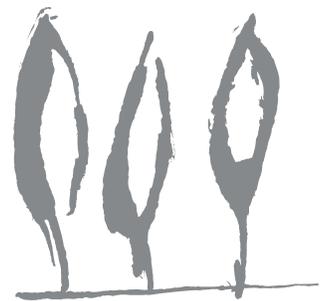




FERTILITY AND MATERNITY CARE:

**Two Women's Health Sectors Ripe
for Innovation and Investment**



TTCP



Many sectors of healthcare have undergone notable advances in recent years, but the women's health market has noticeably lagged behind. Significant potential exists to improve access, quality, outcomes, and satisfaction in this immense and growing market. This report examines two segments of the women's health market that are particularly well-positioned for disruption, fertility care and maternity care.

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TT Capital Partners is a value-add investor for growth-driven companies shaping the future of healthcare. We are a source of capital, expertise and strategic insight for healthcare IT and services companies innovating and disrupting how healthcare is delivered, managed and consumed. Our exclusive focus on healthcare combines investing experience, operating expertise and deep industry knowledge.



INTRODUCTION

Opportunities for innovation abound in fertility and maternity care

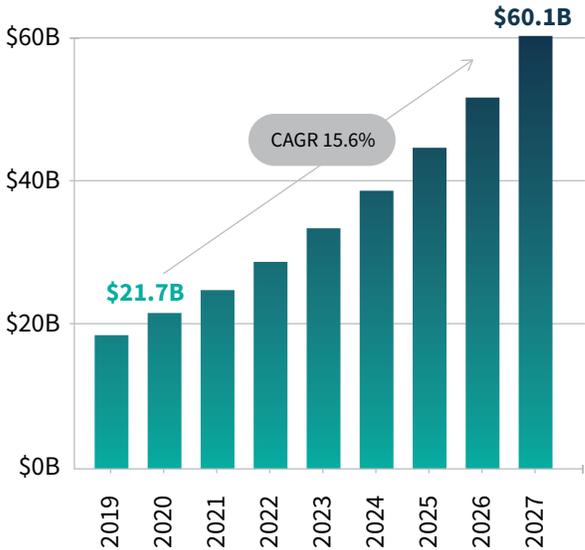
The women’s health market has gained increasing attention and momentum in recent years. The industry has a rare combination of characteristics that make it ripe for innovation and investment. The sheer scale of the space, its rapid growth, and acute pain points are at odds with the relatively low level of historical investment and innovation that we have seen in the marketplace to date. Indeed, women’s health is estimated to be a \$20 billion market, growing approximately 15% annually to \$60 billion by 2027.¹ However, just 3% of U.S. digital health fundraises since 2011 have been connected to women’s health,² and femtech (tech companies addressing female health) accounts for only 1.4% of the capital invested in healthcare. Women were not even required to be included in clinical research until 1993, when Congress passed the NIH Revitalization Act.⁴ As a result of the attractive market dynamics and historical underinvestment, we believe there is an urgent need to advance the “Triple Aim” of healthcare in women’s health, improving upon clinical quality, patient experience, and cost.

Defining the scope of women’s health can vary depending on the source. Sectors that are regularly included in market definitions include general women’s health, reproductive health, gynecology, fertility, maternity, and menopause, and sometimes primary care and mental health. All are important elements of the continuum of care serving women throughout

various stages of life. Each of these sectors, in turn, includes of a multitude of sub-sectors with distinct market characteristics. Cutting across those sub-sectors is an abundance of business models and modalities, such as care coordination, clinical care delivery, benefits management, and a long list of others. Given the complexity, examining the full scope of women’s health can seem overwhelming.

As we stepped back and thoughtfully considered the categories in which TT Capital Partners could most effectively be an agent for innovation through investment, two spaces emerged: fertility and maternity.

FEM-TECH MARKET SIZE¹



Fortune Business Insights; Media Overview, as cited in FemTech Analytics' Industry Landscape Overview

FERTILITY CARE MARKET

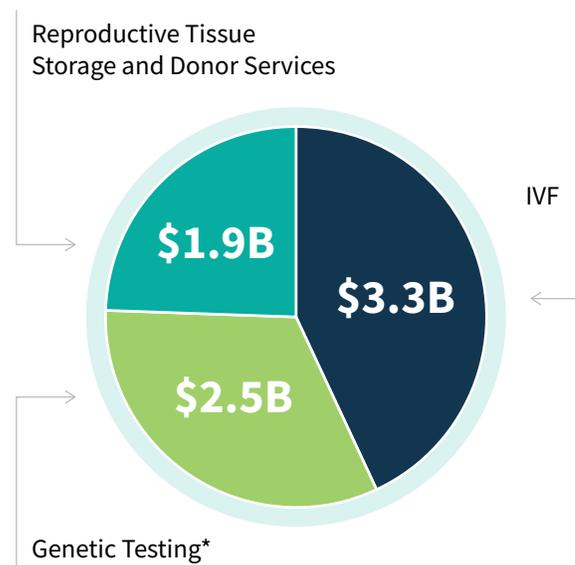
Demand is on the rise, but reimbursement lags behind

Fertility care is generally included in the broad segment of reproductive and sexual health, which covers services and technologies addressing infertility, contraception, cycle tracking, contraception and birth planning/control, and menopause. This report largely focuses on fertility, given the prevalence of infertility, increasing demand for fertility services, historical underinvestment, and overall market size. With an estimated U.S. market size of \$8b,⁴ fertility is the largest segment of the reproductive and sexual health sector.

Primary services found under the umbrella of fertility services include in vitro fertilization (“IVF”), genetic testing, and reproductive tissue storage and egg donor services. The largest two sub-segments are IVF and storage and genetic testing, at an estimated \$3.3b and \$2.5b respectively.⁴

Secular demographic tailwinds are driving an increasing focus on fertility, given that an estimated one in seven couples requires fertility treatment. This ratio is expected to increase, as the average age of a mother’s first birth has increased from 25 in the 1970s, to 28 currently. Further, around 20% of women have their first child at 35 or older, compared with only 8% 10 years ago. The number of women and families seeking fertility treatment and services is steadily increasing.

U.S. FERTILITY SERVICES MARKET⁴



**Represents prenatal and newborn genetic testing market*

Allied Market Research, Cision PR Newswire, and Global Market Insights, as cited in Harris Williams' Fertility Market Overview

The reimbursement landscape for fertility benefits and infertility, however, has lagged the increasing demand. Only 18 states currently have infertility insurance laws which stipulate the conditions through which patients are eligible for infertility treatment reimbursement.⁵ These laws require private insurers to cover at least a portion of fertility treatments but don’t fully protect against high out-of-pocket expenditures for a large portion of treatments. State-based decision making for infertility treatment coverage is born out of the Patient Protection and Affordable Care Act (“PPACA”), which

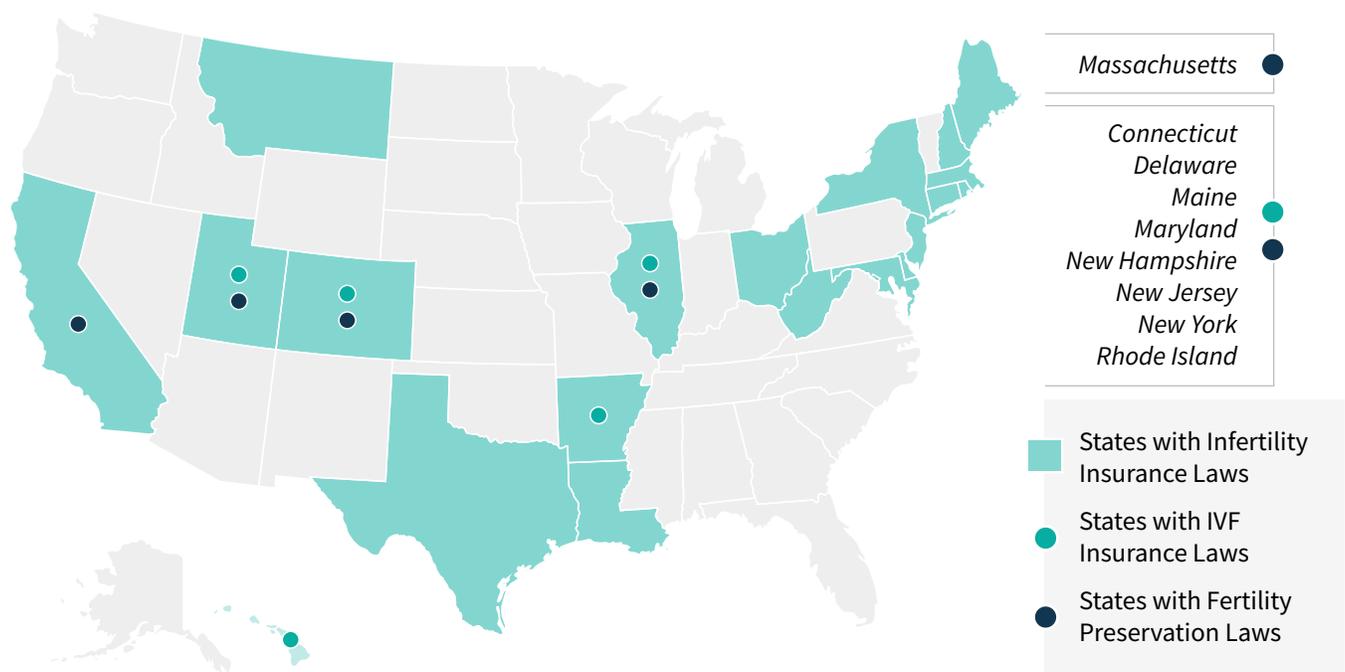
leaves coverage decisions to the states. High cash pay rates remain prevalent across fertility treatments; this will naturally decline with any expansion of commercial and government reimbursement coverage.

Reimbursement trends are key since they impact utilization. The average cost of one IVF cycle is north of \$12.5k, according to Kaiser Family Foundation (KFF).⁶ That doesn't include additional out-of-pocket expenditures related to clinic visits, tests, donor sperm/egg use and other costs. With extremely high personal expenditures possible and given 33 states aren't mandated to cover infertility services, the utilization of IVF and other forms of treatments is dominated by those who can afford to pay. Those with need, but without resources or insurance coverage, likely will not receive infertility services. According to KFF, only one state Medicaid program covers infertility treatment, further exacerbating the income-based access disparities.

Beyond commercial and Medicaid coverage, there is considerable opportunity for women's health companies directly targeting employers as a channel for their offerings, which also helps democratize infertility treatments and fertility benefits access. IVF coverage at small, large and jumbo employers has increased steadily since 2015; not surprisingly, coverage prevalence is highest at jumbo employers.⁵ Two principal factors driving an increase of employer coverage include an interest in ensuring quality, cost-effective care, and a desire to remain competitive in today's hiring environment via benefits that support a more broadly encompassing demographic of employees.

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INFERTILITY COVERAGE BY STATE⁵



The competitive landscape of companies providing fertility benefits and fertility-focused digital health solutions is highly fragmented, given the general immaturity of the market. Progyny (NASDAQ: PGNV) is the most established player offering fertility benefits through employers. Carrot Fertility and InsurMedix similarly focus on the employer channel. Modern Fertility, acquired by Ro in May 2021, increased access to fertility testing and diagnostic services previously reserved for higher-cost clinic settings. Kindbody's offering, expanded through the recent acquisition of Vios Fertility Institute, spans clinic-based fertility, IVF and holistic care, in addition to home-based testing options.

Across cycle tracking, birth control, and contraception, various companies offer digital-based solutions, though the majority of larger fertility or maternity-focused companies present a broad enough offering to also cover these sub-categories. For example, Ovia Health, acquired by Labcorp in 2021, offers a digital healthcare platform for maternity benefits; Ovia's offering spans infertility, pregnancy, cycle tracking, birth planning, and more.

SELECT RECENT ACQUISITIONS & INVESTMENTS:⁷

- Alife Health raises \$22m Series A financing led by Lux Capital, March 22, 2022
- Maven raises \$110m Series D at a \$1b valuation led by Lux Capital and Dragoneer Investment Group; August 17, 2021
- Carrot Fertility raises \$75m Series C at \$260m led by Tiger Global Management; August 17, 2021
- Ovia Health acquired by Laboratory Corporation of America; August 12, 2021
- Overture Life raises \$15m Series B at \$150m valuation led by Octopus Ventures; May 25, 2021
- Ro acquires Modern Fertility for \$225m; May 19, 2021

SELECT FERTILITY PROVIDERS ACQUISITIONS:

- Kindbody acquires VIOS Fertility Institute (26 clinics); February 1, 2021. Purchase price undisclosed
- Inception Fertility acquires Prelude Network; November 6, 2020
- Private equity investors in fertility providers: Morgan Stanley, TA Associates, Waypoint Capital Partners, Windrose, TPG, Webster Equity Partners, Sverica Capital, InTandem Capital Partners and more have made investments in the space since 2017. Clinic-based companies remain highly fragmented with high rates of cash pay and increasing reimbursement coverage.

The fertility segment is an important piece of the broader continuum of care for a woman's life and healthcare needs. Demand for fertility services and benefits are expected to increase—as is investment interest in the space—as demographic tailwinds, continued market education, reimbursement, and employer coverage improve. The high cost of popular treatments like IVF leaves the market ripe for further innovation and, where possible, utilization of digital-based and technology-enabled solutions.



MATERNITY CARE MARKET

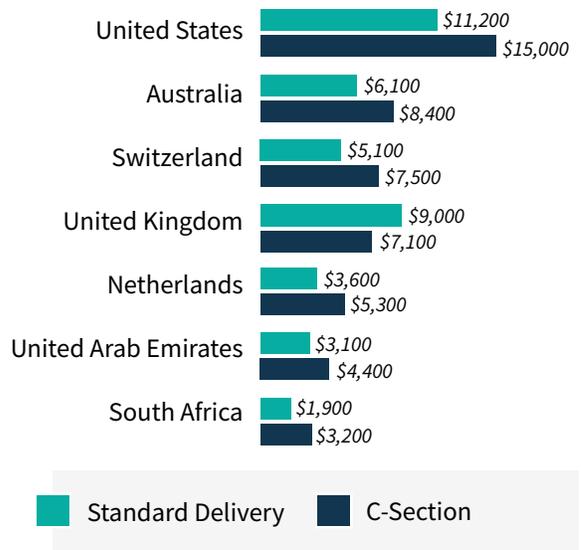
Addressing high cost and poor outcomes with increased coverage and innovation

Maternity care is broadly defined as the space that includes the prenatal, delivery, and postpartum phases of the pregnancy process. Like the fertility sector, maternity care is ripe for investment and innovation. Despite childbirth in the United States being more expensive than almost any other developed country, the U.S. still ranked 51st in infant mortality rate in a 2020 study.⁸ In addition, maternity is a sub-sector with worsening clinical outcomes and a high degree of variation in the quality of care, particularly for minority and underserved patient populations. The unfavorable cost, quality, and outcome trends within maternity care suggest there is a significant opportunity for innovative technologies and reimbursement models to address persistent challenges and inequities that exist across the sector.

The cost of a childbirth in the U.S. is higher than almost all other developed countries. For example, a standard delivery in the U.S. typically costs approximately \$11,200, compared to \$3,600 in the Netherlands.⁹ A factor contributing to elevated costs is the overutilization of expensive and unnecessary procedures, such as cesarean sections. While the World Health Organization reports the ideal cesarean section rate for a population to be 10%-15%,¹⁰ the CDC reports over 31% of deliveries in the United States were by cesarean section in 2019,¹¹ with some hospitals reporting rates as high as 60%.¹² In addition, the number of cesarean sections per 1,000 live births increased from 220 in 1999 to 317 in 2019.¹³

THE U.S. IS THE MOST EXPENSIVE COUNTRY FOR CHILDBIRTH⁹

Average hospital admission cost for a c-section/standard delivery in 2017**

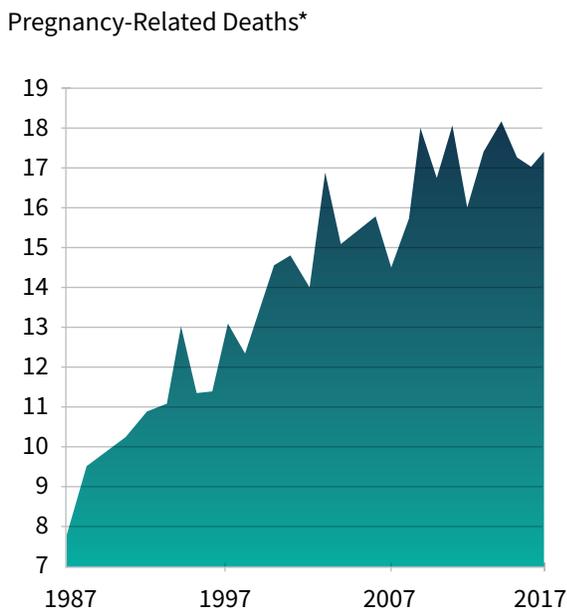


**International Federations of Health Plans, as cited in Statista.

The steep rise in the cesarean birth rate over the past two decades has not been associated with discernable gains in maternal or infant health and poses many excess risks. Unnecessary cesarean sections increase the probability of near-term complications, such as infections, hemorrhages, blood clots, and surgical injuries, as well as risks during future pregnancies (e.g., uterine rupture). As a result, the cost of maternal and newborn care is about 50% higher for cesarean births compared to vaginal births.¹⁴

While the U.S. spends the most per capita on maternity care, clinical outcomes and quality of care are poor relative to other countries, and they continue to worsen. Compared with ten other high-income nations (Australia, Canada, Denmark, France, Germany, Japan, the Netherlands, Sweden, Switzerland, and United Kingdom), the U.S. has the highest maternal mortality rate and infant mortality rate. More specifically, the maternal mortality rate in the U.S. is almost 10x higher than in the countries of Belarus, Poland, and Italy.⁸ Outcomes in the U.S. continue to worsen, with the Centers for Disease Control and Prevention reporting pregnancy-related deaths per 100,000 births in the United States increased from 7.2 in 1987 to 17.3 in 2017,¹⁵ suggesting mothers today face a greater risk of death from pregnancy than their mothers did.

TRENDS IN PREGANCY-RELATED MORTALITY IN THE U.S.: 1987-2017¹⁵



*Per 100,000 live births
Centers for Disease Control and Prevention

While maternity outcomes in the U.S. are generally poor, there is substantial inequality in outcomes as minority and disadvantaged patient populations experience higher maternal morbidity than other demographics. For example, black and indigenous women have a pregnancy mortality rate over 2x to 3x higher than white women.¹⁵ Many disadvantaged women, particularly those on Medicaid, face socioeconomic, political, and geographic barriers impacting their ability to access preventive and routine maternal care, leading to avoidable complications or emergency department utilization.

Given the challenges many Medicaid members face, several state Medicaid programs are expanding their maternity coverage to improve outcomes. Research indicates that consistent access to critical health services throughout a woman’s reproductive years supports prevention, early detection, and treatment of many preventable conditions that place women or their infants at risk of complications. Consequently, many state Medicaid programs are expanding coverage to ensure low-income women have continuous coverage before, during, and after their pregnancy. For example, while federal law only requires pregnancy-related Medicaid coverage to last through 60 days postpartum, 20 states have elected to extend Medicaid postpartum coverage to 12 months. Medicaid is the largest payer for maternity care in the U.S. covering over 40% of births, indicating Medicaid policy changes have a significant impact on the broader maternity care coverage and reimbursement environment.¹⁶

In response to poor cost, quality, and outcome trends in the maternity space, several companies are providing innovative clinical care, telehealth, educational content, and clinical advocacy solutions designed to improve the maternity experience. Maven, Quilted Health, Kiira, Ruth Health, and Oula offer telehealth platforms that connect patients and providers, with

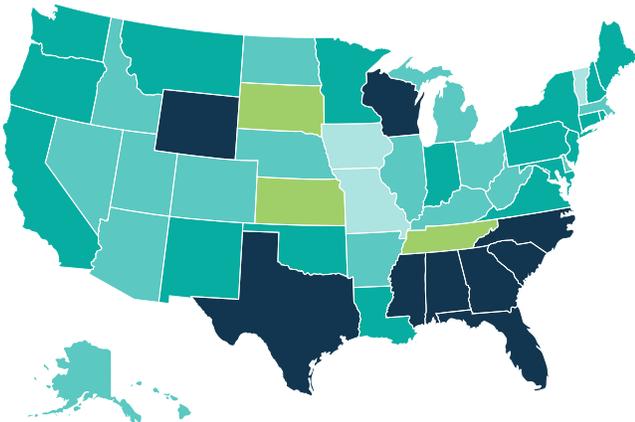
platforms that connect patients and providers, while select platforms also provide access to in-person care. In addition, many maternity care platforms, including Cleo, offer care advocacy solutions and educational content designed to provide clinical navigation and administrative support. Finally, Mahmee provides a platform helping patients find and schedule virtual and in-person appointments with in-network maternal health providers.

Value-based payment arrangements are also well-positioned to improve maternity outcomes. Several maternity care characteristics, including over utilization trends, the ability to generate savings for both the mother and infant, and the strong correlation between preventive care and improved outcomes, suggest value-based care solutions are suited to reduce clinical waste in the maternity space. However, payers and providers have struggled to meaningfully advance value-based maternity solutions, indicating there is substantial opportunity for providers of maternity value-based care solutions. One company, Wildflower Health, is making inroads with its virtual and value-based maternity care solutions (see related story).

Maternity care is a critical component of women’s overall healthcare needs, particularly given the material medical risks associated with pregnancy and significant physical and psychological demands related to motherhood. Worsening clinical outcome, utilization, and cost trends in the space suggest there is increasing demand for investment in innovative solutions targeted at improving the broader maternity care segment. Disruptive technology solutions and value-based payment arrangements are especially well suited to improve maternity care processes and address enduring complexities and inequities that persist in the space.

Worsening clinical outcome, utilization, and cost trends in the space suggest there is increasing demand for investment in innovative solutions targeted at improving the broader maternity care segment.

STATE DECISIONS ON MEDICAID EXPANSION AND FAMILY PLANNING PROGRAMS AFFECT WOMEN'S ACCESS TO POSTPARTUM CARE¹⁶



- Medicaid Family Planning Program (SPA/Waiver) and ACA Medicaid Expansion (18)
- ACA Medicaid Expansion only; no Medicaid Family Planning Program (17 + DC)
- State Family Planning Program and ACA Medicaid Expansion (3)
- Medicaid Family Planning Program only (SPA/Waiver); no ACA Medicaid Expansion (9)
- No ACA Medicaid Expansion and no Medicaid Family Planning Program (3)

Source: Kaiser Family Foundation (KFF) and Guttmacher Institute, as cited in KFF: Expanding Postpartum Medicaid Coverage



INNOVATOR SPOTLIGHT

Wildflower Health plays a critical role in advancing virtual and value-based care



Wildflower Health is a leading provider of virtual and value-based solutions in women's health. Wildflower was founded in 2012, initially offering a mobile application integrated with health payers and providers to help expecting families make informed decisions and connect to healthcare throughout the maternity process. The company has grown to support families across the entire women's health ecosystem, spanning from family planning to pregnancy to whole women's health.

Today, Wildflower delivers a patient engagement and care transformation solution consisting of a patient-facing mobile application that delivers personalized care journeys integrated with provider workflows, as well as health advocacy services, a remote monitoring platform and a network of virtual care partners. The company's solution improves patient experience, provider efficiency and health outcomes by supporting patient engagement and self-care, providing ongoing patient monitoring and augmenting care team workflows.

In addition, Wildflower helps payers and providers capture the value of the care transformation by serving as an enabler of value-based payment bundles for maternity care. The company operates as a convener on behalf of payers and providers, managing network development, payer and provider contracting, and bundle design processes. Wildflower's maternity bundle is comprehensive, spanning from prenatal to postnatal care, and accounts for the total cost of pregnancy for both the mother and baby. By coupling its digital solution and care transformation services with value-based payment administration, Wildflower is helping

OB providers, health systems and payers move more successfully and seamlessly into the care models and payment models needed to transform the safety, quality, cost, and health equity of maternity care in the United States.

"We see a transformational opportunity to improve outcomes and reduce the cost of care by leveraging value-based maternity care. We look forward to accelerating the transition to a new era of value-based care and continuing to support families through their maternity journey."

— **LEAH SPARKS, FOUNDER AND CEO
OF WILDFLOWER**

In March 2022, Wildflower announced that TT Capital Partners invested \$26 million to support the launch of Wildflower's value-based care solutions. Dawn Owens, CEO and Partner of TT Capital Partners, joined Wildflower's board of directors.

"We think maternity care is particularly well-suited for value-based care solutions," Owens said. "Wildflower's leading digital platform and first-mover advantage position the company to lead the transition to value-based maternity care. We are excited to partner with Wildflower and support the company's next phase of growth."

Wildflower will leverage the financing to accelerate the operationalization and nationwide launch of the company's value-based care solutions.



ENDNOTES

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9. Statista, The U.S. Is the Most Expensive Country for Childbirth
10. World Health Organization, Statement on Caesarean Section Rates
11. National Center for Health Statistics, National Vital Statistics Report, Vol. 70, No. 2
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16. Kaiser Family Foundation, Expanding Postpartum Medicaid Coverage



UNCOMMON CLARITY IN HEALTHCARE

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