The Broken Economics of Fertility Care:

How Employers and Health Plans Are Paying the Price

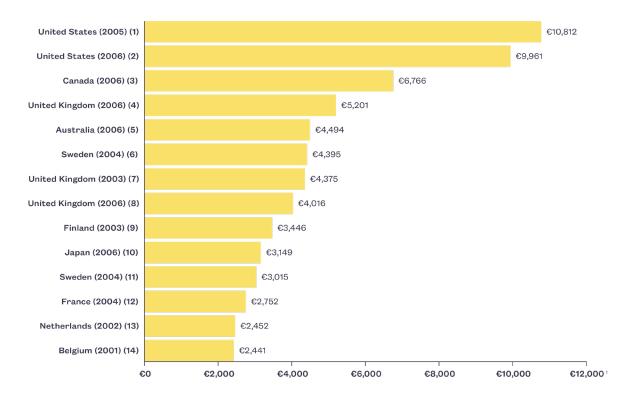
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Overview

Over four decades of scientific research and development, fertility care has changed dramatically, providing increased positive pregnancy outcomes, expansive treatment options, and better access to care. Despite the standardization of protocols, optimized outcomes, and significant increase in access to care, costs have not come down for consumers. In fact, in an industry that is quickly heading towards commoditization, costs are unjustifiably high, and consumers, and their employers, are paying the direct and indirect costs of this market phenomenon.

A Look Back at Employer Fertility Benefit Pricing

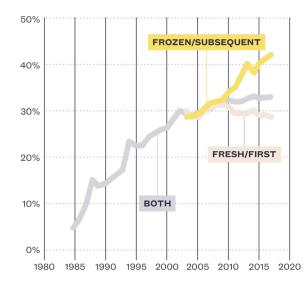
Ten years ago, employer fertility coverage was rare, and consumers were largely on their own to pay for care while at the mercy of self-pay rates charged by fertility providers. Fertility treatment was extremely cost prohibitive, and with success rates still low and average cycles to pregnancy still high, treatment was not a viable option for anyone outside of the upper class, <u>A study</u> completed in 2015 showed a patient undergoing IVF treatment could expect to pay on average \$60,000, causing more stress and hardship on hopeful patients. Additional studies produced by the ESHRE Reproduction and Society Task Force found that the United States actually had the highest cost burden for assisted reproductive technology (ART) procedures.



¹Chambers, Georgina M., The costs and consequences of assisted reproductive technology: an economic perspective. Human Reproductive Update [Internet]. 2010 Jun 8 [cited Jul 21, 2021]; 16(6) 603-613.

High fertility treatment costs have negatively impacted the quality of life, including increased stress over financial burdens, the inability to own their own home, and depleted or empty life savings. According to a collaborative follow up report on the National Survey of Employer-Sponsored Health Plans 2005 by Mercer and RESOLVE, while 70-80% of people that struggled with infertility could receive positive outcomes and benefit from fertility treatments, the cost prohibitiveness deterred an estimated 50% of these people from seeking out care. Of the people who did seek out treatment, they would encounter significant out-of-pocket expenses.

While today's average IVF cycle count to achieve pregnancy is down to about 2.2 cycles², this was not the case from the start. The IVF delivery rate was recorded at less than 10%³ in its early stages, as documented by the <u>Society for Assisted Reproductive Technology</u>. With past patient experiences that sometimes ranged from 6 to 10 cycles to achieve positive outcomes, the financial burden becomes an overwhelming additional stressor on top of the emotional stress of not being able to conceive.



IVF Delivery Rate / Cycle³

Even just a short time ago, the average number of cycles was 3.4, and with the cost of IVF being so high, the financial commitment ranged from \$50,000 - \$75,000 to achieve success. Happily, outcomes over the years have only gone up, and they continue to trend positively with advanced research and development.

It is impressive to look back to the first IVF baby and understand that the science and technology of the fertility industry is truly still in its infancy and yet has come a long way in that short time. In the few short years from inception, pregnancy rates grew 4x from 6% in 1978 up to 30% in 1983 with the move from unstimulated cycles over to stimulated cycles, with the oocyte retrieval rate also increasing more than $3.5x^4$. Then, in 1983, the first donor egg was successfully transferred and resulted in a live healthy birth, opening up the door to new fertility treatment options for women who would have natural or premature ovarian failure⁵.

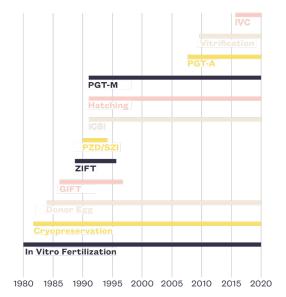
In the 90's, research and development in genetics took scientists to the next step of dramatically increasing pregnancy rates and ultimately reducing cycles. By practicing genetic testing in the 3-5 day window, doctors

2(2021). Cost. FertilityIQ. https://www.fertilityiq.com/topics/cost

³(2021). IVF Delivery Rate / Cycle. Society For Assisted Reproductive Technologies. <u>https://www.sart.org/globalassets/__sart/infographics/more-deliveries.png</u> ⁴Sauer, Mark V., and Wang, Jeff, In vitro fertilization (IVF): a review of 3 decades of clinical innovation and technological advancement. Therapeutics and clinical risk management [Internet]. 2006 Dec [cited 2021 Jul 21]; 2(4): 355-364.

⁵Lutjen P, Trounson A, Leeton J, et al. The establishment and maintenance of pregnancy using in vitro fertilization and embryo donation in a patient with primary ovarian failure. Nature. 1984:307:174–5.

can identify more than 40 different diseases and best predict a healthy and successful transfer⁶. Previous to genetic testing, transplanting multiple embryos to increase the likelihood of pregnancy was a regular practice. With the invaluable insight into the health and viability of an embryo, there was a gained ability to confidently choose healthy embryos while decreasing the number of embryos transplanted, resulting in fewer multiples. Today, vitrification and genetic testing is used by top clinics to not only eliminate additional IVF cycles for patients, which would save a patient on average \$17,000 for each avoided cycle⁷, and also decreases costs for health plans and employers in indirect costs, like NICU expenses, extensive hospital stays and longer periods away from the workplace, that resulted from those multiple births.



Evolution of Techniques⁸

GIFT Gamete Intrafallopian Tube Transfer ZIFT

Zygote Intrafallopian Tube Transfer

PZD/SZI Partial Zona Dissection / Subzonal Insertion

ICSI Intracytoplasmic Sperm Injection

PGT-M Preimplantation Testing for Mutation

PGT-A Preimplantation Testing for Aneuploidy

IVC Intravaginal Culture

Beyond the exciting discoveries in treatments that expand the options of pathways to parenthood for aspiring parents, advances and innovations in support tools, state-of-the-art lab equipment, and medical records have increased a patient's likelihood of achieving a successful pregnancy.

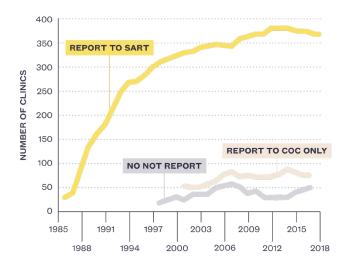
As treatment options diversified in the late 80's, fertility treatments moved from experimental to boutique services, with less than 100 clinics available to aspiring patients to choose from across the US⁹. With a minimal footprint, indirect costs for travel to these specialized fertility clinics exacerbate what is already an expensive procedure to begin with, compounded by the number of cycles that used to be necessary for positive outcomes. By 1991, access doubled to approximately 200 clinics⁹ providing services, and access to care began to open up to those who could afford the treatments and begin building the families they dreamed of having. Today, access to clinics has more than doubled again to approximately 450 unique clinics⁹ with multiple locations, including clinics specialized in modern technology, member experience, and optimized outcomes for their patients. In addition to more clinics with advanced technologies and best practice procedures, there is increasingly more availability of virtual and telemedicine services, helping to go even further to eliminate geographical obstacles like access deserts. This increased access has provided the start to eliminate significant barriers to what the World Health Organization deems essential human rights, the right to decide the timing, spacing, and number of children that a person decides to bear¹⁰.

⁷(2021 Jul 21). The Cost of IVF By City. FertilityIQ. https://www.fertilityiq.com/topics/cost

⁶Sauer, Mark V., and Wang, Jeff, In vitro fertilization (IVF): a review of 3 decades of clinical innovation and technological advancement. Therapeutics and clinical risk management [Internet]. 2006 Dec [cited 2021 Jul 21]; 2(4): 355-364.

⁸(2021). Evolution of Techniques. Society For Assisted Reproductive Technologies. <u>https://www.sart.org/globalassets/__sart/infographics/evolution-of-techniques.png</u> ⁹(2021). Number of Clinics. Society For Assisted Reproductive Technologies. <u>https://www.sart.org/globalassets/__sart/infographics/number-of-clinics.png</u> ¹⁰(202 Sep 14). Infertility. World Health Organization. <u>https://www.who.int/news-room/fact-sheets/detail/infertility</u>

Number of Clinics¹¹



The Present Day Pocketbook

With optimized outcomes from scientific and technological advances over the last 4 decades, and access to these services increasing to become mainstream and more readily available to the entire population, the cost in the market for these services should come down - except they haven't. A recently <u>updated study</u> in Health Affairs highlighted the continued problem with U.S. healthcare costs, drawing conclusions around the price of services as the key factor in the higher healthcare expenditures in the U.S. There are similar challenges and financial burdens for those receiving fertility treatments. By taking into consideration the rate of inflation, the fertility treatments of today cost the same, and in some domestic markets, more than the fertility treatments of yesteryear.

| | SF | LA | NYC | NJ | CHICAGO | BOSTON | SEATTLE | ATLANTA |
|--------------|----------|----------|----------|----------|----------|----------|----------|----------|
| IVF | \$12,246 | \$13,325 | \$9,705 | \$10,866 | \$11,666 | \$8,267 | \$12,450 | \$11,363 |
| Medication | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | \$5,000 |
| Consultation | \$410 | \$320 | \$408 | \$408 | \$438 | \$352 | \$312 | \$282 |
| ICSI | \$1,891 | \$1,763 | \$2,500 | \$1,725 | \$1,750 | \$1,280 | \$900 | \$1,687 |
| PGS | \$5,202 | \$5,475 | \$5,881 | \$5,000 | \$5,425 | \$5,111 | \$4,700 | \$4,800 |
| Total | \$24,749 | \$25,883 | \$23,494 | \$22,999 | \$24,279 | \$20,010 | \$23,362 | \$23,132 |

Itemized IVF Costs by U.S. City and Region¹²

It has been a welcome change over the last decade to see <u>employers expanding benefit coverage</u> for this important need. However, this expansion of coverage and new fertility solutions has lacked focus on the underlying costs for fertility care. As a result, many employers who offer fertility coverage look back and don't understand how their dollars are spent. Similar challenges have been noticed specifically in employersponsored fertility benefits, particularly with niche third-party administrators (TPAs) that tack on indeterminable margins on top of already expensive provider services. With these types of TPAs, employers sponsoring fertility coverage end up paying average market prices which are the same or higher than

individuals pay as self-pay patients, providing no relief from the financial burden of fertility care, but instead shifting the bill to the employers and adding administrative fees on top of it. As employers move into the realm of becoming more educated buyers, there has been a significant shift towards direct contracting with providers, bundled payments for services, value-based care, and becoming more technologically focused.

As with any product or service, buying directly from the source will be the most cost-effective method of acquisition. With the evolution of how fertility care benefits and services are offered in the market, employers and health plans now have the option of being able to work directly with providers to achieve significant cost savings over self-pay rates or rates from expensive third-party administrators. In addition to a direct contracting approach, bundled payments have been a product that has helped drive down prices and control for P&L volatility, offering contracted case rates for full IVF cycles, as opposed to variable service rates with markup costs. These bundled payments combined with a focus on value-based care and the elimination of unnecessary tests and procedures have effectively driven down the cost of services through certain benefits administrators.

Modern technology also plays a significant role in how employers and health plans can influence market prices. Finding providers who strive to put state-of-the-art technology in labs and the hands of their clinicians will be key. Asking for reporting into cost transparency, utilization, and other metrics should be a standard part of the administration of the benefit. Underestimated, but possibly just as important, is considering the technology that is available to patients, as the transformation from the 80s has shifted the population to a digital mobile world. Consumers of today are more educated and have higher expectations around healthcare products and services. When best practices partner with these new technologies, the quickest and most cost effective pathway to positive pregnancy outcomes for patients will be achieved.

According to The Ethics Committee of the American Society for Reproductive Medicine's <u>most recent opinion</u> paper, economic factors are the primary contributors to disparities in access to effective treatment. As a direct response to these economic factors, ASRM's Ethics Committee calls out a need for collective action by increasing insurance coverage for fertility and family building benefits while also reducing the financial burden of these services.

Conclusion

To provide a high-value fertility and family-building solution, the offering needs to be both high-quality and competitively priced. While clinical quality and patient experience are imperative for employers and health plans and are already a key metric in benefit valuation, what has become overlooked in the fertility industry is the rising prices that these groups are paying to offer these benefits. Employers and health plans can strongly influence the market and drive healthcare prices down for themselves and the individuals seeking self-pay rates by working with a provider that also administers the benefit. The recipients receive the highest quality care that only those in the provision of care can provide.