

California Health Benefits Review Program

Executive Summary

Analysis of Assembly Bill 912:
Fertility Preservation

A Report to the 2013-2014 California Legislature

April 25, 2013



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EXECUTIVE SUMMARY

California Health Benefits Review Program Analysis of Assembly Bill 912

The California Assembly Committee on Health requested on February 25, 2013, that the California Health Benefits Review Program (CHBRP) conduct an evidence-based assessment of the medical, financial, and public health impacts of Assembly Bill (AB) 912, fertility preservation. In response to this request, CHBRP undertook this analysis pursuant to the provisions of the program's authorizing statute.¹

In 2014, CHBRP estimates that approximately 25.9 million Californians (67%) will have health insurance that may be subject to a health benefit mandate law passed at the state level.² Of the rest of the state's population, a portion will be uninsured (and so will have no health insurance subject to any benefit mandate), and another portion will have health insurance subject to other state laws or only to federal laws.

Uniquely, California has a bifurcated system of regulation for health insurance subject to state benefit mandates. The California Department of Managed Health Care (DMHC)³ regulates health care service plans, which offer benefit coverage to their enrollees through health plan contracts. The California Department of Insurance (CDI) regulates health insurers,⁴ which offer benefit coverage to their enrollees through health insurance policies.

Group and individual market DMHC-regulated plans and CDI-regulated policies are subject to AB 912. However, Medi-Cal Managed Care is not subject to AB 912. The regulator, DMHC, and the purchaser, the California Department of Health Care Services, have indicated that by referencing "group" plans, AB 912 would not require compliance from plans enrolling Medi-Cal beneficiaries into Medi-Cal Managed Care.^{5,6} Therefore, the mandate would affect the health insurance of approximately 19.4 million enrollees (50% of all Californians).

Developing Estimates for 2014 and the Effects of the Affordable Care Act

The Affordable Care Act (ACA)⁷ is expected to dramatically affect health insurance and its regulatory environment in California, with many changes becoming effective in 2014. It is

¹ Available at: www.chbrp.org/docs/authorizing_statute.pdf.

² CHBRP's estimates are available at: www.chbrp.org/other_publications/index.php.

³ The California Department of Managed Health Care (DMHC) was established in 2000 to enforce the Knox-Keene Health Care Service Plan of 1975; see Health and Safety Code (H&SC) Section 1340.

⁴ The California Department of Insurance (CDI) licenses "disability insurers." Disability insurers may offer forms of insurance that are not health insurance. This report considers only the impact of the benefit mandate on health insurance policies, as defined in Insurance Code (IC) Section 106(b) or subdivision (a) of Section 10198.6.

⁵ Personal communication, S. Lowenstein, DMHC, March 2013.

⁶ Personal communication, C. Robinson, Department of Health Care Services, citing Sec. 2791 of the federal Public Health Service Act, March 2013.

⁷ The federal "Patient Protection and Affordable Care Act" (P.L.111-148) and the "Health Care and Education Reconciliation Act" (P.L. 111-152) were enacted in March 2010. Together, these laws are referred to as the Affordable Care Act (ACA).

important to note that CHBRP's analysis of proposed benefit mandate bills typically address the marginal effects of the proposed bills—specifically, how the proposed mandate would affect benefit coverage, utilization, costs, and public health, holding all other factors constant. CHBRP's estimates of these marginal effects are presented in this report. Because expanded enrollment will not occur until January 2014, CHBRP relies on projections from the California Simulation of Insurance Markets (CalSIM) model⁸ to help set baseline enrollment for 2014. From this projected baseline, CHBRP estimates the marginal impact of benefit mandates proposed that could be in effect after January 2014.

Bill-Specific Analysis of AB Bill 912

AB 912 would require group and individual market DMHC-regulated plans and CDI-regulated policies to provide coverage for “medically necessary expenses for standard fertility preservation services when a necessary medical treatment may directly or indirectly cause iatrogenic infertility to an enrollee.”

Iatrogenic infertility is medically induced infertility caused by a medical intervention used to treat a primary disease or condition. The medical intervention resulting in iatrogenic infertility is often gonadotoxic or surgical treatment. Gonadotoxic treatment includes radiation, chemotherapy, and prescription drugs.

Patients at risk for iatrogenic infertility differ from patients being treated for infertility in that they need to take steps to preserve their fertility prior to undergoing treatment that may put them at risk for becoming infertile. Most cancer patients will not know beforehand if their treatment will lead to infertility or not, so they will need to undergo fertility preservation as a precaution. For example, a patient undergoing treatment for cancer may decide to freeze his sperm prior to starting treatment. Prior to treatment, his fertility may be intact, but if he does not take part in fertility-preserving services, his future ability to father a child may be at risk as treatment may result in iatrogenic infertility.

Analytic Approach and Key Assumptions

Iatrogenic infertility

Iatrogenic infertility is typically caused by cancer treatments, such as radiation and chemotherapy (gonadotoxic treatments) or surgical removal of reproductive organs. Less frequently, fertility is compromised by treatments for autoimmune disorders such as systemic lupus erythematosus, rheumatoid arthritis, or Crohn's disease.

This report focuses on fertility preservation among cancer patients because it is estimated that approximately 90% of iatrogenic infertility is caused by cancer treatment. In addition, there are no recommendations for fertility preservation for patients outside of cancer patients, and thus the research on fertility preservation has focused almost exclusively on this group.

⁸ CalSIM was developed jointly and is operated by the University of California, Los Angeles, Center for Health Policy Research and the University of California, Berkeley, Center for Labor Research and Education. The model estimates the impact of provisions in the ACA on employer decisions to offer, and individual decisions to obtain, health insurance.

Coverage for fertility preservation services versus coverage for infertility treatment

Current California law requires group CDI-regulated policies and most group DMHC-regulated plans to *offer* coverage for infertility treatment.⁹ An enrollee may have coverage for *infertility treatment* but may not have coverage for *fertility preservation services*, and vice versa.

AB 912 would not require coverage of infertility treatment nor would it affect current coverage rates for infertility treatment. Therefore, this report only looks at coverage for medically necessary fertility preservation services, as would be required under AB 912.

Interaction With Other California Requirements

As just discussed, current California law requires group CDI-regulated policies and most group DMHC-regulated plans to *offer* coverage for infertility treatment.^{10,11}

Other existing California state benefit mandates require coverage for various aspects of the screening, diagnosis, and treatment of cancer. However, these existing state benefit mandates do not require coverage for fertility preservation services when iatrogenic infertility may result from cancer treatment.

In addition, DMHC-regulated plans are subject to the Knox-Keene Health Care Service Plan Act of 1975 that requires all health care service plans, except specialized health care service plans, to provide coverage for all medically necessary basic health care services.¹² Medically necessary basic health care services include:

- Physician services;
- Hospital inpatient services and ambulatory care services;
- Diagnostic laboratory and diagnostic and therapeutic radiologic services;
- Home health services;
- Preventive health services;
- Emergency health care services, including ambulance and ambulance transport services, out-of-area coverage, and ambulance transport services provided through the 911 emergency response system; and
- Hospice care.

⁹ H&SC Section 1374.55 and IC Section 10119.6.

¹⁰ H&SC Section 1374.55 and IC Section 10119.6.

¹¹ In 2013, CHBRP was asked to analyze Assembly Bill (AB) 460 (Ammiano) Health Care Coverage: Infertility. This report is available on CHBRP's website at: www.chbrp.org/completed_analyses/index.php.

¹² CHBRP has a resource, *Current Mandates: Health Insurance Benefit Mandates in California State Law*, which includes additional information on basic health care services, available here: www.chbrp.org/other_publications/index.php.

The basic health care services coverage requirement for DMHC-regulated plans interacts with the definition of essential health benefits in California, and thus AB 912, discussed in the “Interaction With the Affordable Care Act” section below.

Requirements in Other States

CHBRP was not able to identify other states with an existing state benefit mandate requiring coverage for fertility preservation services. In the past couple of years, a few states—Connecticut, Hawaii, and New Jersey—have introduced, but not enacted, fertility preservation benefit mandate bills.

Background on Fertility Preservation

- Fertility preservation services provide patients at risk of iatrogenic (medically-induced) infertility with the potential ability to conceive children following treatments that may damage reproductive tissue (e.g., surgery, radiation, chemotherapy, prescription drugs, etc.). In order to preserve reproductive capabilities, fertility preservation services would be decided upon prior to disease treatment.
- Cancer treatments contribute to approximately 90% of iatrogenic infertility cases.
- The definition of reproductive age for purposes of iatrogenic infertility due to cancer treatment is typically under 45 years old. (Some men over 45 years of age may choose to preserve their fertility, and so this may be an underestimate of Californian’s affected by iatrogenic infertility.)
- In California, approximately 10% of the 145,000 new cancer cases diagnosed annually occur among cancer patients under the age of 45. A portion of these patients risk iatrogenic infertility as they undergo cancer treatment. The extent to which patients will become infertile after undergoing treatment varies by type of cancer and type of treatment. For example, rates of ovarian failure or 12-month infertility for women who underwent chemotherapy range between 23% and 36% depending on the type of cancer.
- Fertility preservation services fall into three general categories encompassing seven standard procedures: 1) *cryopreservation* (freezing reproductive tissue) includes sperm cryopreservation, oocyte cryopreservation, and embryo cryopreservation; 2) *harm reduction* includes ovarian transposition (oophoropexy), ovarian shielding during radiation therapy, and testicular shielding during radiation therapy; and 3) *conservative surgery* (cancer therapy modified to preserve reproductive tissue) including the two most common procedures, trachelectomy (i.e., surgical removal of the cervix) and conservative surgery for ovarian cancer.

Medical Effectiveness

The medical effectiveness review focused on the major types of fertility preservation services available to male and female patients undergoing cancer treatments that could compromise their fertility. In the course of performing this review, medical services were categorized as either standard medical care or experimental. Descriptions of both types of fertility preservation

services are provided below, but conclusions regarding the overall effectiveness are only given for standard services.

Of the articles identified in this literature review, very few were randomized controlled trials or large cohort studies. Most were case series of 30 or fewer patients, which are considered to be of low quality in the *Medical Effectiveness* hierarchy of evidence.¹³

CHBRP Terminology for Grading Evidence of Medical Effectiveness

CHBRP uses the following terms to characterize the strength of the evidence it identifies regarding the medical effectiveness of a treatment for which a bill would mandate coverage:

- Clear and convincing evidence;
- Preponderance of evidence;
- Ambiguous/conflicting evidence; and
- Insufficient evidence.

A grade of *clear and convincing evidence* indicates that there are multiple studies of a treatment and that the large majority of studies are of high quality and consistently find that the treatment is either effective or not effective.

A grade of *preponderance of evidence* indicates that the majority of the studies included in the medical effectiveness review are consistent in their findings that treatment is either effective or not effective.

A grade of *ambiguous/conflicting evidence* indicates that although some studies included in the medical effectiveness review find that a treatment is effective, a similar number of studies of equal quality suggest the treatment is not effective.

A grade of *insufficient* evidence indicates that there is not enough evidence available to know whether or not a treatment is effective, either because there are too few studies of the treatment or because the available studies are not of high quality. It does not indicate that a treatment is not effective.

Standard Fertility Preservation Services

- There is a preponderance of evidence that:
 - Sperm cryopreservation (the collection and freezing of sperm) with sperm collected through ejaculate is an effective method of fertility preservation. This is the standard fertility preservation service offered to males at risk for iatrogenic infertility.
 - Embryo cryopreservation (the harvesting of eggs followed by in vitro fertilization and freezing of resulting embryos for later implantation) is an effective method of fertility

¹³ More information on the medical effectiveness approach and the hierarchy of evidence is available on CHBRP's website here: www.chbrp.org/analysis_methodology/medical_effectiveness_analysis.php.

- preservation. Embryo cryopreservation is the standard fertility preservation service available for females at risk for iatrogenic infertility who have a male partner or who want to use donor sperm.
- Oocyte (egg) cryopreservation (the collection and freezing of eggs) is an effective method of fertility preservation. This is the standard fertility preservation service offered to females at risk for iatrogenic infertility who do not have a male partner or who do not want to use donor sperm.
 - Trachelectomy (treatment for cervical cancer where the cervix is surgically removed while the uterus is preserved) and ovarian cancer surgery (where the uterus with one ovary can be preserved) are effective methods of conservative gynecologic surgeries (minimal removal of diseased organs to preserve fertility) for fertility preservation. The available evidence indicates that for specific patient populations, these surgeries do not lead to an increase in cancer recurrence or mortality.
 - There is insufficient evidence to conclude that:
 - Ovarian transposition or oophoropexy (a surgical repositioning of ovaries to another location in the body away from the radiation field) is an effective method of fertility preservation. Despite this, it stands to reason that under specific circumstances, females undergoing pelvic radiation, where there is a high risk of ovarian failure, may want to consider ovarian transposition as a method of fertility preservation.
 - Testicular or ovarian shielding (shields placed over the testicles or ovaries during cancer treatment with radiation therapy) is an effective method of fertility preservation to reduce the dose of radiation delivered to these reproductive organs. Despite this, it stands to reason that patients undergoing pelvic radiation where there is a high risk of damage to the reproductive organs may want to consider shielding to protect their fertility.
 - A grade of *insufficient* evidence indicates that there is not enough evidence available to know whether or not a treatment is effective—it does not indicate that a treatment is not effective.

Experimental Fertility Preservation Services

The following fertility preservation services are considered experimental:

- Sperm cryopreservation using sperm collected through testicular aspiration or extraction, electroejaculation under sedation, or from a postmasturbation urine sample.
- Testicular tissue cryopreservation is the freezing of testicular tissue or germ cells, and reimplantation after treatment or maturation.
- Ovarian cryopreservation and transplantation is the freezing of ovarian tissue and reimplantation after cancer treatment.
- Ovarian suppression with hormonal therapies, known as gonadotropin-releasing hormone (GnRH) analogs, to protect ovarian or testicular tissue during radiation therapy has been established in animals but is still considered experimental in humans.

Benefit Coverage, Utilization, and Cost Impacts

CHBRP estimates that 19.4 million enrollees are in DMHC-regulated plans and CDI-regulated policies subject to AB 912. Medi-Cal Managed Care Plans are not subject to AB 912. **This section estimates coverage, utilization, and cost impacts for three standard medical services for fertility preservation—the cryopreservation of sperm, embryos, and oocytes (eggs).**¹⁴

This section presents, first, the current (baseline) benefit coverage, utilization, and costs related to fertility preservation services for patients at risk for iatrogenic infertility due to cancer treatment, and then provides estimates of the impacts on coverage, utilization, and cost if AB 912 were to be enacted.

Table 1 summarizes the expected benefit coverage, cost, and utilization impacts for AB 912.

Benefit Coverage Impacts

- Approximately 1.6 million enrollees (8.3%) of the 19.4 million enrollees in DMHC-regulated plans and CDI-regulated policies subject to AB 912 currently have coverage for fertility preservation services. If enacted, AB 912 would increase this to 100% of these enrollees.
- Among California's publicly funded health insurance programs, only California Public Employees' Retirement System Health Maintenance Organizations (CalPERS HMOs) are subject to AB 912. CalPERS HMOs do not currently provide coverage for fertility preservation services, but would be required to if AB 912 were enacted.

Utilization and Per-Unit Cost Impacts

- CHBRP estimates that currently, in a 1-year period, 1,051 male enrollees use sperm cryopreservation, with 947 paying for the noncovered benefit directly, and 72 female enrollees use embryo or oocyte cryopreservation, with 56 paying for the noncovered benefit directly.
- If AB 912 is enacted, CHBRP estimates total 1-year postmandate utilization to equal 1,249 male enrollees and 198 female enrollees. This is primarily due to the reduction in enrollee out-of-pocket costs for benefits that were previously not covered. This represents a 19% increase among male enrollees (or 198 males) and a 175% increase among female enrollees (or 126 females).
- In total, postmandate, CHBRP estimates a 29% increase in the use of fertility preservation services, as measured by the number of new users.
- The average per-unit cost for sperm, embryo, and oocyte cryopreservation is not expected to change as a result of this mandate. For analytic purposes, CHBRP estimates costs for 1

¹⁴ Radiation shielding and conservative gynecologic surgery are considered standard practices. However, for radiation shielding, its use and costs are folded into the normal radiation therapy that occurs as part of cancer treatments, and for conservative gynecologic surgery, it is likely to be covered under a cancer surgery benefit and not fertility preservation coverage, so CHBRP did not estimate coverage, utilization, and cost impacts for these procedures, nor for experimental procedures.

year. The average first-year per-unit cost for sperm cryopreservation is estimated to be \$400. The average first-year per-unit cost for embryo and oocyte cryopreservation is estimated to be \$14,700 and \$11,200, respectively.

- The first-year per-unit costs do not include the long-term costs, e.g., the annual storage costs beyond the first year, but it is highly likely that the sperm, embryos, and oocytes would be stored for longer than this time period. The annual storage costs beyond 2014 are estimated to be \$100 for sperm and \$300 for embryos and oocytes. The literature on the average storage duration is limited, however a study reported the average storage duration was 3.1 years among 32 male patients (20% of the total study subjects) who discontinued sperm storage.

Cost Impacts

- Increases in per member per month (PMPM) premiums for the newly mandated benefit coverage vary slightly by market segment. Increases as measured by percentage changes in PMPM premiums are estimated to range from an average of 0.0017% (for CDI-regulated small-group policies) to an average of 0.0031% (for CDI-regulated individual policies) in the affected market segments. Increases as measured by PMPM premiums are estimated to be an average of \$0.01.
- In the privately funded large-group market, the premium increases are estimated to be an average of \$0.01 PMPM among both DMHC-regulated plans and CDI-regulated policies.
- For enrollees in privately funded small-group insurance policies, premiums are estimated to increase by an average of \$0.01 PMPM for both DMHC-regulated plans and CDI-regulated policies.
- In the privately funded individual market, the premiums are estimated to increase by an average of \$0.01 PMPM for both DMHC-regulated plans and CDI-regulated policies.
- Among publicly funded DMHC-regulated CalPERS HMOs, CHBRP estimates that premiums would increase slightly with the impact of an average of 0.0030% (\$0.01 PMPM).
- Total net health expenditures are projected to increase by \$2.1 million (0.0015%) (Table 1). This change in expenditures is due to a \$2.9 million increase in health insurance premiums plus a 0.3 million increase in enrollee out-of-pocket expenses for newly covered benefits, partially offset by a reduction in out-of-pocket expenses for noncovered benefits (\$1.1 million).

Public Health Impacts

- Loss of fertility can negatively impact the quality of life for patients of reproductive age who are treated for cancer. As a result of AB 912, it is expected that the quality of life could improve for some of the 7,650 patients at risk for iatrogenic infertility each year who would gain coverage for fertility preservation services (4,306 males and 3,344 females, see Table 1).

- AB 912 is estimated to reduce the *net* financial burden by almost \$750,000 across enrollees who would have paid for previously uncovered fertility preservation services to prevent iatrogenic infertility.
- Based on the evidence reviewed on the medical effectiveness and utilization of these procedures, annual long-term benefits could include an estimated five additional male and four additional female cancer patients having a biological child each year as a result of AB 912. Birth outcomes appear to be similar to those from spontaneous conception and fresh embryo transfer.
- With 8.3% of enrollees currently covered for fertility preservation services, nearly all enrollees using fertility preservation services are directly paying for these treatments. Female enrollees are paying an estimated \$14,700 for embryo cryopreservation and \$11,200 for oocyte cryopreservation, and male enrollees are paying an estimated \$400 for sperm cryopreservation. AB 912 is expected to decrease the disparity in the financial burden of expenses related to fertility preservation services borne by females. CHBRP estimates that females would still be likely to face a greater out-of-pocket expense burden than males postmandate.
- Limited evidence was found on potential disparities in the use of fertility preservation services by race/ethnicity. Therefore, the extent to which AB 912 would have an impact on disparities is unknown.
- Iatrogenic infertility and fertility preservation services do not impact premature mortality, therefore, AB 912 would not be expected to result in a reduction in premature death or economic loss.
- Although time off from work is required for some fertility preservation services, the impact of AB 912 on economic loss related to fertility preservation services is unknown due to lack of data.

Interaction With the Federal Affordable Care Act

Below is an analysis of how this proposed benefit mandate may interact with the ACA's requirement for certain health insurance to cover "essential health benefits" (EHBs).¹⁵

AB 912 and essential health benefits

For a state benefit mandate to exceed the definition of EHBs in California, triggering the requirement that the state defray the costs for the benefit mandate, the following must be true:

- The state benefit mandate is not covered in the Kaiser Small Group HMO 30 plan that defines the EHB benchmark package in California in 2014 and 2015;
- The state benefit mandate is not covered under basic health care services, as required by the Knox-Keene Health Care Service Plan Act of 1975 (see the "Interaction With Other California Requirements" section above); and

¹⁵ Resources on EHBs and other ACA impacts are available on the CHBRP website: www.chbrp.org/other_publications/index.php.

- The state benefit mandate meets the definition of a benefit mandate that could exceed EHBs as established by federal regulations on EHBs, which states it must be specific to care, treatment, and/or services.¹⁶

Coverage in the Kaiser Small Group HMO 30 plan. Coverage for medically necessary fertility preservation services are not a covered benefit in the Kaiser Small Group HMO 30 plan, and thus are not included in the EHB benchmark benefit package.

Basic health care services. The Kaiser Small Group HMO 30 plan is a DMHC-regulated plan and, as such, is subject to the Knox-Keene Health Care Service Plan Act of 1975 that requires coverage of medically necessary basic health care services. Therefore, medically necessary basic health care services are a part of the EHB coverage requirement in California.¹⁷ However, fertility preservation services are not seen as medically necessary and so are not required coverage under basic health care services.

Federal definition of state benefit mandates that exceed EHBs. State benefit mandates that are specific to care, treatment, and services meet the federal definition of a state benefit mandate that can exceed EHBs.¹⁸ Fertility preservation services would fall within this definition, and so could exceed EHBs.

For the reasons outlined above—fertility preservation services: 1) are not included in the Kaiser Small Group HMO 30 plan; 2) are not part of required coverage under basic health care services; and 3) do meet the federal definition of a state benefit mandate that can exceed EHBs in 2014 and 2015—AB 912 would require coverage for a new state benefit mandate that appears to exceed the definition of EHBs in California, triggering the requirement that the state defray the costs of coverage for enrollees in qualified health plans (QHPs) in Covered California, the state’s health benefits exchange.

Cost of exceeding EHBs. The state is required to defray the additional cost incurred by enrollees in QHPs¹⁹ for any state benefit mandate that exceeds EHBs. As stated above, final rules released by HHS clarify that QHP issuers are responsible for calculating the marginal cost that must be defrayed. However, this rule left state flexibility in how this would be calculated; it could be based on “either a statewide average or each issuer’s actual cost.”²⁰ California has not yet identified which option it will use.

CHBRP is not able to estimate the total number of enrollees in QHPs in 2014, but is able to estimate the marginal change in the PMPM premium that would result from requiring coverage

¹⁶ Department of Health and Human Services. Patient Protection and Affordable Care Act: Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation. Final Rule. *Federal Register*, Vol. 78, No. 37. February 25, 2013; 12843. Available at: www.gpo.gov/fdsys/pkg/FR-2013-02-25/pdf/2013-04084.pdf.

¹⁷ Currently, no CDI-regulated policies are required to cover basic health care services. However, in 2014 CDI-regulated policies subject to the EHB coverage requirement—nongrandfathered small-group and individual market policies—will be required to cover basic health care services.

¹⁸ Essential Health Benefits. Final Rule. 12843.

¹⁹ In California, QHPs are non-grandfathered small-group and individual market DMHC-regulated plans and CDI-regulated policies sold in Covered California, the state’s exchange.

²⁰ Essential Health Benefits. Final Rule. 12843.

for fertility preservation services in 2014. These estimates reflect a statewide average and not an issuer's actual cost. The marginal change in the PMPM premium that CHBRP estimates would result from AB 912 and that the state would be responsible for defraying for each enrollee in a QHP in Covered California is:

- \$0.01 in nongrandfathered small-group and individual market DMHC-regulated plans; and
- \$0.01 in nongrandfathered small-group and individual market CDI-regulated policies.

This report presents an evidence-based analysis to provide decision-makers with a more comprehensive understanding of the impacts of AB 912—not only potential costs, such as the cost to defray, but also reviews of the medical effectiveness evidence and estimates of the mandate's public health impacts for Californians.

Table 1. AB 912 Impacts on Benefit Coverage, Utilization, and Cost, 2014

	Before Mandate	After Mandate	Increase/ Decrease	Change After Mandate
Benefit Coverage				
Total enrollees with health insurance subject to state-level benefit mandates (a)	25,899,000	25,899,000	0%	0%
Total enrollees with health insurance subject to AB 912	19,382,000	19,382,000	0%	0%
Number of enrollees with coverage for reproductive material cryopreservation	1,617,593	19,382,000	17,764,407	1,098%
Percentage of enrollees with coverage for reproductive material cryopreservation	8.3%	100%	92%	1,098%
Utilization and Cost				
<i>Number of enrollees who are subject to AB 912 and diagnosed with cancer where treatment might result in iatrogenic infertility during child-bearing ages</i>				
Male	4,306	4,306	—	0%
Female	3,344	3,344	—	0%
<i>Number of enrollees using services covered by insurance—reproductive material cryopreservation</i>				
Sperm	104	1,249	1,145	1,101%
Embryo (with Rx)	8	99	91	1,138%
Oocyte (with Rx)	8	99	91	1,138%
Subtotal	120	1,447	1,327	1,106%
<i>Number of enrollees using services not covered by insurance—reproductive material cryopreservation</i>				
Sperm	947	—	-947	-100%
Embryo (with Rx)	28	—	-28	-100%
Oocyte (with Rx)	28	—	-28	-100%
Subtotal	1,003	—	-1,003	-100%
<i>Number of enrollees using services (combining the covered and not covered categories)—reproductive material cryopreservation</i>				
Sperm	1,051	1,249	198	19%
Embryo (with Rx)	36	99	63	175%
Oocyte (with Rx)	36	99	63	175%
Total	1,123	1,447	324	29%
<i>Average cost per procedure—reproductive material cryopreservation</i>				
Sperm	\$400	\$400	—	0%
Embryo (with Rx)	\$14,700	\$14,700	—	0%
Oocyte (with Rx)	\$11,200	\$11,200	—	0%

Table 1. AB 912 Impacts on Benefit Coverage, Utilization, and Cost, 2014 (Cont'd)

	Before Mandate	After Mandate	Increase/ Decrease	Change After Mandate
Expenditures				
Premium expenditures by private employers for group insurance	\$78,385,161,000	\$78,387,027,000	\$1,866,000	0.0024%
Premium expenditures for individually purchased insurance	\$13,639,719,000	\$13,640,097,000	\$378,000	0.0028%
Premium expenditures by persons with group insurance, CalPERS HMOs, Covered California, and Medi-Cal Managed Care (b)	\$21,272,946,000	\$21,273,451,000	\$505,000	0.0024%
CalPERS HMO employer expenditures (c)	\$4,016,233,000	\$4,016,352,000	\$119,000	0.0030%
Medi-Cal Managed Care Plan expenditures (exempt from AB 912)	\$12,480,492,000	\$12,480,492,000	\$0	0.0000%
Healthy Families Plan expenditures (exempt from AB 912) (d)	\$667,300,000	\$667,300,000	\$0	0.0000%
Enrollee out-of-pocket expenses for covered benefits (deductibles, copayments, etc.)	\$14,462,198,000	\$14,462,552,000	\$354,000	0.0024%
Enrollee expenses for noncovered benefits (e)	\$1,105,000	\$0	-\$1,105,000	-100%
Total expenditures	\$144,925,154,000	\$144,927,271,000	\$2,117,000	0.0015%

Source: California Health Benefits Review Program, 2013.

Notes: (a) This population includes persons with privately funded and publicly funded (e.g., CalPERS HMOs, Medi-Cal Managed Care Plans) health insurance products regulated by DMHC or CDI. Population includes enrollees aged 0 to 64 years and enrollees 65 years or older covered by employment-sponsored insurance.

(b) Premium expenditures by enrollees include employee contributions to employer-sponsored health insurance, health insurance purchased through Covered California, and enrollee contributions for Medi-Cal Managed Care.

(c) Of the increase in CalPERS employer expenditures, about 58%, or \$69,000, would be state expenditures for CalPERS members who are state employees or their dependents.

(d) Children in Healthy Families, California's CHIP, will be moved into Medi-Cal Managed Care by January 1, 2014, as part of the 2012–2013 budget.

(e) Includes only those expenses that are paid directly by enrollees to providers for services related to the mandated benefit that are not currently covered by insurance. In addition, this only includes those fertility preservation service expenses that will be newly covered, post-mandate. Other components of expenditures in this table include all health care services covered by insurance such as "Premium expenditures by private employers for group insurance" and "CalPERS HMO employer expenditures."

Key: AB=Assembly Bill; CalPERS HMOs=California Public Employees' Retirement System Health Maintenance Organizations; CDI=California Department of Insurance; DMHC=Department of Managed Health Care; Rx=prescription.

ACKNOWLEDGMENTS

This report provides an analysis of the medical, financial, and public health impacts of Assembly Bill 912. In response to a request from the California Assembly Committee on Health on February 25, 2013, the California Health Benefits Review Program (CHBRP) undertook this analysis pursuant to the program's authorizing statute.

Sara McMenamin, PhD, of the University of California, San Diego, prepared the medical effectiveness analysis. Stephen L. Clancy, MLS, AHIP, of the University of California, Irvine, conducted the literature search. Diana Cassady, DrPH, and Dominique Ritley, MPH, of the University of California, Davis, prepared the public health impact analysis. Byung-Kwang Yoo, MD, MS, PhD of the University of California, Davis prepared the cost impact analysis. Robert Cosway, FSA, MAAA, and Scott McEachern of Milliman, provided actuarial analysis. H. Irene Su, MD, of the University of California, San Diego, provided technical assistance with the literature review and expert input on the analytic approach. Laura Grossmann, MPH, of CHBRP staff prepared the *Introduction* and synthesized the individual sections into a single report. A subcommittee of CHBRP's National Advisory Council (see final pages of this report) and a member of the CHBRP Faculty Task Force, Sylvia Guendelman, PhD, LCSW, of the University of California, Berkeley, reviewed the analysis for its accuracy, completeness, clarity, and responsiveness to the Legislature's request.

CHBRP gratefully acknowledges all of these contributions but assumes full responsibility for all of the report and its contents. Please direct any questions concerning this report to:

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A group of faculty and staff undertakes most of the analysis that informs reports by the California Health Benefits Review Program (CHBRP). The CHBRP **Faculty Task Force** comprises rotating representatives from six University of California (UC) campuses. In addition to these representatives, there are other ongoing contributors to CHBRP from UC. This larger group provides advice to the CHBRP staff on the overall administration of the program and conducts much of the analysis. The **CHBRP staff** coordinates the efforts of the Faculty Task Force, works with Task Force members in preparing parts of the analysis, and coordinates all external communications, including those with the California Legislature. The level of involvement of members of the CHBRP Faculty Task Force and staff varies on each report, with individual participants more closely involved in the preparation of some reports and less involved in others. As required by CHBRP's authorizing legislation, UC contracts with a certified actuary, Milliman Inc., to assist in assessing the financial impact of each legislative proposal mandating or repealing a health insurance benefit. Milliman also helped with the initial development of CHBRP methods for assessing that impact.

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