandfathered under the ACA, not just non-grandfathered plans. <sup>12</sup> This extends the coverages itemized above, as well as others now only applicable to non-grandfathered plans, to grandfathered plans. These differences relative to current law drive the estimated incremental impact on premiums estimated in this report.

S.B. 499 does not address any existing provisions or exclusions in the federal law regarding male sterilization surgery, drugs to induce abortion, and non-prescribed OTC contraception (except for EC), nor would it supplement the effect of federal exemptions for certain religious organizations. S.B. 499 does not require coverage of male condoms.

## 1.4 Analysis

BerryDunn estimated the impact of S.B. 499 by in turn estimating the potential contribution of each of four components:

- *Therapeutic Equivalents:* Measure existing cost sharing for pharmacy claims for women's contraceptive services (e.g., oral contraceptives) and estimate the cost to carriers of eliminating the cost sharing of *covering at least one therapeutic equivalent per FDA-approved drug, device, or product.*
- *EC:* Estimate the utilization of EC in the eligible population, the portion of users who might seek reimbursement, and the unit cost of those doses.

- *Immediate Dispensing*: Measure the estimated increase in scripts that will be offered at 12 months and the increase in pill wastage for the longer script duration.
- *Contraceptive Services*: Measure existing cost sharing for medical claims for women's contraceptive services (including office visits) and estimate the cost to carriers of eliminating that cost sharing.

BerryDunn then aggregated these components and projected them forward over the next five years (2018 – 2022) for the fully insured Massachusetts population, and added insurer retention (administrative cost and profit) to arrive at an estimate of the bill's effect on premiums. Note the estimates assume carriers would fully comply with the provisions of the bill if it becomes law. The analysis does not consider the impact of any reduced pregnancies, miscarriages, and abortions due to improved contraception adherence.

This analysis relies on projections of the rate at which insurance plans will lose grandfathered status and become ACA compliant, and the total number of claims filed for OTC EC with or without a prescription. These uncertainties are addressed by modeling a range of assumptions within reasonable judgment-based limits, and producing a range of incremental impact estimates based on varying these parameters.

## 1.5 Summary Results

Table ES-1 summarizes the estimated effect of S.B. 499 on premiums for fully insured plans over five years. This analysis estimates that the mandate, if enacted as drafted for the 190<sup>th</sup> General Court, would increase fully insured premiums by as much as 0.054% on average over the next five years; a more likely increase is in the range of 0.040%, equivalent to an average annual expenditure of \$5.3 million over the period 2018 – 2022.

The impact on premiums is driven by the provisions eliminating cost sharing for at least one therapeutic equivalent of FDA-approved contraception for women, plus coverage for OTC ECs, the impact of 12-month script wastage, and the impact on contraceptive medical services on ACA-grandfathered plans.

The impact of the bill on any one individual, employer-group, or carrier may vary from the overall results depending on the current level of benefits each receives or provides, and on how those benefits would change under the proposed mandate. In particular, plans currently grandfathered as exempt from ACA contraception requirements will likely see larger increases in premiums.

**Table ES-1: Summary Results**

	2018	2019	2020	2021	2022	Weighted Average	5 Year Total
Members (000s)	2,407	2,381	2,354	2,327	2,300		
Medical Expense Low (\$000s)	\$1,272	\$1,731	\$1,687	\$1,651	\$1,620	\$1,691	\$7,960
Medical Expense Mid (\$000s)	\$1,928	\$2,720	\$2,743	\$2,769	\$2,800	\$2,754	\$12,961
Medical Expense High (\$000s)	\$3,361	\$4,876	\$5,056	\$5,245	\$5,443	\$5,095	\$23,981
Premium Low (\$000s)	\$1,429	\$1,944	\$1,895	\$1,854	\$1,820	\$1,900	\$8,942
Premium Mid (\$000s)	\$2,166	\$3,056	\$3,081	\$3,111	\$3,146	\$3,094	\$14,560
Premium High (\$000s)	\$3,776	\$5,477	\$5,680	\$5,892	\$6,115	\$5,724	\$26,940
PMPM Low	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07
PMPM Mid	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11
PMPM High	\$0.18	\$0.19	\$0.20	\$0.21	\$0.22	\$0.20	\$0.20
Estimated Monthly Premium	\$463	\$473	\$483	\$493	\$503	\$483	\$483
Premium % Rise Low	0.015%	0.014%	0.014%	0.013%	0.013%	0.014%	0.014%
Premium % Rise Mid	0.023%	0.023%	0.023%	0.023%	0.023%	0.023%	0.023%
Premium % Rise High	0.040%	0.041%	0.042%	0.043%	0.044%	0.042%	0.042%

## 1.6 Executive Summary Endnotes

<sup>1</sup> The 190<sup>th</sup> General Court of the Commonwealth of Massachusetts, House Bill 536, An Act relative to advancing contraceptive coverage and economic security in our state (ACCESS): <https://malegislature.gov/Bills/190/H536>.

<sup>2</sup> The 190<sup>th</sup> General Court of the Commonwealth of Massachusetts, Senate Bill 499, An Act relative to advancing contraceptive coverage and economic security in our state (ACCESS): <https://malegislature.gov/Bills/190/S499>.

<sup>3</sup> Massachusetts General Law c.175 §47W, c.176A §8W, c.176B §4W, c.176G §4O. Accessed 30 October 2017: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXXII/Chapter175/Section47W>.

---

<sup>4</sup> Daniels, K, Mosher, WD. Contraceptive Methods Women Have Ever Used: United States, 1982-2010. National Health Statistics Reports. 2013 Feb 14. Number 62. Accessed 10/23/2017: <https://www.cdc.gov/nchs/data/nhsr/nhsr062.pdf>.

<sup>5</sup> *Opt cit.* Daniels K, Mosher, WD. Contraceptive Methods Women Have Ever Used, 1982-2010. National Health Statistics Reports.

<sup>6</sup> *Opt cit.* Daniels K, Mosher, WD. Contraceptive Methods Women Have Ever Used, 1982-2010. National Health Statistics Reports.

<sup>7</sup> *Op. cit.* M.G.L. (M.G.L.) c.175 §47W, c.176A §8W, c.176B §4W, c.176G §4O.

<sup>8</sup> Healthcare.gov. Individuals and Families, Health benefits & coverage, Birth control benefits. Accessed 1 December 2015: <https://www.healthcare.gov/coverage/birth-control-benefits/>. See also: Coverage of Certain Preventive Services Under the Affordable Care Act; Final Rules. 26 CFR Part 54, 29 CFR Parts 2510 and 2590, 45 CFR Parts 147 and 156. Federal Register 78:127; 2 July 2013. Accessed 1 December 2015: <http://www.gpo.gov/fdsys/pkg/FR-2013-07-02/pdf/2013-15866.pdf>.

<sup>9</sup> U.S. Department of Labor, Employee Benefits Security Administration (EBSA). FAQs about Affordable Care Act Implementation (Part XXVI). Published 15 May 2015; accessed 28 January 2016: <http://www.dol.gov/ebsa/faqs/faq-aca26.html#footnotes>. FAQ Q4 refers in footnote 12 to the FDA Birth Control Guide:

U.S. Food and Drug Administration (FDA). Birth Control Guide. Accessed 28 January 2016: <http://www.fda.gov/downloads/ForConsumers/ByAudience/ForWomen/FreePublications/UCM356451.pdf>.

The 18 birth control methods for women covered under the ACA (PHS Act 2713 and its implementing regulations) include: Sterilization surgery; Surgical sterilization implant; Implantable rod; Copper intrauterine device; IUDs with progestin (a hormone); Shot/injection; Oral contraceptives (the pill), with estrogen and progestin; Oral contraceptives with progestin only; Oral contraceptives, known as extended or continuous use that delay menstruation; The patch; Vaginal contraceptive ring; Diaphragm; Sponge; Cervical cap; Female condom; Spermicide; Emergency contraception (Plan B/morning-after pill); Emergency contraception (a different pill called Ella).

<sup>10</sup> EBSA: FAQs about Affordable Care Act Implementation Part XII. Published 20 February 2013; accessed 28 January 2016: <http://www.dol.gov/ebsa/faqs/faq-aca12.html>.

<sup>11</sup> Contraceptive methods for which the ACA requires coverage, other than oral contraceptives, are already covered without cost sharing. Therefore the cost of this provision would be driven by expansion of covered oral contraceptives.

<sup>12</sup> U.S. Centers for Medicare and Medicaid Services (CMS) Healthcare.gov, Glossary: Grandfathered Health Plan. Accessed 27 January 2016: <https://www.healthcare.gov/glossary/grandfathered-health-plan/>.

As used in connection with the Affordable Care Act: A group health plan that was created—or an individual health insurance policy that was purchased—on or before March 23, 2010. Grandfathered plans are exempted from many changes required under the Affordable Care Act. Plans or policies may lose their “grandfathered” status if they make certain significant changes that reduce benefits or increase costs to consumers. A health plan must disclose in its plan materials whether it considers itself to be a grandfathered plan and must also advise consumers how to contact the U.S. Department of Labor or the U.S. Department of Health and Human Services with questions.



## 2.0 Introduction

H.B. 536 and S.B. 499,<sup>1</sup> both hereafter referenced as S.B. 499, as submitted in the 190<sup>th</sup> General Court, would broaden coverage of contraceptive methods and related services offered by current state law.<sup>2</sup> The bill overlaps significantly with the contraception requirements of the ACA, although S.B. 499 requires coverage for additional contraceptives without cost sharing and a full year's supply of contraceptives in a single dispensing.

Massachusetts General Law (MGL) c.3 §38C charges CHIA with, among other duties, reviewing the potential impact of proposed mandated healthcare insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged BerryDunn to provide an actuarial estimate of the effect enactment of the bill would have on the cost of health insurance in Massachusetts.

Assessing the impact of the proposed mandate on premiums entails analyzing its incremental effect on spending by insurance plans. This in turn requires comparing spending under the provisions of the bill to spending under current statutes and current benefit plans for the relevant services. For this analysis, BerryDunn was given one copy of the bill (H.B. 536/S.B. 499); the online versions the bills have not been updated to date to reflect changes that occurred after they were drafted. BerryDunn asked follow-up questions of the sponsoring legislators to clarify that the intent of the bill is followed in this analysis.

Section 3 of this analysis outlines the provisions and interpretations of the bill. Section 4 summarizes the methodology used for the estimate. Section 5 discusses important considerations in translating the bill's language into estimates of its incremental impact on healthcare costs and steps through the calculations. Section 6 summarizes the results.

## 3.0 Interpretation of S.B. 499

Current Massachusetts state law requires carriers to cover contraceptive drugs, devices, and services under the same terms and conditions as for such other outpatient services. S.B. 499 requires coverage of certain drugs, devices, procedures, and services without member cost sharing. The bill contains significant overlap with the requirements of the ACA, limiting the bill's cost impact. S.B. 499 includes the following provisions:

- Requires coverage for FDA-approved contraceptive drugs, devices, and other products for enrollees, enrollees' covered spouses, and enrollees' covered dependents. The following apply:
  - If there are any therapeutic equivalents of an FDA-approved drug, device, or product, the insurer is not required to include all therapeutic equivalents in its formulary, as long as at least one is included and covered without cost sharing.
  - If an individual's attending provider recommends a particular FDA-approved contraceptive drug, device, or product, based on a medical determination with

respect to that individual, the insurer shall provide coverage subject to utilization management procedures, for the prescribed contraceptive drug, device, or product.

- If an FDA-approved oral contraceptive has no therapeutic equivalent, coverage shall not be required unless the individual's attending provider recommends the particular FDA-approved oral contraceptive, based on a medical determination with respect to that individual and subject to utilization management procedures for the FDA-approved oral contraceptive.
- Requires coverage for all FDA-approved EC available OTC either with a prescription, or dispensed consistent with the requirements of section 19A of chapter 94C.
- Requires coverage for contraceptives intended to last for the following time periods:
  - Up to a 3-month period of time for the first time the prescription contraceptive is dispensed to the covered person.
  - Up to a 12-month period of time for subsequent dispensing of the same prescription, which may be dispensed all at once or over the course of the 12-month period, regardless of whether the covered person was enrolled in a plan or policy under this chapter at the time the prescription contraceptive was first dispensed; provided that the insured may not fill more than one 12-month prescription in a single dispensing per plan year.
- Requires coverage of voluntary female sterilization procedures.
- Requires coverage of patient education and counseling on contraception.
- Requires coverage of follow-up services related to the drugs, devices, products, and procedures covered, including, but not limited to, management of side effects, counseling for continued adherence, and device insertion and removal.
- Prohibits member cost sharing for the mandated contraceptive services, drugs, devices, and products.
- Prohibits the imposition of any unreasonable restrictions or delays in coverage; provided that reasonable medical management techniques may be applied to coverage within a method category, as defined by the FDA, but not across types of methods.
- Exempts employers that are churches or qualified church-controlled organizations from the provisions regarding contraceptive services, drugs, and devices.

S.B. 499 does not:

- Change the effect of the existing state mandate statute on coverage for HRT drugs and related services for peri- and post-menopausal women.
- Mandate or alter existing coverage for contraceptive drugs, devices, products, and procedures prescribed by a provider for reasons other than contraceptive purposes.

- Require coverage for male condoms.
- Require carriers to cover experimental investigational treatments.

### **3.1 Plans Affected by the Proposed Mandate**

The bill as drafted amends statutes that regulate healthcare carriers in Massachusetts. The bill includes six sections, each of which addresses statutes dealing with a particular type of health insurance policy:

- Section 1: Chapter 32A – Plans Operated by the Group Insurance Commission (GIC) for the Benefit of Public Employees
- Section 2: Chapter 118E – MassHealth (Medicaid) Plans
- Section 3: Chapter 175 – Commercial Health Insurance Company Plans
- Section 4: Chapter 176A – Hospital Service Corporation Plans
- Section 5: Chapter 176B – Medical Service Corporation Plans
- Section 6: Chapter 176G – HMO Plans

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

### **3.2 Covered Services**

#### **3.2.1 Contraception and Its Use**

As noted above, the bill's intent is to ensure that a woman has access to the FDA-approved method of birth control she and her healthcare provider choose, without cost sharing.

Contraceptive drugs and devices, used consistently and correctly—and paired with appropriate associated examination and consultation services—can play a significant role in family planning. While 30% of women do not need a contraceptive method,<sup>3</sup> 10% of women are at risk of unintended pregnancy but are not using contraception.<sup>4</sup> Of the women not using contraception and at risk of unintended pregnancy, larger percentages are under 20 years of age, were never married, and are black; however, the number of women at risk does not vary by income or education level.<sup>5</sup>

Almost half of women with an unintended pregnancy report using some form of contraception,<sup>6</sup> but the 68% of women at risk of unintended pregnancy who use some form of contraception consistently and correctly account for only 5% of unintended pregnancies.<sup>7</sup> While use of any method of birth control reduces the risk of unintended pregnancy by 85%, proper and consistent

use of the most effective methods “virtually eliminates” the risk.<sup>8</sup> Most women (67%) who use contraception rely on non-permanent methods, while the remainder relies on male or female sterilization.<sup>9</sup>

This analysis defines the services mandated by S.B. 499 to include all FDA-approved prescribed methods of contraception services, medications, and devices, with the exceptions of male sterilization surgeries, and OTC contraception (except for EC). The analysis estimates incremental cost to the Massachusetts fully insured commercial healthcare market for mandated coverage of these prescribed services, medications, and devices without cost sharing, and assumes full compliance by all insurance plans.

### 3.3 Existing Laws Affecting the Cost of S.B. 499

Under current Massachusetts law, carriers who provide outpatient services must cover “outpatient contraceptive services under the same terms and conditions as for such other outpatient services. Outpatient contraceptive services shall mean consultations, examinations, procedures, and medical services provided on an outpatient basis and related to the use of all contraceptive methods to prevent pregnancy that have been approved by the United States Food and Drug Administration.”<sup>10</sup>

The existing Massachusetts laws regarding outpatient contraceptive services have been expanded for some plans by more recent federal law. Under the ACA, non-grandfathered health insurance plans must fully cover the costs of contraceptive methods and counseling for all women, as prescribed by a healthcare provider.<sup>11</sup> When provided by an in-network provider, these services will require no patient cost sharing (no deductibles, co-insurance, or co-payments). Coverage must include at least one method from each of the 18 categories<sup>12</sup> of *clinician-prescribed* contraception (even those available OTC) for women approved by the FDA, including female sterilization procedures, implanted devices, barrier and hormonal methods, and EC, as well as related services, education, and counseling. The ACA provides that, if the method covered without cost sharing within a given category is not medically appropriate, the plan must accommodate the individual’s need “by having a mechanism for waiving the otherwise applicable cost-sharing . . .”<sup>13</sup> (Therefore, to the extent patients do not or cannot employ the specified mechanism, some cost sharing might be present.)

OTC contraception, drugs to induce abortions, and sterilization surgery for men are not included in the ACA benefit language. Health plans sponsored by certain exempt religious organizations may not be covered and may require out-of-pocket payment. Some non-profit religious organizations that certify religious objections do not have to contract, arrange, pay, or refer for contraceptive coverage; for these types of organizations, carriers or third-party administrators may make separate payments for contraceptive services to in-network providers without patient cost sharing.

For the insurance plans to which it applies, S.B. 499, as intended by the sponsors, would require coverage in broader in several specific ways than that required under the federal law.

Appendix A contains a detailed comparison of S.B. 499 to the ACA, highlighting the incremental effects of the bill. These incremental effects can be summarized as follows:

- *Therapeutic Equivalents*. Expand prohibitions on cost sharing to cover one therapeutic equivalent of all 39 FDA-approved oral contraception products, not just one per each of the three ACA oral contraceptive categories (i.e., combined pill, Progesterin-only, and extended/continuous use).
- *EC*. Require coverage beyond the two products required by the ACA to all FDA-approved EC obtained OTC or by prescription, and prohibit cost sharing on all.
- *Immediate Dispensing*. Allows up to 3 months dispensed at once for new prescriptions, and up to 12 months for renewed prescriptions.
- *Contraceptive Services*. Prohibit cost sharing on all services associated with evaluation and management related to contraception.

In addition to these areas of coverage added by S.B. 499, all the provisions of the bill apply to plans grandfathered under the ACA, not just non-grandfathered plans.<sup>14</sup> The first three items are not currently required by the ACA, and so the incremental effect is for the entire fully insured population, both grandfathered and non-grandfathered. Cost sharing for contraceptive services is already prohibited by the ACA for non-grandfathered populations, so the incremental effect would only be for the grandfathered plans. In addition to identifying the incremental statutory effect of the bill, in estimating the incremental cost impact we must also analyze the degree to which the incremental legal requirements are already being provided voluntarily in plans sold by carriers. Appendix B summarizes current coverage by carrier, as described by the carriers in a recent survey, for non-grandfathered plans. These existing coverages are also reflected in the All Payer Claim Database (APCD) data, from which the incremental effect of the bill is calculated.

## 4.0 Methodology

### 4.1 Overview

Estimating S.B. 499's impact on premiums required assessing the incremental impacts described above related to:

- Therapeutic equivalents
- Emergency Contraception
- Extended scripts
- Contraceptive services

The incremental costs for these provisions were estimated for both the non-grandfathered and grandfathered plans for the first three, and the grandfathered plans for the contraceptive service. Combining these components, and accounting for carrier retention, resulted in a baseline estimate of the proposed mandate's incremental effect on premiums, which is then

projected over the five years following the assumed January 1, 2018, implementation date of the law.

## 4.2 Data Sources

The primary data sources used in the analysis were:

- Information about the intended effect of the bill, gathered from sponsors
- Information, including descriptions of current coverage, from responses to a survey of commercial health insurance carriers in Massachusetts
- Academic literature, published reports, and population data, cited as appropriate
- Massachusetts insurer claim data from CHIA's Massachusetts APCD for calendar years 2011 – 2015, for plans covering the majority of the under-65 fully insured population subject to the mandate

## 4.3 Steps in the Analysis

The analysis was executed in the following steps.

*Therapeutic Equivalents: Estimate the impact to cost sharing for the mandate to provide coverage for at least one therapeutic equivalent per FDA-approved drug, device, or product.*

- Use the APCD to measure the allowed and paid amount on pharmacy claims for women's contraceptive services covered by Massachusetts payers in baseline year 2015, a period in which the ACA's women's preventive health contraceptive services provisions were fully in effect.
- Identify all FDA-approved contraceptive drugs with therapeutic equivalents<sup>15</sup>
- For each carrier, determine which, if any, groupings of therapeutically equivalent contraceptive drugs (groupings) are not currently covered.<sup>ii</sup>
- For each carrier, determine if there is at least one contraceptive drug with no cost sharing in each grouping.
- For any grouping where there is not at least one contraceptive drug with no cost sharing, identify the therapeutic equivalent that would cost the carrier the least incremental expense in each grouping, and assume that the carrier will cover that item with no cost share when the mandate is implemented. Perform this step for each carrier.<sup>iii</sup>

---

<sup>ii</sup> As discussed in Section 5, all carriers cover at least one contraceptive drug from each grouping identified; no additional drugs need to be added, resulting in no marginal cost for additional drugs.

<sup>iii</sup> This step was taken in all cases in which there was a non-zero difference between paid and allowed. To the extent that cases with small differences may have reflected data anomalies, the estimates for the therapeutic equivalents impact will be conservatively high.

- Use the 2015 baseline year from APCD to measure the allowed and paid amounts on pharmacy claims for each drug in the groupings from the previous step. Calculate the cost to remove cost sharing for one therapeutic equivalent in that grouping, using the historical utilization of that therapeutic equivalent as the low-scenario assumption, and the total utilization for that therapeutic equivalent group as the high-scenario assumption (assumes all utilization migrates to the no-cost-share option)<sup>iv</sup>.
- Using the cost to remove cost sharing from the step above from the baseline year divide by pharmacy member-months to calculate a baseline per-member per-month (PMPM) incremental cost for contraceptive pharmacy benefits currently requiring cost sharing.
- Using an estimated increase in pharmacy costs, project the baseline costs forward over the five-year analysis period.

*EC: Estimate the cost of mandating EC without cost sharing.*

*First, analyze the cost of coverage for EC with no prescription that is not currently covered.*

- Data from a survey of Massachusetts insurance carriers and the APCD found one insurer in Massachusetts already covers EC, both with and without a prescription. Using this carrier's claims data estimate as one assumption of the percent of women using EC annually, also draw upon published literature.<sup>16</sup>
- Using APCD data for 2015, determine the percent of women using EC for whom the EC was paid by insurance; then estimate the percent of EC users not using coverage by subtracting the percent of users with coverage from the total calculated in step one.
- Using the APCD, calculate the number of commercial fully insured women with pharmacy coverage in Massachusetts between ages 15 – 44.
- Multiply the percentage of incremental users of OTC EC who will submit claims by the number of fully insured women with pharmacy coverage to get the total number of users.
- Using APCD data, estimate the number of annual paid units (doses) of EC per user. Multiply the annual paid units per user by the number of users to calculate the annual incremental number of paid units of EC.
- Using available literature, estimate the average retail generic and brand-name unit cost of EC with no prescription to calculate the weighted average price per unit based on an APCD brand vs. generic distribution of contraceptives.
- Multiply the number of annual incremental paid units of EC by the weighted average price per unit to calculate a baseline marginal cost of coverage for EC with no prescription.

<sup>iv</sup> Note that the analysis did not model more sophisticated patient migration patterns across drug products. The approach taken produces estimates that are at or above those that migration modeling would produce, and so provides a conservatively high estimate.

---

*Next, analyze the impact of requiring coverage of all FDA-approved EC.*

- Using the APCD estimate, the average cost per script of EC currently covered.
- Estimate the unit cost of brand-name EC.
- Estimate the difference in unit cost to move to a brand-name EC drug.
- Estimate the projected number of covered units that will switch to a brand name.
- Multiple the cost difference cost by the number of units that will move to determine the incremental cost.

*Determine the total added cost of EC.*

- Add the baseline costs for covering EC with no prescription to the baseline cost of requiring coverage of all FDA-approved EC.
- Divide the baseline cost by the number of commercial fully insured members with pharmacy coverage in Massachusetts to obtain a baseline PMPM estimate.
- Using an estimated increase in pharmacy costs, project the baseline cost forward over the five-year analysis period.

*Immediate Dispensing: Estimate the impact of mandating coverage for a single dispensing of a 12-month supply of prescription contraceptive after up to a 3-month trial.*

- Using available literature, estimate the percent of oral contraception delivered with a 12-month supply after the proposed mandate.
- Adjust the percentage of oral contraception that will be subject to a 12-month supply due to the initial 3-month script requirement.
- Estimate the incremental wastage of contraception from using 12-month supply scripts compared to wastage of scripts with 3-months' supply or less.
- Multiply the percentages from step 2 and step 3 to calculate the increase in waste as a percent of total contraception cost, after it is adjusted for elimination of cost sharing.
- Multiply the increase in wasted contraception percentage by the annual contraception PMPM cost, using APCD 2015 cost data and membership, to calculate the incremental wastage PMPM.
- Project the baseline cost forward over the five-year analysis period.

*Contraceptive Services: Estimate costs to carriers of eliminating cost sharing for all prescribed medical contraception services for women, which is only a new requirement for grandfathered plans.*

- Use the APCD to measure the allowed and paid amount on medical claims for women's contraceptive services covered by Massachusetts payers in baseline year 2015.



- Using the difference between paid and allowed amounts, estimate the cost sharing for women's contraceptive medical services in the baseline year, and divide by medical member-months to calculate a baseline PMPM incremental cost for contraceptive medical benefits currently requiring cost sharing.
- Based on information collected from the carrier survey, project grandfathered membership through the analysis period. (The ACA permits cost sharing for women's contraceptive services for grandfathered plans, which contributes to cost sharing measured in the APCD; membership in those plans will decline.)
- Using the projected PMPM increase in medical expense from above, and adjusting it downward to reflect declining membership in grandfathered plans, calculate the estimated PMPM incremental expense associated with eliminating cost sharing for medical contraceptive services through the analysis period.

*Calculate the impact of projected claim costs on insurance premiums.*

- According to the carrier survey collected for the S.B. 483 mandate study published in 2016, approximately 1.2% of fully insured medical members are in plans that self-insure pharmacy benefits through a separate pharmacy benefits manager. To calculate projections for all contraceptive mandate provisions on a medical membership basis, adjust all pharmacy-related PMPMs to a medical-membership based estimate.
- Add the estimated PMPM costs associated with eliminating cost sharing for all medical contraception services, and with eliminating cost sharing for certain oral contraception that apply to the mandate, adding new drugs to the formularies, the cost of requiring a single dispensing to an enrollee of a supply of prescription contraceptives for a 12-month period, the cost of all FDA-approved EC, and the cost of covering EC without a prescription.
- Estimate the fully insured Massachusetts population under age 65, projected for the next five years (2018 – 2022).
- Multiply the aggregate marginal PMPMs related to the mandate by the projected population estimate to calculate the total estimated marginal cost of S.B. 499.
- Estimate the impact of insurer retention (administrative costs and profit) on premiums.

*For components that are already included in the ACA, the cost estimate is zero. These include:*

- Exempting employers that are churches or qualified church-controlled organizations.
- No cost impact of the language that prohibits impositions of unreasonable restrictions or delays in coverage.

#### 4.4 Limitations

While measuring cost sharing in the APCD is relatively straightforward, this analysis also rests on assumptions that hold more uncertainty. For example, this analysis relies on an estimate of the rate at which ACA-grandfathered plans will lose that status and then must comply with the ACA's mandates for women's preventive health contraceptive services coverage and its restrictions on cost sharing. Data from the carrier survey show that grandfathered membership has fallen over time and is anticipated to continue to do so over the analysis period; however, there is uncertainty in the rate and timing of this decline. This uncertainty does affect the magnitude of the incremental cost of eliminating medical costing sharing; however, it has very little impact on the overall cost of implementing the proposed mandate. For example, if all of the 2017 grandfathered membership remains in grandfathered plans—on which the bill's provisions would have greater effect—the average mid-range incremental PMPM cost over the projection period would increase from \$0.005 to \$0.007.

Likewise, the model incorporates an estimate of the total number of claims filed for EC with or without a prescription. To calculate the total number of women using EC, this analysis draws on the APCD for one carrier whose current coverage is consistent with the proposed mandate and on rates published in a study. These estimates introduce uncertainty because of limited information on the percentage of women using EC without a prescription. Further, data are insufficient to estimate precisely the number of women who will not seek reimbursement for EC because of privacy or administrative reasons. However, this uncertainty has little impact on the overall cost of implementing the proposed mandate. For example, if privacy concerns have no impact and all women seek reimbursement for OTC EC use, the average high scenario incremental PMPM cost over the projection period would increase from \$0.023 to \$0.027.

Next, the analysis does not consider the impact of fraud, nor the potentially offsetting cost of reduced pregnancies, miscarriages, and abortions from proper contraceptive use.

Finally, the model incorporates an estimate of the number of oral contraception that will move to a 12-month prescription and how much additional waste will occur as a result. We draw on published studies to determine these rates. These estimates introduce uncertainty because of limited information on how much wastage will occur when women move to a 12-month prescription for oral contraception. This uncertainty impacts the results but has little impact on the overall cost of implementing the proposed mandate. For example, if the wastage rate for women filling a 12-month supply of oral contraception increased from 4.0% to 4.5%, the average high scenario incremental PMPM cost over the projection period would increase from \$0.050 to \$0.057.

We address these uncertainties by modeling a range of assumptions within reasonable judgment-based limits, and producing a range of estimates of incremental cost by varying these parameters. The more detailed step-by-step description of the estimation process outlined in the next sections addresses these uncertainties further.

## 5.0 Analysis

This section describes the calculations outlined in the previous section in more detail. The analysis includes development of a best estimate middle-cost scenario, as well as a low-cost scenario using assumptions that produced a lower estimate, and a high-cost scenario using more conservative assumptions that produced a higher estimated impact.

The ACA mandate regarding women’s contraceptive services eliminates cost sharing for one product (specified by the carrier) of prescribed contraception in each of the 18 FDA-approved methods, and requires carriers to provide a mechanism to waive otherwise-applicable cost sharing for another method if medically necessary for an individual. S.B. 499 expands this mandate to eliminate any cost sharing for all prescribed methods, as well as expands coverage to include EC without a prescription without cost sharing.

Section 5.1 describes the steps used to calculate the PMPM pharmaceutical expenses associated with covering at least one therapeutic equivalent per FDA-approved drug with no cost sharing (in some cases cost sharing may apply). Section 5.2 estimates the PMPM costs of coverage for EC with no prescription and without cost sharing. Section 5.3 estimates the PMPM costs of expanding coverage of oral contraception to include dispensing with a 12-month supply. Section 5.4 describes the steps used to calculate the PMPM medical expenses associated with eliminating member cost sharing for contraceptive services covered under grandfathered plans that currently require cost sharing. Section 5.5 adjusts pharmacy-related PMPMs to a medical membership basis, while Section 5.6 aggregates the marginal PMPM costs for all contraception-related provisions of the mandate. Section 5.7 projects the fully insured population age 0 – 64 in Massachusetts over the 2018 – 2022 analysis period. Section 5.8 calculates the total estimated marginal cost of S.B. 499, and Section 5.9 adjusts these projections for carrier retention to arrive at an estimate of the bill’s effect on premiums for fully insured plans.

### 5.1 Therapeutic Equivalents

One of the four components contributing to S.B. 499’s effect on premiums stems from the requirement of covering at least one therapeutic equivalent per FDA-approved drug and covering at least one drug with no cost sharing. The ACA requires that carriers cover one contraceptive drug, device, or product per category of contraception at zero cost sharing. There are multiple grouping of therapeutically equivalent drugs in each ACA category of contraception. To measure the impact, we first identified all FDA-approved contraceptive drugs with therapeutic equivalents. We bucketed all FDA-approved drugs into groupings by applying the categories contained in the FDA Orange Book. In all of the groupings, the APCD provided evidence that each carrier covered at least one drug, and as a result, no new drugs are required resulting in no marginal cost of the proposed mandate.

To measure the impact of covering one drug in each grouping of therapeutically equivalent drugs with no cost sharing, we analyzed claims data in the APCD. The choice of which therapeutic equivalents to provide at zero cost sharing can vary for each carrier. We estimated

the cost impact of this legislation by assessing the cost sharing currently employed by carriers. For each carrier, we used the APCD to determine if there is at least one contraceptive drug with no cost sharing in each grouping. If there was at least one drug with no cost share in each grouping, then the mandate has no marginal impact for that grouping for that carrier. For any grouping where there are no contraceptive drugs with no cost sharing at the carrier level, the carrier must add a drug with no cost share. For all such groupings, this analysis used the 2015 baseline year from the APCD to measure the allowed and paid amount on pharmacy claims for each drug in each grouping. Using the difference between paid and allowed amounts, we estimated the cost sharing (deductible, co-insurance, and co-payment) for women’s contraceptive pharmacy services in the baseline year. The marginal impact of the proposed mandate is the cost for the carrier to remove cost sharing for one therapeutic equivalent drug in that grouping.<sup>v</sup>In the low scenario, this analysis used the drug with the lowest cost shares in each grouping and in the high scenario; this analysis assumed all the volume in that grouping moved to the no cost share product.<sup>vi</sup> The mid scenario assumes the carriers will select the drug with the lowest cost shares and some additional volume will migrate to that drug. Table 1 displays the results.

**Table 1: Estimated Baseline Cost Share for Oral Contraceptives**

	Baseline Cost Share
Low Scenario	\$894,773
Mid Scenario	\$1,049,653
High Scenario	\$1,204,532

Projecting this expense over the analysis period requires applying an estimate of cost growth trend for oral contraceptives. Analysis of the APCD shows that the cost trend for contraceptive pharmacy claims is decreasing. However, this report reflects a more conservative approach to projecting the costs for these contraceptive methods going forward. The middle scenario of 3% in Table 2 is based on the three-year average utilization trend, assumes the unit cost trend will flatten (as opposed to decrease), and that cost-sharing amounts will increase with the overall claim trend. The low scenario assumes no adjustment to cost-sharing amounts for pharmacy benefits over the analysis period. Instead, the factor used applies the average 3% increase in contraceptive pharmacy claims, attributable to utilization and calculated from the claim data, to the proportion of costs associated with deductible and co-insurance, which averages approximately 6% of cost sharing; the remainder of cost sharing is co-pay driven. Multiplying

<sup>v</sup> As noted in Section 4, this step was taken in all cases in which there was a non-zero difference between paid and allowed. To the extent that cases with small differences may have reflected data anomalies, the estimates for the therapeutic equivalents impact will be conservatively high.

<sup>vi</sup> As noted in Section 4, the analysis did not model more sophisticated patient migration patterns across drug products. The approach taken produces estimates that are at or above those that migration modeling would produce, and so provides a conservatively high estimate.

these results yields 0.2%, the low scenario factor in Table 2. The high scenario applies the long-term average national projection for cost increases to pharmaceuticals over the study period,<sup>17</sup> to account for any potential new oral contraceptive methods entering the market during the study period.

**Table 2: Estimated Annual Cost Increase Trend Factor for Oral Contraceptives**

	Trend Factor
Low Scenario	1.002
Mid Scenario	1.030
High Scenario	1.057

The 2015 baseline pharmacy oral contraceptive cost-sharing amount is divided by the corresponding pharmacy member months of 16.1 million, and increased by the trend factors in Table 2 to project the PMPM impact of eliminating cost sharing for at least one therapeutic-equivalent drug without cost sharing. Table 3 displays the results.

**Table 3: Estimated PMPM of Increased Expense Associated With Having No Cost Sharing for at Least One Therapeutic-Equivalent Oral Contraceptive**

	Baseline	2018	2019	2020	2021	2022
Low Scenario	\$0.04	\$0.04	\$0.04	\$0.05	\$0.05	\$0.04
Mid Scenario	\$0.06	\$0.07	\$0.07	\$0.07	\$0.07	\$0.06
High Scenario	\$0.09	\$0.09	\$0.10	\$0.10	\$0.11	\$0.09

## 5.2 EC

The ACA mandates coverage of EC without cost sharing for one method in each of two EC categories<sup>18</sup> when obtained with prescription. This mandate extends that coverage to include all EC methods obtainable with or without a prescription.

To project the incremental cost of covering these drugs without a prescription for all fully insured women, the model first estimates the number of women who use EC annually, with or without a prescription. Data from a survey of Massachusetts insurance carriers and the APCD found one insurer in Massachusetts already covers EC, both with and without a prescription. This carrier's claims showed that with this coverage 0.37% of women use EC annually, which is used as the middle and low scenarios for this analysis.

In a national survey, 0.2% of women between 15 – 44 stated they had used EC in the previous month, or about 2.4% annually;<sup>19</sup> this number is used in the high scenario. APCD data for all carriers also show insurance paid for EC for 0.23% of all women, representing a mix of members of the one carrier covering EC with and without a prescription and those that only currently cover it with a prescription. To calculate the incremental number of annual users of EC

covered by the proposed mandate, this figure was subtracted from the total estimates in each scenario, as in Table 4.

**Table 4: Percent of Women Who Use EC Annually**

	All Users	Incremental Users
Low Scenario	0.37%	0.14%
Mid Scenario	0.37%	0.14%
High Scenario	2.40%	2.17%

The proposed mandate would cover EC purchases with no prescription; however, this analysis assumes a portion of women will not submit claims due to either privacy concerns or the associated administrative burdens, and will therefore pay for EC out of pocket, which reduces the incremental impact of this bill. Under the mid and low scenarios, the privacy and administrative requirement concerns are accounted for because they are based upon APCD data for a carrier whose current coverage is consistent with the proposed mandate; as a result, the mid and low scenarios contain no adjustment. For the high scenario, four factors contribute to an estimate of this percentage. The four factors are as follows: 1) the age distribution of women in the fully insured population in Massachusetts; 2) an estimate by age group of the number of women who have taken or used EC in the last 12 months based on a national survey;<sup>20</sup> 3) a factor adjusting for the reduced likelihood that dependent children will submit claims for EC with nor prescription purchases; and 4) a factor adjusting for the increased likelihood that older women will submit claims for EC purchases with no prescription. Table 5 shows the result of these calculations.

**Table 5: Estimated Percent of Women Who Will Pay for EC Out of Pocket**

	% to Pay Out of Pocket
Low Scenario	0%
Mid Scenario	0%
High Scenario	17%

The model assumes the remaining users of EC with no prescription (equal to 1 minus the Table 5 values) will submit claims to insurance for reimbursement; multiplying this calculation by the incremental percent of users shown previously in Table 4 yields the overall percentage of women who will submit claims for EC under the proposed mandate shown in Table 6. This percent is multiplied by the number of fully insured women age 15 – 44 with pharmacy coverage (602,188) to estimate the number of incremental users who will submit claims for OTC EC annually, also displayed in Table 6.

**Table 6: Estimated Users of OTC EC Who Submit Claims**

	<b>% Submit EC Claims</b>	<b>Incremental % Using OTC EC and Submitting Claim</b>	<b>Incremental Users of OTC EC Who Submit Claims</b>
Low Scenario	100%	0.14%	837
Mid Scenario	100%	0.14%	837
High Scenario	83%	1.79%	10,807

APCD data shows that current users of EC average 1.174 units paid annually. Multiplying this by the number of incremental users of EC who submit claims from Table 6 yields the number of incremental units of EC paid annually, as shown in Table 7. Based on national data and adjusting for trend, the average cost of generic EC is \$43.48 per unit;<sup>21</sup> brand-name products average \$51.96 per unit.<sup>22</sup> APCD data shows that 90% of paid EC was generic; therefore, the weighted average cost for EC used in this analysis is \$44.36. This amount is multiplied by incremental paid units to calculate each scenario’s baseline cost, also displayed in Table 7.

**Table 7: Estimated Incremental Paid Units and Baseline Cost of EC With No Prescription**

	<b>Incremental Paid Units</b>	<b>Incremental Baseline Cost</b>
Low Scenario	983	\$43,619
Mid Scenario	983	\$43,619
High Scenario	12,692	\$563,062

The model then applies a 3.0% annual increase to this cost, based on the anticipated 3.0% annual increase in oral contraceptive claims from the APCD data. Under the low scenario, this trend is used throughout the projection period because the low scenario is based upon APCD data for a carrier whose current coverage is consistent with the proposed mandate. Under the middle and high scenarios, it is anticipated utilization will increase by an additional amount in the initial year of the proposed mandate because EC with no prescriptions will be new coverage. This analysis assumes a 5.7% trend in 2018, the initial year of the proposed mandate, for the middle and high scenarios. The 5.7% trend is consistent with the long-term average national projection for cost increases to pharmaceuticals<sup>23</sup> over the study period, applies in year one of the mandate only, and is expected to revert back to the 3.0% trend for the remaining years in the study period. Multiplying the baseline amount by the trend assumptions and dividing by corresponding pharmacy member-months yields the estimated marginal cost of OTC EC attributable to this mandate, shown in Table 8.

**Table 8: Estimated Marginal Cost of OTC EC**

	2018	2019	2020	2021	2022
Low Scenario	\$0.002	\$0.002	\$0.002	\$0.002	\$0.002
Mid Scenario	\$0.002	\$0.002	\$0.002	\$0.002	\$0.002
High Scenario	\$0.021	\$0.022	\$0.023	\$0.023	\$0.024

As previously indicated, the ACA mandates coverage of EC without cost sharing for one method in each of two EC categories<sup>24</sup> when obtained with prescription. This mandate also requires coverage of all FDA-approved EC, including brand-name drugs with no cost sharing.

This analysis used the APCD to calculate the average cost per script of EC currently covered. Using 2015 claims data, the APCD showed that with the average cost per script for EC is \$25.07. To estimate the unit cost of brand-name EC this analysis starts with the 2015 estimate brand-name cost of \$51.96 discussed above. For all scenarios, this analysis assumes that the carriers will receive AWP less 15%. This analysis reduced the \$51.96 average brand price by 15% and then adds a \$1.00 dispensing fees, which is based upon APCD data resulting in a brand price of \$45.17. To calculate the incremental unit cost, this analysis subtracted the current EC unit cost from the APCD from the estimated brand-name cost in each scenario, as shown in Table 9.

**Table 9: Estimated Incremental Unit Cost to Cover All Types of EC**

	Estimated Brand-Name Unit Cost	Incremental Unit Cost
Low Scenario	\$45.17	\$20.10
Mid Scenario	\$45.17	\$20.10
High Scenario	\$45.17	\$20.10

An estimate of the projected number of covered units to switch to a brand-name alternative is uncertain. However, even if all the projected number of units were to switch the incremental cost would be very low with no significant impact on the cost of this mandate. This analysis assumes that in the mid scenario 75% of the prescriptions would move to brand name. The low scenario assumes 50% and the high scenario assume 100% of the prescriptions would move to a brand-name prescription. To determine the number of prescriptions that would move to brand name, the total number of prescriptions in the baseline period are multiplied by the above migration percentages and the results are in Table 10. To calculate the baseline cost, the incremental unit cost is multiplied by the number of prescriptions projected to move to brand name, also shown in Table 10.



**Table 10: Estimated Claims Moving to Brand-Name EC and Baseline Cost**

	<b>Incremental Unit Cost</b>	<b>Scripts Moving to Brand Name</b>	<b>Baseline Cost</b>
Low Scenario	\$20.10	492	\$9,889
Mid Scenario	\$20.10	737	\$14,814
High Scenario	\$20.10	983	\$19,758

The model then applies a 3.0% annual increase to this cost, based on the anticipated 3.0% annual increase in oral contraceptive claims from the APCD data. This analysis uses this trend throughout the projection period for all scenarios. Multiplying the baseline amount by the trend assumptions and dividing by corresponding pharmacy member-months yields the estimated marginal cost of expanded EC to brand-name drugs attributable to this mandate, shown in Table 11 on the following page.

**Table 11: Estimated Marginal Cost of Requiring Brand-Name EC**

	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Low Scenario	\$0.0007	\$0.0007	\$0.0007	\$0.0007	\$0.0008
Mid Scenario	\$0.0010	\$0.0010	\$0.0011	\$0.0011	\$0.0011
High Scenario	\$0.0013	\$0.0014	\$0.0014	\$0.0015	\$0.0015

The projected cost of covering EC with no prescription was added to the cost of coverage for all FDA-approved contraception including brand name and results, which are the total cost of expanded EC coverage, results are shown in Table 12.

**Table 12: Estimated Marginal Cost of Expanded EC**

	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Low Scenario	\$0.002	\$0.002	\$0.002	\$0.003	\$0.003
Mid Scenario	\$0.003	\$0.003	\$0.003	\$0.003	\$0.003
High Scenario	\$0.023	\$0.023	\$0.024	\$0.025	\$0.026

### 5.3 Immediate Dispensing

The proposed mandate would require coverage for a single dispensing to an enrollee of a supply of prescription contraceptives for a 12-month period. Carriers may require a 3-month trial prescription when starting a new contraceptive method before prescribing a 12-month prescription. No more than one 12-month prescription is required per plan year.

A study conducted in California found that among a group of 28,000 women receiving oral contraceptives from clinics that can dispense a 12-month supply at no cost to the patient, 11%

were dispensed pills in a 1-month supply, 27% were dispensed in a 3-month supply, 7% were dispensed in a 6-month supply, 4% were dispensed in a 10-month supply, 34% were dispensed in a 12-month supply, and 17% were dispensed in other quantities (Foster et al., 2011)<sup>25</sup>. Based on this study we estimated that 12-month scripts would be delivered between 40% and 50% of scripts. We expect the percentage of 12-month script to be 25% for the low scenario, 40% for the mid scenario, and 50% for the high scenario over the experience period as shown in Table 13. The slight reduction, especially in the low scenario reflects a dampening impact due to the mandate allowing for a trial period before requiring a 12-month script to be filled and also that the mandate requires only one 12-month script to be filled per year.

**Table 13: Estimated Distribution of 12-Month Scripts**

	<b>12-Month Script Distribution</b>
Low Scenario	25%
Mid Scenario	40%
High Scenario	50%

We estimated the additional wastage of contraception for 12-month scripts compared to scripts 3-months or less to range between 2% and 4% with 2% being the low scenario, 2.5% mid scenario and 4% high scenario. The high scenario is based on a California Family PACT (Planning, Access, Care, and Treatment) study<sup>26</sup> that found that about 6.5% of contraception was wasted using a 12-month script and only 2.4% and 2.0% for 1-month and 3-month scripts. The difference of around 4.5% is the basis for the high scenario. The PACT population is lower income than a commercial population subject to the proposed mandate. We expect the mid and low scenarios to have less additional waste due to higher education levels of a commercially insured population as well as the mandating allowing for an up to 3-month script trial period for each drug. In the California study about a third of the wastage was due to changing scripts and the trial period would reduce this wastage. The low, mid and high estimates of wastage are shown on Table 14.

**Table 14: Estimated Additional Wastage for 12-Month Scripts**

	<b>Estimated Additional Wastage for 12-Month Script</b>
Low Scenario	2.0%
Mid Scenario	2.5%
High Scenario	4.0%

We multiplied the percentage of 12-month scripts by the additional wastage at 12 months to estimate the total increase in expected wasted contraception percentage shown in Table 15.

**Table 15: Additional Percent of Total Contraception Wasted**

	<b>Additional % of Contraception Wasted</b>
Low Scenario	0.5%
Mid Scenario	1.0%
High Scenario	2.0%

The APCD was used to estimate a baseline PMPM for oral contraception cost. Using 2015 oral contraceptive claims of about \$30.8M for largest three APCD carriers that have audited dated, and adding the additional cost (\$894,772 for the low scenario \$1,049,653 for the mid scenario and \$1,204,532 for the high scenario) to paid claims because of reduced cost sharing on Therapeutic equivalents (from section 5.1), and dividing by about 16.1M member months for those same carriers, results in the PMPM baseline contraception cost included in Table 16. Table 16 multiplies the increased wastage percent in Table 15 by the total baseline 2015 contraception PMPM, which results in the baseline wastage PMPM cost.

**Table 16: Additional Wastage PMPM**

	<b>Additional % of Total Contraception Wasted</b>	<b>Baseline Contraception PMPM</b>	<b>Baseline PMPM wastage</b>
Low Scenario	0.5%	\$1.96	\$0.010
Mid Scenario	1.0%	\$1.97	\$0.020
High Scenario	2.0%	\$1.98	\$0.040

Table 17 shows the PMPM impact of the 12-month script requirement of proposed mandate. The results are calculated by projecting the baseline cost forward over the five-year analysis period using assumed pharmacy trend in Table 2. The low scenario trends at 0.2%, the mid

scenario trends at 3.0%, the high scenario trends at 5.7%. This range represents historical contraceptive unit cost trend as the mid-point.

**Table 17: Estimated Marginal Cost of 12-Month Script for Oral Contraception**

	2018	2019	2020	2021	2022
Low Scenario	\$0.010	\$0.010	\$0.010	\$0.010	\$0.010
Mid Scenario	\$0.022	\$0.022	\$0.023	\$0.023	\$0.024
High Scenario	\$0.047	\$0.049	\$0.052	\$0.055	\$0.058

This analysis of the 12-month script contraception requirement with 3-month trial period, does not estimate the potential offsetting costs of reduced pregnancy and abortion rates. The literature suggests that having a 12-month script reduces unplanned pregnancies and abortions due to higher drug adherence

#### **5.4 Eliminating Cost Sharing for Non-Oral Contraception (Medical Claims)**

Cost sharing for non-oral contraception methods, which was prohibited for non-grandfathered plans by the ACA, has fallen dramatically since the implementation of the ACA. In an analysis of APCD data, the current cost sharing associated with these methods is almost wholly attributable to currently grandfathered health insurance plans, which are exempt from the ACA but would be covered under the provisions of S.B. 499. According to a survey of commercial insurance carriers, these plans are anticipated to lose their grandfathered status over time, further shrinking the number of plans and members exempt from the ACA’s contraceptive services provisions.

Based on data provided in the carrier survey, membership in grandfathered plans has fallen over time; the average of the decline in the number of grandfathered members for 2013-14, 2014-15, 2015-16, and 2016-17 is approximately 15 percent. This decline is expected to continue throughout the analysis period, and is reflected in the middle scenario membership decrease in Table 18. The low scenario applies a higher reduction at 25% (more plans will lose grandfathered status and their ACA exemptions), while the high scenario uses a lower assumption of 5 percent.

**Table 18: Adjustment Factors to Estimate of Membership in Grandfathered Plans**

	<b>Membership Decrease</b>
Low Scenario	25%
Mid Scenario	15%
High Scenario	5%

Applying this adjustment in Table 18 to grandfathered membership each year over the analysis period yields the percent of members remaining in grandfathered plans compared to the 2015 baseline claims year, as reflected in Table 19.

**Table 19: Estimated Percent of Members Remaining in Grandfathered Plans Versus 2015 Level**

	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Low Scenario	53.1%	39.9%	29.9%	22.4%	16.8%
Mid Scenario	60.2%	51.2%	43.5%	37.0%	31.4%
High Scenario	67.3%	63.9%	60.7%	57.7%	54.8%

As plans lose grandfathered status over time and must comply with the ACA contraception requirements, their contraceptive services will no longer be subject to cost sharing. Therefore, the analysis assumes the cost-sharing amounts associated with medical contraceptive services—the 2015 baseline cost sharing of \$133,252—will decrease by the same percentages over the analysis period. This total is divided by corresponding medical member-months of 13.75 million, and an average long-term average national projection for cost increases to physician and clinical services over the study period is applied.<sup>27</sup> Table 20 outlines the resulting PMPM estimates.

**Table 20: Estimated Increased Expense Associated With Elimination of Cost Sharing for Non-Oral Contraception**

	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Low Scenario	\$0.005	\$0.004	\$0.003	\$0.002	\$0.002
Mid Scenario	\$0.006	\$0.005	\$0.004	\$0.004	\$0.003
High Scenario	\$0.007	\$0.007	\$0.006	\$0.006	\$0.006

## 5.5 Adjustments to Pharmacy Membership

Pharmacy and medical member-months for the fully insured population differ, as approximately 1.1% of the fully insured medical members in the 2015 baseline year were in plans that self-insured pharmacy coverage through a separate pharmacy benefits manager. PMPM marginal costs based on pharmacy membership are therefore adjusted to a medical-membership basis

so that the projected fully insured medical membership can be used to calculate the projected cost of the mandate. Tables 21, 22, and 23 show the adjustments to Tables 3, 12, and 17, respectively. The PMPM amounts in Table 20 for Contraceptive Services were based upon medical member months so were not adjusted.

**Table 21: Estimated Marginal Cost of Therapeutic Equivalents, Adjusted to Medical Membership**

	2018	2019	2020	2021	2022
Low Scenario	\$0.044	\$0.044	\$0.044	\$0.045	\$0.045
Mid Scenario	\$0.064	\$0.065	\$0.067	\$0.069	\$0.071
High Scenario	\$0.088	\$0.092	\$0.098	\$0.103	\$0.109

**Table 22: Estimated Marginal Cost of EC, Adjusted to Medical Membership**

	2018	2019	2020	2021	2022
Low Scenario	\$0.002	\$0.002	\$0.002	\$0.002	\$0.003
Mid Scenario	\$0.003	\$0.003	\$0.003	\$0.003	\$0.003
High Scenario	\$0.023	\$0.023	\$0.024	\$0.025	\$0.025

**Table 23: Estimated Marginal Cost of Immediate Dispensing, Adjusted to Medical Membership**

	2018	2019	2020	2021	2022
Low Scenario	\$0.010	\$0.010	\$0.010	\$0.010	\$0.010
Mid Scenario	\$0.021	\$0.022	\$0.022	\$0.023	\$0.024
High Scenario	\$0.046	\$0.048	\$0.051	\$0.054	\$0.057

## 5.6 Marginal Cost Per Member Per Month

Adding together the estimated PMPM costs associated with the four relevant contraception provisions (from Tables 20, 21, 22 and 23) yields the total PMPM incremental cost, shown in Table 24.

**Table 24: Estimated Marginal PMPM Cost of Contraception Mandate**

	2018	2019	2020	2021	2022
Low Scenario	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06
Mid Scenario	\$0.09	\$0.10	\$0.10	\$0.10	\$0.10
High Scenario	\$0.16	\$0.17	\$0.18	\$0.19	\$0.20

### 5.7 Projected Fully Insured Population in Massachusetts

Table 25 shows the fully insured population in Massachusetts age 0 to 64 projected for the next five years. Appendix C describes the sources of these values.

**Table 25: Projected Fully Insured Population in Massachusetts, Ages 0 – 64**

Year	Total (0 – 64)
2018	2,407,114
2019	2,380,914
2020	2,353,701
2021	2,326,576
2022	2,299,887

### 5.8 Total Marginal Medical Expense

Multiplying the total estimated PMPM cost by the projected fully insured membership over the analysis period results in the total cost (medical expense) associated with the mandate, shown in Table 26.

**Table 26: Estimated Marginal Cost of Contraception Mandate**

	2018	2019	2020	2021	2022
Low Scenario	\$1,272,106	\$1,730,556	\$1,686,639	\$1,650,518	\$1,620,429
Mid Scenario	\$1,928,313	\$2,720,097	\$2,742,568	\$2,769,426	\$2,800,486
High Scenario	\$3,361,204	\$4,875,590	\$5,056,069	\$5,244,992	\$5,443,436

### 5.9 Carrier Retention and Increase in Premium

Assuming an average retention rate of 11.0% based on CHIA’s analysis of administrative costs and profit in Massachusetts,<sup>28</sup> the increase in medical expense was adjusted upward to approximate the total impact on premiums. Table 27 shows the result.

**Table 27: Estimate of Increase in Carrier Premium Expense**

	2018	2019	2020	2021	2022
Low Scenario	\$1,429,030	\$1,944,035	\$1,894,700	\$1,854,123	\$1,820,322
Mid Scenario	\$2,166,187	\$3,055,643	\$3,080,886	\$3,111,057	\$3,145,949
High Scenario	\$3,775,836	\$5,477,035	\$5,679,777	\$5,892,005	\$6,114,929

## 6.0 Results

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

The impact on premiums is driven by the provisions of S.B. 499 eliminating cost sharing for all FDA-approved prescribed contraception for women, plus its coverage for OTC EC. More specifically, the largest contributor to the impact on premiums is the requirement that providers cover all versions of prescribed, FDA-approved oral contraceptives without cost sharing.

Starting in 2020, the federal ACA will impose an excise tax, commonly known as the “Cadillac Tax”, on expenditures on health insurance premiums and other relevant items (health savings account contributions, etc.) that exceed specified thresholds. To the extent relevant expenditures exceed those thresholds (in 2020), S.B. 499, by increasing premiums, has the potential of creating liability for additional amounts under the tax. Estimating the amount of potential tax liability requires information on the extent to which premiums, notwithstanding the effect of S.B. 499, will exceed or approach the thresholds, and is beyond the scope of this analysis.

### 6.1 Five-Year Estimated Impact

For each year in the five-year analysis period, Table 28 displays the projected net impact of the mandate on medical expense and premiums using a projection of Massachusetts fully insured membership. Note that the relevant provisions of S.B. 499 are assumed effective January 1, 2018.<sup>29</sup>

The low scenario impact is \$1.9 million per year on average, and is due to the lower estimates of cost increases to therapeutic equivalents, slower transitioning of grandfathered plans to ACA-compliant plans, lower utilization and claims filing rates for EC with no prescription, and lower wastage and number of claims dispensed with a 12-month supply. The high scenario has an average cost of \$5.7 million per year, and reflects higher cost increases therapeutic equivalents, faster transitioning of grandfathered plans to ACA-compliant plans, higher utilization and claims



filing rates for EC with no prescription, and higher wastage and number of claims dispensed with a 12-month supply. The middle scenario has average annual costs of \$3.1 million, or an average of 0.023% of premium.

Finally, the impact of the proposed law on any one individual, employer-group, or carrier may vary from the overall results depending on the current level of benefits each receives or provides, and on how the benefits will change under the mandate. In particular, plans currently grandfathered as exempt from ACA contraception requirements will likely see larger increases in medical expenses and presumably in premiums.

**Table 28: Summary Results**

	2018	2019	2020	2021	2022	Weighted Average	5 Year Total
Members (000s)	2,407	2,381	2,354	2,327	2,300		
Medical Expense Low (\$000s)	\$1,272	\$1,731	\$1,687	\$1,651	\$1,620	\$1,691	\$7,960
Medical Expense Mid (\$000s)	\$1,928	\$2,720	\$2,743	\$2,769	\$2,800	\$2,754	\$12,961
Medical Expense High (\$000s)	\$3,361	\$4,876	\$5,056	\$5,245	\$5,443	\$5,095	\$23,981
Premium Low (\$000s)	\$1,429	\$1,944	\$1,895	\$1,854	\$1,820	\$1,900	\$8,942
Premium Mid (\$000s)	\$2,166	\$3,056	\$3,081	\$3,111	\$3,146	\$3,094	\$14,560
Premium High (\$000s)	\$3,776	\$5,477	\$5,680	\$5,892	\$6,115	\$5,724	\$26,940
PMPM Low	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07
PMPM Mid	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11
PMPM High	\$0.18	\$0.19	\$0.20	\$0.21	\$0.22	\$0.20	\$0.20
Estimated Monthly Premium	\$463	\$473	\$483	\$493	\$503	\$483	\$483
Premium % Rise Low	0.015%	0.014%	0.014%	0.013%	0.013%	0.014%	0.014%
Premium % Rise Mid	0.023%	0.023%	0.023%	0.023%	0.023%	0.023%	0.023%
Premium % Rise High	0.040%	0.041%	0.042%	0.043%	0.044%	0.042%	0.042%

## 6.2 Impact on the GIC

The proposed mandate is assumed to apply to both fully insured and self-insured plans operated for state and local employees by the GIC, with an effective date for all GIC policies on July 1, 2018.

---

Because the benefit offerings of GIC plans are similar to those of most other commercial plans in Massachusetts, with grandfathered plans not currently subject to the ACA women's preventive health contraceptive services mandates and cost-sharing restrictions, the estimated PMPM effect of the proposed mandate on GIC medical expense is not expected to differ from that calculated for the other fully insured plans in Massachusetts.

This is consistent with carrier survey responses that, in general, did not indicate differences in coverage for the GIC, with the exception of one. This one carrier, which covers only a portion of the GIC, indicated no current differences in coverage between its grandfathered and non-grandfathered plans. (There is, therefore, for this carrier, no incremental cost of eliminating cost sharing for medical contraception services, as in Section 5.4, which may reduce the incremental PMPM estimate for that one carrier's membership by \$0.006.)

As noted, at least some information from carriers suggests the GIC has grandfathered plans. However, given that complete information is not available, the analysis takes a conservative approach to estimating the bill's potential impact on GIC plans and assumes a mix of grandfathered/non-grandfathered membership in GIC plans similar to that in the rest of the fully insured plans. Based on these assumptions, the bill's impact on the GIC plans would be similar to its impact on most other fully insured plans.

To estimate the medical expense separately for the GIC, the PMPM medical expense for the general fully insured population was applied to the GIC membership starting in July of 2018.

Table 29 breaks out the GIC-only fully insured membership and the GIC self-insured membership and the corresponding incremental medical expense and premium. Note that the total medical expense and premium values for the general fully insured membership displayed in Table 28 also include the GIC fully insured membership. Finally, the proposed mandate is assumed to require the GIC to implement the provisions on July 1, 2018; therefore, the results in 2018 are approximately one-half of an annual value.

**Table 29: GIC Summary Results**

	2018	2019	2020	2021	2022	Weighted Average	5 Year Total
<b>GIC Fully Insured</b>							
Members (000s)	54	54	54	54	54		
Medical Expense Low (\$000s)	\$20	\$39	\$39	\$38	\$38	\$39	\$174
Medical Expense Mid (\$000s)	\$30	\$62	\$63	\$64	\$65	\$63	\$284
Medical Expense High (\$000s)	\$53	\$110	\$116	\$121	\$127	\$117	\$527
Premium Low (\$000s)	\$22	\$44	\$43	\$43	\$42	\$43	\$195
Premium Mid (\$000s)	\$34	\$69	\$70	\$72	\$73	\$71	\$319
Premium High (\$000s)	\$59	\$124	\$130	\$136	\$142	\$132	\$592
<b>GIC Self-Insured</b>							
Members (000s)	270	270	269	268	268		
Medical Expense Low (\$000s)	\$100	\$196	\$193	\$190	\$189	\$193	\$868
Medical Expense Mid (\$000s)	\$152	\$308	\$313	\$319	\$326	\$315	\$1,419
Medical Expense High (\$000s)	\$264	\$552	\$578	\$605	\$634	\$585	\$2,633

## Appendix A: Comparison of H.B. 536/S.B. 499 to the Affordable Care Act

Abbreviated H.B. 536/S.B. 499 provision description for subsequent use in report	H.B. 536/S.B. 499 Provisions	Related ACA Requirements	Possible Incremental Impact
Plans Affected	<ul style="list-style-type: none"> <li>• Plans affected by bill: M.G.L. Chapter 32A, 175, 176A, 176B, 176G, 118E</li> <li>• Includes plans grandfathered as exempt from the essential health benefit and preventive services requirements of the ACA.</li> </ul>	<p>Plans required to adhere to ACA requirements: All private plans, including individual, small group, large group, and self-insured plans</p> <p>Plans that maintain “grandfathered” status are exempt.</p>	See below.
	<ul style="list-style-type: none"> <li>• Requires coverage for all Food and Drug (“FDA”)-approved contraceptive drugs, devices, and other products for enrollees, enrollee’s covered spouse, and enrollee’s covered dependents. The following apply:</li> </ul>	See below.	See below.
Expanded Options	<ul style="list-style-type: none"> <li>○ If there is one or more therapeutic equivalents of an FDA-approved drug, device, or product, the insurer is not required to include all therapeutic equivalents in its formulary, as long as at least one is included and covered without cost sharing.</li> </ul>	The ACA requires one form of 18 FDA-approved methods of birth control must be covered without cost-sharing.	Access would increase to include additional drugs, devices, and methods available without cost-sharing, but the expected incremental impact is low.

Abbreviated H.B. 536/S.B. 499 provision description for subsequent use in report	H.B. 536/S.B. 499 Provisions	Related ACA Requirements	Possible Incremental Impact
Provider discretion	<ul style="list-style-type: none"> <li>○ If an individual's attending provider recommends a particular FDA-approved contraceptive drug, device, or product, based on a medical determination with respect to that individual, the insurer shall provide coverage subject to utilization management procedures, for the prescribed contraceptive drug, device, or product.</li> </ul>	See below.	No anticipated incremental effect.

Abbreviated H.B. 536/S.B. 499 provision description for subsequent use in report	H.B. 536/S.B. 499 Provisions	Related ACA Requirements	Possible Incremental Impact
No therapeutic equivalent	<ul style="list-style-type: none"> <li>○ If an FDA-approved oral contraceptive has no therapeutic equivalent,<sup>vii</sup> coverage shall not be required unless the individual's attending provider recommends the particular FDA-approved oral contraceptive, based on a medical determination with respect to that individual and subject to utilization management procedures for the FDA-approved oral contraceptive.<sup>viii</sup></li> </ul>	<p>If an individual's attending provider recommends a particular service or FDA-approved item based on a determination of medical necessity with respect to that individual, the plan or issuer must cover that service or item without cost-sharing.</p> <p>The plan or issuer must defer to the determination of the attending provider. Medical necessity may include considerations such as severity of side effects, differences in permanence and reversibility of contraceptives, and ability to adhere to the appropriate use of the item or service, as determined by the attending provider.<sup>ix</sup></p>	Some oral contraceptives without therapeutic equivalents might be excluded from coverage, resulting in a small reduction in cost.

<sup>vii</sup> Oral contraceptives with no therapeutic equivalent: Natazia, Taytulla, Lo Minastrin Fe, Norinyl 1+50, Tri-Ligest 21. FDA: U.S. Food & Drug Administration. Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations. Accessed 18 October 2017: <https://www.accessdata.fda.gov/scripts/cder/ob/>.

<sup>viii</sup> Barash, Bryan. Reply to follow-up sponsor questions, 10 October 2017 "...the doctor's recommendation would take precedence subject to the insurer's utilization management procedures."

Abbreviated H.B. 536/S.B. 499 provision description for subsequent use in report	H.B. 536/S.B. 499 Provisions	Related ACA Requirements	Possible Incremental Impact
EC	<ul style="list-style-type: none"> <li>Requires coverage for all FDA-approved EC available OTC, either with a prescription, or dispensed consistent with the requirements of section 19A of chapter 94C.</li> </ul>	ACA requires coverage of levonorgestrel and ulipristal acetate, without cost-sharing.	Would expand access without cost-sharing to additional drugs, but incremental impact expected to be low.

<sup>ix</sup> FAQs about Affordable Care Act Implementation (Part XXVI), May 11, 2015. Accessed 19 October 2017: [https://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/Downloads/aca\\_implementation\\_faqs26.pdf](https://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/Downloads/aca_implementation_faqs26.pdf)

Abbreviated H.B. 536/S.B. 499 provision description for subsequent use in report	H.B. 536/S.B. 499 Provisions	Related ACA Requirements	Possible Incremental Impact
12-month supply	<ul style="list-style-type: none"> <li>• Requires coverage for contraceptives intended to last for the following time periods:               <ul style="list-style-type: none"> <li>○ Up to a 3-month period of time for the first time the prescription contraceptive is dispensed to the covered person.</li> <li>○ Up to a 12-month period of time for subsequent dispensing of the same prescription, which may be dispensed all at once or over the course of the 12-month period, regardless of whether the covered person was enrolled in a plan or policy under this chapter at the time the prescription contraceptive was first dispensed; provided that the insured may not fill more than one 12-month prescription in a single dispensing per plan year.</li> </ul> </li> </ul>	ACA does not address this.	Anticipated incremental impact, expected to be low.



Abbreviated H.B. 536/S.B. 499 provision description for subsequent use in report	H.B. 536/S.B. 499 Provisions	Related ACA Requirements	Possible Incremental Impact
Female sterilization	<ul style="list-style-type: none"> <li>Requires coverage of voluntary female sterilization procedures. No cost-sharing.</li> </ul>	ACA requires this. Note: Grandfathered plans are exempt from requirement.	Small incremental impact related to grandfathered plans.
Education and counseling	<ul style="list-style-type: none"> <li>Requires coverage of patient education and counseling on contraception. No cost-sharing.</li> </ul>	ACA requires this. Note: Grandfathered plans are exempt from requirement.	Small incremental impact related to grandfathered plans.
Follow-up services	<ul style="list-style-type: none"> <li>Requires coverage of follow-up services related to the drugs, devices, products and procedures covered, including, but not limited to, management of side effects, counseling for continued adherence, and device insertion and removal. No cost-sharing.</li> </ul>	ACA requires this. Note: Grandfathered plans are exempt from requirement.	Small incremental impact related to grandfathered plans.
No unreasonable restrictions or delays	<ul style="list-style-type: none"> <li>Prohibits the imposition of any unreasonable restrictions or delays in coverage; provided that reasonable medical management techniques may be applied to coverage within a method category, as defined by the FDA, but not across types of methods.</li> </ul>	Permits use of reasonable medical management techniques, such as step therapy and prior authorization.	No incremental impact.
Church exemption	<ul style="list-style-type: none"> <li>Exempts employers that are churches or qualified church-controlled organizations from the provisions regarding contraceptive services, drugs, and devices.</li> </ul>	ACA has exemption.	No incremental impact.

## Appendix B: Contraception Coverage by Carrier for Fully Insured Plans

The following multipage table displays the responses from ten carriers to a survey on coverage for contraception (drugs, devices, and procedures) for non-grandfathered plans. Carriers not responding to the survey are excluded.

Method	Blue Cross Blues Shield MA		BMCHP	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
1. Sterilization for women	Sterilization for women, including corresponding anesthesia, if for family planning. All services at \$0 cost share	Sterilization done for reasons other than family planning	Yes (plan covers an option in this category without cost sharing)	N/A
2. Surgical sterilization implant for women	Sterilization for women, including corresponding anesthesia, if for family planning. All services at \$0 cost share	Sterilization done for reasons other than family planning	Yes	N/A
3. Implantable rod	Insertion of these implants are covered at \$0 cost share		Yes, (i.e. NEXPLANON)	N/A
4. IUD copper	Insertion of these implants are covered at \$0 cost share		Yes, (i.e. PARAGARD)	N/A
5. IUD with progestin	Insertion of these implants are covered at \$0 cost share		Yes, MIRENA	N/A
6. Shot/injection	Injections are covered at \$0 cost share	Tier 2, 3 or Brand Name	MEDROXYPROGESTERONE ACETAT 150MG/ML	N/A
7. Oral contraceptive (combined pill)	All generic brands	Tier 2, 3 or Brand Name	Yes, (i.e. GILDESS)	N/A
8. Oral contraceptive (progestin only)	All generic brands	Tier 2, 3 or Brand Name	Yes, (i.e. JENCYCLA)	N/A

Method	Blue Cross Blues Shield MA		BMCHP	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
9. Oral contraceptive extended/continuous use	All generic brands	Tier 2, 3 or Brand Name	LEVONORGES TREL-ETHINYL ESTRADIOL 90MG- 20MG/DAYSEE	N/A
10. Patch	All generic brands	Tier 2, 3 or Brand Name	Yes, (i.e. XULANE)	N/A
11. Vaginal contraceptive ring	Covered at \$0 cost share if administered or supplied in doctor's office		Yes, (i.e. NUVARING)	N/A
12. Diaphragm	All generic brands		Yes, (i.e. OMNIFLEX)	N/A
13. Sponge	All generic brands		Yes	N/A
14. Cervical cap	All generic brands		Yes, (i.e. FEMCAP)	N/A
15. Female condom	All generic brands		Yes, (i.e. FC FEMALE CONDOM)	N/A
16. Spermicide	All generic brands		Yes, (i.e. VCF VAGINAL CONTRACEPTIVES)	N/A
17. EC (Plan B/Plan B One Step/Next Choice)	All generic brands with prescription for women under 17	All brands for women over age 17	Yes, (i.e. Next Choice)	N/A
18. EC (ELLA)	All generic brands with prescription for women under 17	All brands for women over age 17	Yes	N/A

Method	Fallon		Harvard Pilgrim	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
1. Sterilization for women	Yes	\$0	Y	CIF (covered in full)
2. Surgical sterilization implant for women	Yes	\$0	Y	
3. Implantable rod	Yes	\$0	Y	CIF
4. IUD copper	Yes	\$0	Y	CIF
5. IUD with progestin	Yes	\$0	Y	
6. Shot/injection	Yes	See Fallon detail 1	Y	CIF
7. Oral contraceptive (combined pill)	Yes	See Fallon detail 1	See HP detail 1 below	
8. Oral contraceptive (progestin only)	Yes	See Fallon detail 1	NORETHINDRONE, DEBLITANE, SHAROBEL, LYZA, NORLYROC, NORABE, JOLIVETTE, ERRIN, CAMILA, JENCYCLA, HEATHER	
9. Oral contraceptive extended/continuous use	Yes	See Fallon detail 1	QUASENSE, JOLESSA, LEVONORGESTREL-ETH ESTRADIOL, DAYSEE, LEVONORG-ETH ESTRAD ETH ESTRAD, ASHLYNA, INTROVALE, CAMRESE, CAMRESE LO	
10. Patch	Yes	See Fallon detail	Y	CIF
11. Vaginal contraceptive ring	Yes	See Fallon detail	Y	CIF
12. Diaphragm	Yes	\$0	WIDE SEAL DIAPHRAGM, ORTHO ALL-FLEX, CAYA CONTOURED	

Method	Fallon		Harvard Pilgrim	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
13. Sponge	Yes	\$0	TODAY CONTRACEPTIVE SPONGE	
14. Cervical cap	Yes	\$0	Y	CIF
15. Female condom	Yes	\$0	Y	
16. Spermicide	Yes	\$0	CONCEPTROL, GYNOL II, VCF, ENCARE	
17. EC (Plan B/Plan B One Step/Next Choice)	Yes	With Rx, \$0; without Rx, member may submit for reimbursement	Covered under Pharmacy	
18. EC (ELLA)	Yes	\$0	Covered under Pharmacy with prescription	

Fallon detail 1: If generic, covered at \$0 cost share. If brand-name product with no generic available and only FDA-approved for contraception, a step through a generic products is required for \$0 cost share. At POS, if evidence of generic product in history, claim will process at \$0. If no evidence, documentation required from provider. If brand with generic available, claim will process at non-preferred brand tier cost share. If a product has multiple FDA-approved indications, a PA is required to determine use. If it's for contraception, requires step as above.

HP detail1: Levonest, Dasetta, Philith, Falmina, Mono-Linyah, Tri-Linyah, Elinest, Desogestrel-Ethinyl, Stradiol, Wera, Pimtree, Larin Fe, Larin, Larin 24 Fe, Juleber, Norgestrel-Ethinyl Estra, Levonorgestrel-Eth Estradiol, Norethindron-Ethinyl Estradiol, Norethin-Eth Estra, Ferrous Fum, Desogestr-Eth Estrad Eth Estra, Drospirenone-Ethinyl Estradiol, Lo Loestrin, Fe, Minastrin 24 Fe, Lo Minastrin Fe, Ovcon-50, Aubra, Tarina Fe, Chateal, Cyred, Safyral, Beyaz, Natazia, Ortho Tri-Cyclen Lo, Delyla, Tilia Fe, Layolis Fe, Necon, Leena, Microgestin Fe, Mononessa, Trinessa, Brevicon, Norinyl 1+35, Microgestin, Levora-28, Trivora-28, Zenchent Fe, Zovia 1-35e, Zovia 1-50e, Low-Ogestrel, Ogestrel, Azurette, Lutera, Zenchent, Reclipsen, Caziant, Sronyx, Zarah, Vestura, Nortrel, Lessina, Sprintec, Tri-Sprintec, Portia, Junel, Junel Fe, Tri-Legest Fe, Balziva, Apri, Aviane, Enpresse, Cryselle, Kariva, Velivet, Kelnor 1-35, Aranelle, Ocella, Gildagia, Kimidess, Cyclofem, Emoquette, Gildess, Gildess Fe, Gildess 24 Fe, Myzilra, Orsythia, Previfem, Tri-Previfem, Lomedia 24 Fe, Solia, Kurvelo, Vyfemla, Enskyce, Nikki, Pirmella, Norethindrone-Ethin Estradiol, Wymzya Fe, Norgestimate-Ethinyl Estradiol, Briellyn, Viorele, Marlissa, Alyacen, Estarylla, Tri-Estarylla, Altavera, Loryna, Syeda, Zeosa, Junel Fe 24, Gianvi

Method	Health New England		Minuteman	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
1. Sterilization for women	Y (plan covers an option without cost sharing)		Essure System	
2. Surgical sterilization implant for women	Y		Tubal Ligation Tubal ligation status	
3. Implantable rod	Y		Nexplanon	
4. IUD copper	Y		Paraguard	
5. IUD with progestin	Y		Mirena, Skyla	
6. Shot/injection	Y		Medroxyprogesterone injection	
7. Oral contraceptive (combined pill)	Y	Y (options with cost sharing exist)	See Minuteman detail 1	
8. Oral contraceptive (progestin only)	Y	Y	camila, deblitane, errin, heather, jencycla, jolivette, lyza, nora-be, norethindrone, norlyroc, sharobel	
9. Oral contraceptive extended/continuous use	Y	Y	amethia and amethia LO, camrese and camrese LO, daysee, introvale, jolessa, levonorgestrel and ethinyl estradiol, quasense,	
10. Patch	Y	Y	Xulane patch	
11. Vaginal contraceptive ring	Y		Nuvaring	
12. Diaphragm	Y		Omniflex diaphragm, Ortho diaphragm all flex and flat spring and coil spring kit, wide-seal silicone diaphragm kit,	
13. Sponge	Y		Today Sponge	

Method	Health New England		Minuteman	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
14. Cervical cap	Y		Femcap, Prentif Cavityrim cervical cap	
15. Female condom	Y		Fc Female Condom and Fc2 female condom	
16. Spermicide	Y		Shur-seal, Vcf vaginal contraceptive film and foam, Encare, Options conceptrol and Gynol vaginal contraceptive	
17. EC (Plan B/Plan B One Step/Next Choice)	Y		My way, next choice one dose	
18. EC (ELLA)	Y		Ella	

Minuteman detail 1: altavera, alyacen, apri, aranelle, aubra, avaine, azurette, balziva, briellyn, casziant, cesia, chateal, cryselle, cyclafem, dasetta, delyla, desogestrel/ethinyl estradiol, drospireone/ethinyl estradiol, elinest, emoquette, enpresse-28, enskyce, estarylla, falmina, gianvi, gildagia, gildess and gildess FE, junel and junel FE, kariva, kelnor, kurvelo, larin and larin FE, leena, lessina, levonest, levonorgestrel and ethinyl estradiol, lomedica 24 FE, loryna, low-ogestrel, lutera, marlissa, microgestin and microgestin FE, mono-linyah, mononessa, myzilra, natazia, necon and necon FE, nikki, norethindrone acetate/ethinyl estradiol, notrel, ocella, orsythia, philith, pimtrea, priemlla, portia, previfem, reclipen, solia, sprintec, sronyx, syeda, tarina, tilia, tri legest, tri linyah, tri previfem, tri sprintec, trivora, velivet, vestura, viorele, vyfemla, wera,, wymza fe, zarah, zenchent, zovia

Method	Neighborhood Health Plan		Tufts	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
1. Sterilization for women	Yes	No	See Tufts detail 1	None
2. Surgical sterilization implant for women	Yes	No	Permanent implantable contraceptive intratubal occlusion device(s) and delivery system	None
3. Implantable rod	Yes	No	All products covered	None
4. IUD copper	Yes	No	All products covered	None
5. IUD with progestin	Yes	No	All products covered	None
6. Shot/injection	Yes	No	All products covered	None
7. Oral contraceptive (combined pill)	Yes	No	All products covered	None
8. Oral contraceptive (progestin only)	Yes	No	All products covered	None
9. Oral contraceptive extended/continuous use	Yes	No	All products covered	None
10. Patch	Yes	No	All products covered	None
11. Vaginal contraceptive ring	Yes	No	All products covered	None
12. Diaphragm	Yes	No	All products covered	None
13. Sponge	Yes	No	All products covered	None



Method	Neighborhood Health Plan		Tufts	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
14. Cervical cap	Yes	No	All products covered	None
15. Female condom	Yes	No	All products covered	None
16. Spermicide	Yes	No	All products covered	None
17. EC (Plan B/Plan B One Step/Next Choice)	Yes	No	All products covered	None
18. EEC (ELLA)	Yes	No	All products covered	None

Tufts detail 1:

00851-Anesthesia for intraperitoneal procedures in lower abdomen including laparoscopy; tubal ligation/transection

00952-Anesthesia for vaginal procedure; hysteroscopy and/or hysterosalpingography

58555-hysteroscopy, diagnostic

58565-hysteroscopy, surgical; with bilateral fallopian tube cannulation to induce occlusion by placement of permanent implants

58600-Ligation or transection of fallopian tube(s), abdominal or vaginal approach, unilateral or bilateral

58605-Ligation or transection of fallopian tube(s), abdominal or vaginal approach, postpartum, unilateral or bilateral, during same hospitalization

58611-Ligation or transection of fallopian tube(s) when done at the time of cesarean delivery or intra-abdominal surgery (not a separate procedure)

58615-Occlusion of fallopian tube(s) by device (e.g., band, clip, Falope ring) vaginal or suprapubic approach

58670-Laparoscopy, surgical; with fulguration of oviducts (with or without transection)

58671-Laparoscopy, surgical; with occlusion of oviducts by device (e.g., band, clip, or Falope ring)

88302-Level II- Surgical pathology, gross and microscopic examination Appendix, incidental, Fallopian tube, sterilization

99144- Moderate sedation age 5 years or older, first 30 minutes intra-service time, when billed with 00952 or 58555

99145- Moderate sedation each additional 15 minutes intra-service time, when billed with 00952 or 58555

A4264-Permanent implantable contraceptive intratubal occlusion device(s) and delivery system

Method	Unicare		United Healthcare	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
1. Sterilization for women	Yes	no member cost	See United Health Care detail 1	
2. Surgical sterilization implant for women	Yes	no member cost	See United Health Care detail 1	
3. Implantable rod	Yes	See Unicare detail 1 below.	See United Health Care detail 1	
4. IUD copper	Yes	See Unicare detail 1 below.	See United Health Care detail 1	
5. IUD with progestin	Yes	See Unicare detail 1 below.	See United Health Care detail 1	
6. Shot/injection	Yes	See Unicare detail 1 below.	See United Health Care detail 1	
7. Oral contraceptive (combined pill)	Yes	See Unicare detail 1 below.	Select combined pill, extended use and progestin only products covered at \$0	
8. Oral contraceptive (progestin only)	Yes	See Unicare detail 1 below.	Select combined pill, extended use and progestin only products covered at \$0	
9. Oral contraceptive extended/continuous use	Yes	See Unicare detail 1 below.	Cover every unique progestin at \$0	
10. Patch	Yes	See Unicare detail 1 below.	\$0	
11. Vaginal contraceptive ring	Yes	See Unicare detail 1 below.	\$0	
12. Diaphragm	Yes	See Unicare detail 1 below.	See United Health Care detail 1	

Method	Unicare		United Healthcare	
	Services with no cost sharing	Services with cost sharing	Services with no cost sharing	Services with cost sharing
13. Sponge	Yes	See Unicare detail 2 below.	\$0	
14. Cervical cap	Yes	See Unicare detail 1 below.	See United Health Care detail 1	
15. Female condom	Yes	See Unicare detail 2 below.	\$0	
16. Spermicide	Yes	See Unicare detail 2 below.	\$0	
17. EC (Plan B/Plan B One Step/Next Choice)	Yes	\$0- for generics and single-source brands (brands w/ no generic available). Cost share applies to brands with generic equivalents available. OTC requires prescription.	\$0	
18. EC (ELLA)	Yes	\$0- for generics and single-source brands (brands w/ no generic available). Cost share applies to brands with generic equivalents available. OTC requires prescription.	\$0	

Unicare detail 1: \$0- for generics and single-source brands (brands w/ no generic available). Cost share applies to brands with generic equivalents available.

Unicare detail 2: \$0- for generics and single-source brands (brands w/ no generic available). OTC requires prescription. OTC brands with generic equivalents available are not covered.

United Health Care detail 1: 100% with Network providers under the Preventive Care Services Benefit.

## Appendix C: Membership Affected by the Proposed Mandate

Membership potentially affected by a proposed mandate may include Massachusetts residents with fully insured employer-sponsored health insurance issued by a Massachusetts licensed company (including through the GIC), non-residents with fully insured employer-sponsored insurance issued in Massachusetts, Massachusetts residents with individual (direct) health insurance coverage, and, in some cases, lives covered by GIC self-insured coverage. Membership projections for 2018 to 2022 are derived from the following sources.

Total Massachusetts population estimates for 2013, 2014, and 2015 from U. S. Census Bureau data<sup>30</sup> form the base for the projections. Distributions by gender and age, also from the Census Bureau,<sup>31</sup> were applied to these totals. Projected growth rates for each gender/age category were estimated from Census Bureau population projections to 2030.<sup>32</sup> The resulting growth rates were then applied to the base amounts to project the total Massachusetts population for 2018 to 2022.

The number of Massachusetts residents with employer-sponsored or individual (direct) health insurance coverage was estimated using Census Bureau data on health insurance coverage status and type of coverage<sup>33</sup> applied to the population projections.

To estimate the number of Massachusetts residents with fully insured employer-sponsored coverage, projected estimates of the percentage of employer-based coverage that is fully insured were developed using historical data from the Medical Expenditure Panel Survey Insurance Component Tables.<sup>34</sup>

To estimate the number of non-residents covered by a Massachusetts policy—typically cases in which a non-resident works for a Massachusetts employer offering employer-sponsored coverage—the number of lives with fully insured employer-sponsored coverage was increased by the ratio of the total number of individual tax returns filed in Massachusetts by residents<sup>35</sup> and non-residents<sup>36</sup> to the total number of individual tax returns filed in Massachusetts by residents.

The number of residents with individual (direct) coverage was adjusted further to subtract the estimated number of people previously covered by Commonwealth Care who moved into MassHealth due to expanded Medicaid eligibility under the ACA.<sup>37</sup>

Projections for the GIC self-insured lives were developed using GIC base data for 2013,<sup>38</sup> 2014,<sup>39</sup> and 2015,<sup>40</sup> and the same projected growth rates from the Census Bureau that were used for the Massachusetts population. Breakdowns of the GIC self-insured lives by gender and age were based on the Census Bureau distributions.



center  
for health  
information  
and analysis

*For more information, please contact:*

**CENTER FOR HEALTH INFORMATION AND ANALYSIS**

501 Boylston Street  
Boston, MA 02116  
617.701.8100

[www.chiamass.gov](http://www.chiamass.gov)

*Publication Number: 17-304-CHIA-01*