Employers and Evidence-Based Infertility Benefits
A guide to making informed decisions
Introduction

New trends increase the importance of providing infertility benefits

For a lot of people, raising a family is an important part of life. However, recent demographic data show that for various personal and societal reasons women are waiting to have children later in life, which may lead to fertility challenges. According to a 2014 Centers for Disease Control and Prevention (CDC) report that looked at data from 2006 to 2010, 17% of women aged 25 to 44 reported using an infertility service.1

Women are not the only demographic affected by infertility. About 33% of infertility cases are attributed to male factors.2 In the CDC report, 9.4% of men in the same age cohort reported using an infertility service, too.1

Employers are finding that providing access to evidence-based infertility care has benefits in addition to employee satisfaction. For many employers, providing infertility coverage not only helps create a family-friendly image for the public, but helps attract top talent from employers that do not provide such coverage.3 The recent announcements of technology companies like Facebook and Apple competing for employees using impressive benefits packages are cases in point.4

In spite of this trend, employers may still question whether offering evidence-based infertility benefits is right for their company. A closer look at the data will give you a more comprehensive view of the potential for positive impact on your employees and your bottom line.

This guide will review:

- The basics of infertility and its treatment
- Utilization and cost of infertility coverage
- The impact of multiple births on employers
- A benchmark for current large employer coverage for infertility benefits
- Real-world cost data regarding infertility benefits
- Considerations when developing an infertility benefit

SOURCES OF INFERTILITY2
The basics of infertility and its treatment

Infertility treatment

The first step in infertility treatment is determining the cause, which may include risk factors such as age, bodyweight, diet, smoking, or alcohol consumption. Some risk factors appear as clinical conditions, such as ovulatory disorders or uterine or cervical abnormalities in women and testicular and other medical conditions in men. Some causes can be addressed with simple lifestyle changes. In other cases, infertility may be treated with surgery, medication, intrauterine insemination, assisted reproductive technology (ART), or a combination of approaches.

COMMON TREATMENT OPTIONS FOR INFERTILITY

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Description</th>
<th>Employer Insight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery</td>
<td>Usually performed to repair blocked, scarred, or damaged fallopian tubes. Surgery can also be performed to address male infertility factors.</td>
<td>Surgery may be covered by medical plan even if infertility is not covered.</td>
</tr>
<tr>
<td>Medication</td>
<td>Infertility treatments range from ovulatory stimulation to ovulation regulation to insulin level control.</td>
<td>A range of medications are available to treat patients depending on the patients’ underlying diagnosis and coverage.</td>
</tr>
<tr>
<td>Intrauterine insemination (IUI)</td>
<td>IUI (also called artificial insemination) is the typical treatment for male-factor (using donor sperm) or unexplained infertility. Sperm is placed directly into the uterus around the time of ovulation.</td>
<td>Success rates can be as high as 20% depending on age, medication use, infertility diagnosis, and other facts. However, IUI carries a higher risk for multiple gestation.</td>
</tr>
<tr>
<td>Assisted reproductive technology (ART)</td>
<td>In vitro fertilization (IVF) is the most common ART procedure. Eggs are removed from the ovaries and fertilized outside of the woman’s body. The resulting embryo(s) are then transferred to the uterus.</td>
<td>Multiple births result from the common practice of transferring more than one embryo during each cycle. Of ART pregnancies in 2012, 59% were singletons, 34% were twins, and 2% were triplets or more.</td>
</tr>
</tbody>
</table>

What is infertility?

Infertility is a disease of the reproductive system, resulting in not being able to conceive after 1 year of trying (or 6 months if a woman is 35 or older). In 1998, the U.S. Supreme Court stated that reproduction is a “major life activity” and conditions that interfere with reproduction should be regarded as disabilities per the American Disabilities act of 1999.
Providing evidence-based infertility coverage can help employees make better treatment decisions

Cost constraints due to lack of adequate insurance coverage can force employees seeking infertility medical care to choose options with perceived higher pregnancy success rates, but which can also have a higher risk of multiple births. Multiples can lead to expensive medical complications for both mother and child.

Providing coverage removes these cost constraints, so patients are able to make sound decisions based on the best evidence-based treatment recommendation for their diagnosis.

- In a study of infertile women undergoing a combined 15,418 IVF/embryo transfer cycles, patients with infertility benefits electively chose to transfer 1 embryo/cycle significantly more often than patients with no coverage, thereby reducing costs due to multiple births.

"IF [PATIENTS] ARE PAYING OUT OF POCKET, [THEY] ARE PRETTY DESPERATE TO HAVE THAT CYCLE WORK WHEN [THEY'VE] PAID $15,000 INTO AN IVF CYCLE..."
Utilization and cost of infertility coverage

Only 1 in 3 women who seek infertility services require treatment beyond basic medical advice\(^1\)

Providing evidence-based infertility benefits does not mean that every employee of reproductive age will use them. In a 2014 CDC report\(^1\):

- only \(3\%\) of patients seeking infertility services used IVF
- only \(7\%\) of patients seeking infertility services used IUI

Infertility coverage can be provided at less than 1% of total premium cost

Massachusetts arguably has the most comprehensive coverage with regard to access to infertility treatments among the mandated states, and includes IVF coverage in its benefits.\(^{14,15}\) For self-insured plans, the cost of coverage providing comprehensive infertility services is less than 0.3% of the total premium cost.\(^{16}\) (Cost of coverage will vary depending on the type of services provided.) For fully insured plans in this state, the cost of such coverage is less than 1% of the total premium cost.\(^{16}\)

THE COST OF PROVIDING COMPREHENSIVE INFERTILITY SERVICES IS MANAGEABLE\(^{16}\)

<table>
<thead>
<tr>
<th>Plan Type</th>
<th>Cost (PMPM)</th>
<th>Cost as % of Total Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Insured</td>
<td>$2.75</td>
<td>0.69%</td>
</tr>
<tr>
<td>Fully Insured</td>
<td>$3.67</td>
<td>0.95%</td>
</tr>
</tbody>
</table>

PMPM=Per member per month.

\(^{1}\) Source: 2014 CDC report.
Long-term cost savings may outweigh the short-term savings of not providing coverage

Long-term costs can accrue when employees without infertility coverage turn to procedures that may be more likely to result in multiple births, which may be more costly to your plan in the long run.

The price of multiple births

Preterm birth, low birthweight, and high rates of disability are common and expensive complications of multiple births. Nearly half of all charges related to prematurity are borne by employers and other private insurers.17

THE HIGH COST OF LOW BIRTHWEIGHT18

<table>
<thead>
<tr>
<th>Normal birthweight</th>
<th>$5,816</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low birthweight</td>
<td>$205,204</td>
</tr>
</tbody>
</table>

“...IN PERSPECTIVE OF HOW MUCH WE SPEND ON MRIs AND CT SCANS, FOR EXAMPLE, THE COST OF THE FERTILITY BENEFIT ISN’T EVEN A ROUNDING ERROR.” 8

Ray Brusca
Vice President of Benefits, Black & Decker
# Impact of multiple births on employers

Multiple births can lead to decreased productivity and increased disability claims

<table>
<thead>
<tr>
<th><strong>Absenteeism</strong></th>
<th><strong>Lost Productivity</strong></th>
<th><strong>Short-Term Disability</strong></th>
<th><strong>Long-Term Disability</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4x greater risk for time absent from work&lt;sup&gt;19&lt;/sup&gt; In general, more time off from work is required for parents with multiple births compared with parents who choose elective single embryo transfer (eSET) births. Increased absenteeism for both parents is due to a longer hospital stay for mother and/or baby, additional medical appointments for infant, and treatment for chronic conditions in infant&lt;sup&gt;17&lt;/sup&gt;</td>
<td>$5.7 billion in costs Due to preterm births in 2005&lt;sup&gt;17&lt;/sup&gt;</td>
<td>4,039 cases per million covered lives Due to pregnancy complications&lt;sup&gt;20&lt;/sup&gt;</td>
<td>203 cases per million covered lives Due to pregnancy complications. Major causes of long-term disability include pregnancy with twins, premature labor, antepartum hemorrhage, postpartum hemorrhage, and other complications&lt;sup&gt;20&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

7 days on disability Average length of pregnancy-related short-term disability<sup>20</sup>
**Elective Single Embryo Transfer (eSET) can reduce the likelihood of multiple births**

Multiple births adversely impact the health and well-being of mother and child, as well as the total cost of care during pregnancy. eSET can provide patients with a multiples rate of 1.1%.11

- In 2013, the pregnancy rate for eSET was shown to be similar to double embryo transfer without an increased risk of multiple delivery, when combined with comprehensive chromosomal screening21
- Compared 2-embryo transfer, eSET reduces the risk of low birthweight by more than 50%, reduces neonatal intensive care unit (NICU) admittance by more than 50%, and decreases hospital length of stay (LOS) by more than 80%22

**eSET is the transfer of only 1 embryo created via IVF**

- In 2013, The American Society for Reproductive Medicine (ASRM) lowered the number of recommended embryos to be transferred in IVF cycles in an effort to reduce the number of higher-order multiple pregnancies23
- If all infertility treatment–related multiple births in the United States were singletons, estimated national savings could exceed $6 billion24

“...YOU WANT TO HAVE LIVE BIRTH RATES. AFTER ALL, THAT IS WHY PEOPLE HAVE IVF—TO HAVE BABIES. BUT YOU WANT TO DO IT AS SAFELY AS POSSIBLE.”25

Joanne Armstrong, MD
Senior Medical Director and Head of Women’s Health, Aetna
A growing number of employers see the value of evidence-based infertility coverage

In a CDC study of women aged 25 to 44, infertility services were utilized by women of varying educational levels—25% had a high school diploma or GED, or less; 17% had some college but no bachelor’s degree; 21% had a bachelor’s degree; and 23% had a master’s degree or higher.1

Two-thirds of large employers offer infertility benefits26

These organizations and many more recognize the value of infertility coverage in attracting and retaining talent.4,27

LARGE EMPLOYERS WITH INFERTILITY BENEFITS

<table>
<thead>
<tr>
<th>Accenture</th>
<th>Deloitte &amp; Touche</th>
<th>Johns Hopkins University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ace Hardware</td>
<td>Dick’s Sporting Goods</td>
<td>Johnson &amp; Johnson</td>
</tr>
<tr>
<td>American Express</td>
<td>Facebook</td>
<td>Long Island Railroad</td>
</tr>
<tr>
<td>Apple</td>
<td>Ford</td>
<td>Microsoft</td>
</tr>
<tr>
<td>Avon</td>
<td>Gap</td>
<td>Proctor &amp; Gamble</td>
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<tr>
<td>Bank of America</td>
<td>IBM</td>
<td>Scholastic</td>
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<tr>
<td>Con Edison</td>
<td>JP Morgan</td>
<td>Starbucks</td>
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<td></td>
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<td>The Nature Conservancy</td>
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<tr>
<td></td>
<td></td>
<td>T-Mobile</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Xerox</td>
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<td></td>
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<td>Yale University</td>
</tr>
</tbody>
</table>

GED=General education development.
Employer-provided infertility benefits vary widely in their design\textsuperscript{15}

As shown on the right, evaluation by a specialist is the most frequently covered service and most likely the least expensive (recall that roughly 1 in 3 women who seek infertility services require treatment beyond basic medical advice).\textsuperscript{1} Notably, more than a quarter of large employers cover more costly services, including in vivo fertilization and/or IVF. The demographics and needs of your workforce will inform the specific design of your infertility benefit.\textsuperscript{26}

Pressure on employers to cover infertility services continues to grow as more women in the workforce wait longer to start their families. A comprehensive, evidence-based infertility benefit can go a long way toward attracting and retaining these valuable employees.

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**LARGE EMPLOYER* COVERAGE OF INFERTILITY TREATMENTS\textsuperscript{26}**

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other advanced procedures (GIFT, ZIFT)</td>
<td>25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In vivo fertilization†</td>
<td>14%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In vitro fertilization</td>
<td>26%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug therapy</td>
<td>37%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation by a specialist</td>
<td>59%</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Large employers are defined as companies having 500 or more employees.
†In vivo fertilization is defined as artificial insemination or intracytoplasmic sperm injection.
GIFT=gamete intrafallopian transfer; ZIFT=zygote intrafallopian transfer.
Adapted from Mercer National Survey of Employer-Sponsored Health Plans, 2014.

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\textbf{“THE DECISION [TO COVER INFERTILITY TREATMENTS] DOES NOT LIE WITH INSURANCE COMPANIES. EMPLOYERS MAKE THAT DECISION.... MOST INSURANCE COMPANIES WOULD OFFER IT IF THEIR CUSTOMERS—THE EMPLOYERS—PUSHED FOR IT.”\textsuperscript{28}}

Sean Tipton
Chief Advocacy and Policy Officer,
American Society for Reproductive Medicine
Real-world cost data from mandated states

Mandated coverage does NOT substantially raise insurance premiums\textsuperscript{16,29}

Comprehensive reviews from Connecticut, Massachusetts, and Rhode Island, which have mandated infertility benefits since the 1980s, show that the cost of infertility coverage is less than 1% of the total premium cost.\textsuperscript{29}

**COMPARATIVE COST OF INFERTILITY BENEFITS IN 3 STATES WITH MANDATED COVERAGE\textsuperscript{29}**

<table>
<thead>
<tr>
<th>State</th>
<th>Population Impacted</th>
<th>Cost</th>
<th>Benefit</th>
</tr>
</thead>
</table>
| Connecticut    | 102,623             | 0.9% of total premium | Mandated coverage of infertility treatment  
- Lifetime coverage max of 2 IVF cycles  
- Covered individuals must be <40 years of age |
| Massachusetts  | 200,848             | 0.23%-0.95% of total premium | Mandated coverage of infertility treatment  
- Most comprehensive coverage  
- Not required to cover experimental procedures, surrogacy, or cryopreservation of eggs |
| Rhode Island   | 31,983              | 0.36% of total premium | Mandated coverage of infertility diagnosis and treatment  
- Only married individuals  
- Co-payment cannot exceed 20% |

Adapted from Fertility Within Reach\textsuperscript{®}, The Policymaker’s Guide to Infertility Health Benefits.

Note: In mandated states, fully insured plans follow state law. Self-insured plans and small businesses follow federal law and are exempt from state infertility coverage mandates according to the Employee Retirement Income Security Act of 1974 (ERISA).\textsuperscript{30}

**Insurance coverage affects patient decisions**

A 2011 study showed that patients in states without IVF insurance mandates had higher multiple pregnancy rates due to transferring significantly more embryos per cycle than states with coverage for IVF.\textsuperscript{31} The benefit choices you make can impact patient behavior and your total health insurance costs.\textsuperscript{32}
Considerations when developing an infertility benefit

FERTILITY BENEFIT STRUCTURE AND POTENTIAL COST IMPACT

<table>
<thead>
<tr>
<th>Benefit Structure</th>
<th>Patient Behavior</th>
<th>Health Insurance Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>No infertility coverage</td>
<td>- Incentivizes members to opt for more aggressive treatment (multiple-embryo transfer) to increase probability of success on first attempt&lt;br&gt;- Incentivizes members to attempt treatments that cost less (IUI) which may lead to higher-order births</td>
<td>Baseline</td>
</tr>
<tr>
<td>Cover infertility without IVF</td>
<td>- Incentivizes members to exhaust coverage for other therapies prior to IVF&lt;br&gt;- If members move on to IVF, they will most likely select multiple-embryo transfer</td>
<td>- Excess usage of treatments that are less likely to produce singletons (IUI)&lt;br&gt;- Increases the likelihood of multiple births</td>
</tr>
<tr>
<td>Cover infertility with limited IVF</td>
<td>Limited IVF attempts may lead to fewer eSETs</td>
<td>- Increases cost of new IVF benefit&lt;br&gt;- Limited IVF may lead to low usage of eSET, which could result in multiple births</td>
</tr>
<tr>
<td>Cover infertility with unlimited IVF</td>
<td>Incentivizes choosing the best course of action for member</td>
<td>Increased cost of new IVF benefit may be partially offset by savings resulting from fewer multiple births</td>
</tr>
<tr>
<td>Cover unlimited infertility with IVF and medical management</td>
<td>- Incentivizes choosing the best course of action for member based on treatment protocols set by health plans&lt;br&gt;- May include rules on eSET and precertification</td>
<td>Increased cost of new IVF benefit may be partially offset by savings resulting from fewer multiple births (rate of multiple births decreased to a greater extent with medical management than without</td>
</tr>
</tbody>
</table>

Adapted from Data on file, Milliman.
### Developing your infertility benefit

Work with your health plan carrier to establish the evidence-based benefit design that's right for your organization and your employees

#### Start by reviewing your current coverage

- **Document current coverage:** Find out if you cover infertility treatment services already. Are they comprehensive or are they encouraging employees to make decisions that will increase your overall health care cost rather than reduce it?

- **Run the numbers:** Look at your current infertility-specific data. Review infertility benefit claims (if applicable), birth rates, and maternity leave data to analyze the cost of pregnancies in your population. Don’t forget to account for diagnoses associated with male factor infertility.

- **Request an example** of a standard rider for infertility coverage

- **Get a baseline** to assess your needs, determine what you are doing well and what may be missing. Ask your health plan for comparative infertility benefit metrics, if available.
**Things to consider when you're ready to add or upgrade an infertility benefit**

**Define eligibility**

- **Age:** The success rate for infertility treatments tends to taper off when a woman is 40 years or older. Only 4.5% of cycles performed on women older than 42 result in a successful live birth.

- **Marital status:** Some states that mandate infertility coverage require a couple to be legally married. It is unclear if and how these laws are enforced.

**Determine precertification requirements**

- Set preauthorization requirements before the plan is in place. This could encourage employees to seek care from a specialist sooner to avoid duplication of tests and to get a clearer diagnosis.

**Cover evidence-based medical evaluation for infertility**

- A medical evaluation is the first step in determining the course of treatment for infertile couples.

**Drive employees toward quality care**

- You can design infertility benefits to direct employees to high-quality providers by creating multiple coverage tiers.

**Determine the optimum number of cycles covered**

- Some companies set an annual or lifetime maximum for infertility treatment or set a maximum number of attempts per lifetime. Some companies choose not to set lifetime caps or limit the number of cycles.

- You could also mandate the network infertility centers to inject the minimum number of eggs (or mandate eSET) necessary to achieve a viable single birth.
Evidence-based infertility benefits are a win for your employees and a win for your organization

Addressing the needs of your employees seeking assistance to overcome infertility can potentially help you attract and keep valued employees, and may help you contain health care costs over the long term.

EMD Serono is committed to infertility benefit solutions

EMD Serono is dedicated to helping employers find infertility benefit solutions that will satisfy the needs of both the employer and employee. EMD Serono has created several resources to help navigate this complicated process, including an infertility cost-analysis tool and employer presentations. If you would like to speak with an EMD Serono representative to learn more about these resources, please email fertility.marketing@emdserono.com.

A partnership to make a difference

EMD Serono is proud to partner with Path2Parenthood and RESOLVE: The National Infertility Association to create this educational employer brochure. It is our hope that employers will use this guide to help them get started in making an in-depth and informed decision about their infertility benefits.
References

Notes
About EMD Serono

EMD Serono, Inc., a subsidiary of Merck KGaA, Darmstadt, Germany, is a leading U.S. biopharmaceutical company focused exclusively on specialty care. For more than 40 years, EMD Serono has integrated cutting-edge science, innovative products and devices, and industry-leading patient support and access programs. EMD Serono has deep expertise in neurology, fertility and endocrinology, as well as a robust pipeline of potential therapies in neurology, oncology, immunology and immuno-oncology. Today, EMD Serono has more than 1,100 employees around the country with commercial, clinical, and research operations based in the company’s home state of Massachusetts.