



WHITE PAPER

**proving our impact:  
externally validating  
Ovia's preterm  
birth reduction  
programming**

## Executive Summary

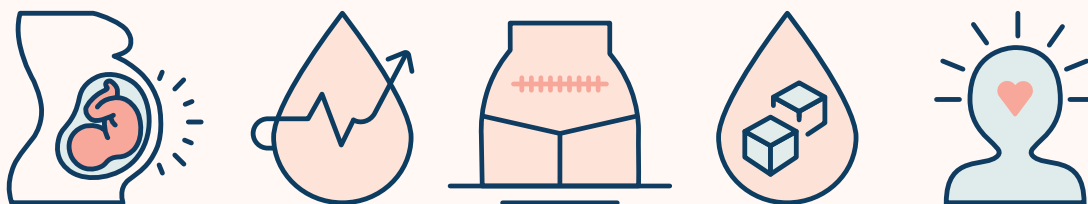
Despite spending the highest percentage of its gross domestic product on healthcare, the United States still lags behind peer countries when it comes to maternal health, particularly for people of color and other groups experiencing social determinants of health.<sup>1</sup> The fact that the U.S. has the worst maternal mortality and morbidity rates of any developed nation is only made more alarming when you consider that nearly half of all maternal deaths in the U.S. are preventable.<sup>2</sup>

Aside from the very real and very obvious implications for public health and wellness, the maternal health gap in the U.S. costs employers, health plans, providers, and private families billions in unnecessary spending on avoidable outcomes each year. The maternal and infant healthcare continuum of services are among the most expensive line items for health plans and self-insured employers, with one out of every five dollars typically spent on maternal and infant healthcare.<sup>3</sup> Preterm birth, seen at a much higher rate in the U.S. than in other developed nations, is a particularly outsized cost driver, with societal costs topping out at **\$26.2 billion every year**.

Digital wellness and condition management solutions focused on maternal health are increasingly recognized as necessary tools in the effort to not only improve outcomes and create healthier, happier families, but rein in spending on expensive and preventable maternal health conditions and complications like preterm birth. Fortunately, the reproductive health and femtech markets have been growing at a rapid clip, but the sudden proliferation of solutions and approaches has created a marketplace that can be difficult to navigate. Clinically proven results have—until now—been in short supply.

Ovia Health was the first maternal and family health solution built specifically to empower families through data and information, informing fertility and family planning decisions and allowing families and women to gain control of reproductive health. Since its inception, Ovia has set the standard for evidence-based care and solutions, backed by over **50-peer reviewed publications** and partnerships with leading universities and research groups. In an effort to apply the same stringent standards to determine the clinical efficacy of its programming, Ovia Health conducted the industry's most rigorous third-party validation analysis, partnering with both an independent insurance claims provider and an independent analytics firm.

This whitepaper illustrates the meaningful impacts of Ovia Health programs on one of the most expensive maternal and infant health outcomes—preterm birth—and provides actionable advice and guidance for payers, employers, and industry innovators on what to look for when evaluating new solutions.

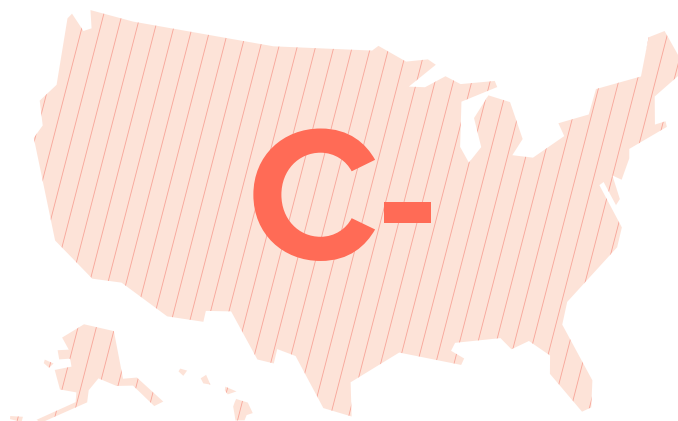


**1 out of every 5 dollars**  
typically spent on maternal and infant healthcare

## Mapping the United States Preterm Birth Gap

The United States, between payers and families, spends \$4.2 billion<sup>4</sup> on family building, such as fertility treatments, every year. Dwarfing that figure is the \$75.8 billion<sup>5</sup> that's spent annually on maternal and postpartum health. Driving that number ever upward is a slate of often-preventable maternal health conditions that, without proper early risk detection and intervention, can slip through the cracks of traditional perinatal care. Topping that list is premature birth.

**Preterm delivery:** For the first time in five years, the US preterm birth rate has dropped, but only by a mere tenth of a percent. Over 10% of babies in the US are born prematurely<sup>6</sup>—and Black women are 51% more likely to deliver prematurely than all other women. The costs are staggering—the total costs associated with premature birth every year are \$26.2 billion<sup>7</sup>, and employers alone are billed more than \$12 billion annually in excess healthcare costs.<sup>8</sup>



**The United States earned a C- on March of Dimes' 2020 Report Card for preterm birth.**

## Tackling Endemic Maternal Health Conditions with a Proactive Approach

Ovia Health is a digital family health platform that has proudly served more than 17 million family journeys. Ovia's proactive approach to family planning and maternity leverages self-monitoring data and more than 10 years of claims data to help families make confident decisions and navigate their health. Its proprietary data set provides individuals with personalized health insights and education at the right time, as well as connection to virtual health coaching and benefits navigation across family needs, from preconception to postpartum and parenting. Its approach powers early identification of health risks, equitable access to information to make decisions, and the ability for proactive condition management and prevention that leads to radically different outcomes for endemic maternal health challenges.

Reproductive health—particularly fertility, maternal health, and women's health—are perpetually under-researched and underfunded. Ovia Health has endeavored to change that, publishing over 50 peer-reviewed studies and partnering with over 40 leading universities and research groups around the world to validate the impact of its own approach and advance science and understanding of these conditions overall. Additionally, Ovia is the only family building solution accepted to the international Digital Therapeutics Alliance. As a result, Ovia stands alone as the most clinically-focused, evidenced-based family building solution on the market.

Research shows that up to 50% of a person's health outcomes are determined by social determinants of health (SDOH), and that SDOH factors are associated with outcomes like preterm birth.<sup>9,10</sup> At Ovia, we make it a key part of our mission to reduce health disparities and create clinical programs that better meet the varying needs of everyone in our community. Ovia Health's **proprietary proactive approach** engages members early to identify high-risk factors and precipitates subsequent action through machine learning in order to push members to make the right health decisions and self-advocate with their providers. The platform enables a personal and proactive journey across the family growth continuum, filling in care gaps and enabling families to be informed and in control of their own care to ultimately reduce health disparities.

#### Ovia's digital model uniquely has 4 levels of intervention

1. Personalized, evidence-based education for the entire maternity journey
2. Comprehensive screenings evaluating dozens of guideline-informed risk factors: social, emotional and physical risk factors
3. 50+ personalized condition and risk factor based clinical pathways, reviewed by clinicians
4. Virtual clinical advice & care advocacy by our Care Team for wraparound support



### Proving Ovia's Ability to Impact Preterm Birth through Third-Party Validation

Having the industry's most robust research arm, it only made sense to take that scientific rigor and apply it to quantifying "The Ovia Effect." That is, determining the effectiveness of Ovia's own solutions. Ovia selected to scrutinize its impact on moving the needle on **preterm birth** in particular for a few reasons: the U.S. has a concerning high preterm birth rate compared to other developed nations; the disproportionate impact preterm birth

has on moms of color and of lower socioeconomic status; the dangerous health implications this condition has on both mom and baby; and its expensive price tag for payers and employers.

To examine the efficacy of Ovia's preterm birth prevention programming, Ovia partnered with Change Healthcare to source claims data and Health Data Analytics Institute to perform a rigorous third-party validation analysis in the family-building and maternal health solutions space. Engaging with third parties for data sourcing and analysis is the gold standard methodology for validating techniques because it greatly reduces the risk of data bias, a common culprit in research studies. And by working with an independent claims provider, we do not depend on self-reported data alone and have more rigorous, evidenced-based outcomes to analyze.

The study analyzed health claims from 35 clients, evaluating over 10,000 Ovia member and non-member claims. At the time of publishing, Ovia Health is the only family-building solution to have intentionally partnered with both an independent insurance claims provider and an independent analytics firm to source and analyze data.

#### The Goal?

Determine whether Ovia members experience better health outcomes—and lower healthcare costs—than non-Ovia members with similar clinical histories.

#### The Results?

Compared with matched control cases, study participants who interacted with Ovia's preterm birth prevention programming, including clinical education, dynamic health prompts delivered at appropriate times throughout pregnancy, and access to a supportive Care Team of licensed health clinicians for support 365 days per year, demonstrated a meaningful reduction in preterm birth approaching statistical significance (54% reduction).

**54% reduction  
in preterm birth**





## Layering: The Key to Further Improving Outcomes

Importantly, the study sought to go beyond a simple comparison of costs and outcomes among Ovia members vs. non-members. Analysts also divided the Ovia member cohort across key lines, first evaluating the efficacy of Ovia Health's specialized virtual Health Experts, and second determining the correlation between the frequency of member engagement with Ovia solutions and clinical outcomes. The results clearly showed the importance of "layering on" for additional impact—that is, members who were the most engaged, either through communication with virtual health experts or with the solution itself, experienced even better outcomes than Ovia members who were less engaged.

### Tapping the Transformative Power of Virtual Coaching

One of the most powerful levers in the Ovia solutions is the Health Expert team—a subset of the Care Team. Health Experts are a suite of in-house clinicians ranging from lactation consultants to perinatal mental health specialists to fertility nurses and child development educators, exclusively available through Ovia's enterprise offering. Providing coaching through in-app messaging or telephonic consultation 365 days per year, Ovia's virtual Health Experts provide always-on support whenever it's needed during the entire family health continuum—from guiding parents through the adoption process to triaging a strange pregnancy pain to helping a parent soothe their child to sleep in the middle of the night.

But what are the downstream effects of that expert support? When compared to Ovia members who didn't interact with Health Experts, Ovia Health members that engaged with the Health Expert team experienced a statistically significant 68% reduction in preterm birth rates.



**68% reduction  
in preterm birth**  
when members engage with Ovia's  
Health Expert team

### Why these results matter

Not only does this reduction in preterm birth rate have far-reaching impacts on public health, it's also among the largest cost drivers for healthcare payers. In fact, the societal costs of preterm birth top \$26.2 billion every year, from nearly \$17 billion just in medical and health care costs for the baby, to almost \$2 billion in labor and delivery costs for mothers, and billions more for early intervention, special education services, and lost work.<sup>11</sup> Based on Ovia Health's book of business aggregate claims analysis and literature estimates, the following cost avoidance metrics capture the tremendous impact each and every averted negative maternal health outcome has for dodging significant costs for employers, health plans, and individuals.



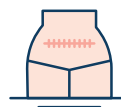
**\$95,000**

**in cost savings per avoided  
preterm birth**



**\$23,000**

**in cost savings per avoided case of  
preeclampsia**



**\$7,000**

**in cost avoidance per vaginal birth  
after Cesarean**



**\$2,500**

**in cost avoidance for every treated  
perinatal health condition**



**\$5,800**

**in cost savings per ever avoided  
case of gestational diabetes**

Ensuring the continued health of women, children, and families isn't just good sense—it's good business. And women and families can't wait; they need data-driven, validated approaches to improve the state of healthcare, fast.

## Key Approaches to Improve Outcomes and Reduce Expenditures for Payers and Healthcare Organizations

It's clear that there are plentiful opportunities for employers, health plans, and healthcare providers to transform maternal health outcomes—and significantly draw back unnecessary spending—by tapping into the power of digitally enabled approaches to maternal health management. Progressive employers and forward-leaning health plans and providers have already charted a path toward a safer, more affordable future for maternal health by adopting clinically-validated maternity management solutions and undertaking select key approaches:

### Ensure that Evidence-based Digital Education is Promoted as Early as Possible in Maternity Journeys

Given pregnancy only lasts nine months, every week counts to positively influence members to empower members with the information they need to make the best health decisions they can. Thanks to our engaging and dynamic solution experience, over 80% of Ovia members engage with our solutions in the first trimester and log in an average of 30 times per month, enabling us to expose these members early and often to the powerful clinical programming that can make all the difference in their reproductive health journey. By providing families with clinically-backed educational content at the outset of their maternity journeys, payers and providers can arm women and families the information they need to self-identify risk, better prepare for their family-building journey, find facilities and providers that are safer and better suited for their needs, access resources to facilitate better outcomes like doulas, and learn to effectively advocate for the best care they can receive. Ovia's approach ensures that employers, plan members, or patients know about the availability of digital maternal health support tools, and encourage them to access them as much as possible to further bolster efficacy.



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### Integrate Virtual Health Coaching for Early Guidance and Advocacy

Digitally-enabled education and support is essential, but as the study bears out, human-to-human connections can drastically improve outcomes, particularly when it comes to enabling parents to access needed mental health support. Payers and providers evaluating family building and maternal health solutions should give particular weight to the availability of clinically qualified health coaches to support families and provide guidance and advocacy as early as possible in the maternal journey.

### Enable Early Identification and Stratification of Risk through Holistic Data Collection on Self-reported Symptoms and Risk Factors

A maternal health management solution can't be an island. The most effective digital approaches to maternal health come through integrated, comprehensive solutions. Data collected through Ovia can power personalization that allows participants to have knowledge of their health risks and clinical guidelines and prepare them for conversations with their provider. Additionally, employers and health plans should aim to implement solutions that fully integrate with overall benefits ecosystems to fill in gaps in care and guide employees or members to the right care at the right time. Ideally, health plan care management teams should have visibility into high-risk cases identified through maternal health solutions for immediate intervention.

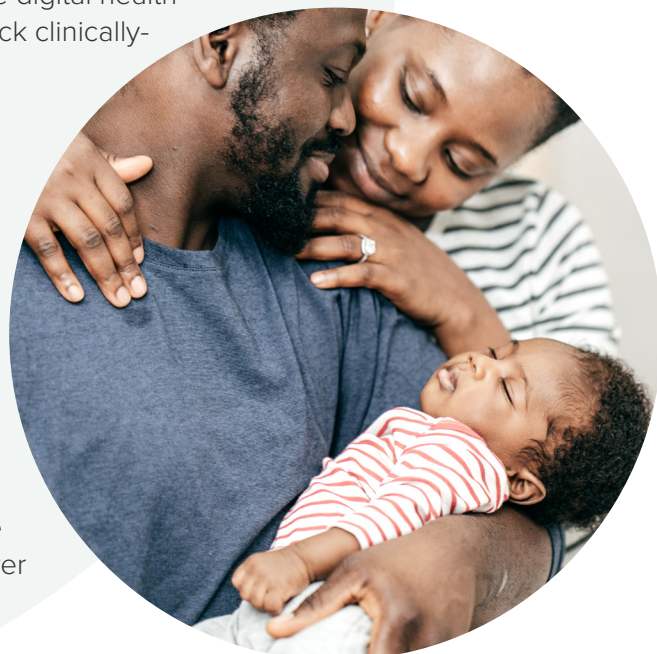
## The Takeaway

We can no longer put off improving the landscape of women and family health. There is low-hanging fruit—and an immense opportunity—to improve health outcomes, reduce spending on preventable conditions, stem employee turnover, and generally support women throughout the United States.

Improving health and support systems for women and families, particularly for people of color and other groups disproportionately affected by health disparities, is not only the right ethical choice, it's also the right business choice. Employees and members are demanding more equitable, intersectional benefits to support them in the moments that matter. Given rapid growth in the digital health and wellness space, it is all the more critical that buyers pick clinically-validated solutions that will drive real results.

Through strategically leveraging a third-party validated maternal health solution like Ovia, payers can provide members or employees with a digital companion that empowers members to take healthcare into their own hands, allowing them to make informed decisions about their own health and the health of their families.

When the traditional healthcare system disempowers women and families, we all need to restore it. By engaging participants proactively during critical life stages, Ovia Health not only avoids unnecessary spend but also provides personalized, evidence-driven guidance that has transformed the health trajectories and lives of over 17 million families, and counting.



### Learn more today.

Contact your Ovia sales director or email [enterprise@oviahealth.com](mailto:enterprise@oviahealth.com) to learn more about our solutions.

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4. CDC, ["Assisted Reproductive Technology Surveillance — United States, 2017"](#); Ovia Book of Business Data
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