

# Case Studies

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# Transforming Illegible Medical Test Reports: A Case Study

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## 1. Context



The Non-invasive Prenatal Testing (NIPT) is a screening method that helps to determine if the baby is at risk for genetic abnormalities, such as chromosomal disorders, in the first trimester of pregnancy.

NIPT is an elective test that can be strongly recommended by Healthcare Professionals (HCPs) based on risk factors such as maternal age ( $\geq 35$  years old) and personal or family history of a pregnancy with a chromosomal abnormality. It has been recurrently reported by pregnant women and, sometimes HCPs, that NIPT reports are hard to parse for non-specialists.

## 2. Challenge



Why not transform the NIPT illegible report content into user-friendly reports that can better inform pregnant women and support them in making shared decisions with their HCPs?

After all, these illegible reports hold valuable and vital information for pregnant women and the HCPs.

NIPT reports don't have to be unintelligible. With more understanding of their cryptic content, pregnant women can become participants in their own family-health decisions.

## 3. Process



### 3.1. Basic Principles

When tackling new challenges, we make sure that the approach we are proposing is in line with our mission and vision:

*"rendering health information accessible to everyone: easy, clear, simple, and relevant".*

We base our strategies on increasing pregnant women's knowledge and engagement in order to foster shared decision-making and increase their access to reliable health information.

## 4. Future



As with all our products and features, the NIPT report augmentation will be assessed continuously and developed further through:

- Conducting post-marketing analyses
- Enhancing our products based on feedback from clients and users
- Customizing content for our target populations
- Expanding the knowledge base that we share with our users

The aim is to create smart content that is automatically tailored for different conditions and NIPT results. This will be backed by a more comprehensive NIPT guide that provides pregnant women and their families with more details related to the test, its potential outcomes, and the next steps after receiving the result.

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## Understanding & Analysis

Conducting a thorough analysis of current report, NIPT testing market, medical literature, and patient blogs is key to setting the first stone in this transformation.



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## Execution and Outcome

Delivering an end-product is visually appealing, self-explanatory, patient-centered, user-friendly, and scientifically and medically-sound NIPT report.

**A patient-centered augmented NIPT report** based on leveraging our expertise in the health-technology sphere, and in augmenting, providing, insights.

**Addressing patients' and clinicians' concerns** and bridging gaps in the currently available report.

A digital representation of a Non-Invasive Prenatal Testing (NIPT) report on a blue clipboard. The report is titled 'NON INVASIVE PRENATAL TESTING (NIPT) Genome-wide Screen'. It features a 'RESULT SUMMARY' section with a green checkmark, a red female symbol, and a blue DNA helix icon. Below this is a 'TEST RESULT' section with a cloud icon and a 'U+' result. The report is designed to be clear and patient-centered, with lines for additional information.

**Validating the outcome** by conducting a structured review process by Medicus-affiliated healthcare professionals, external experts in the field, and a general audience.

**Tailored the content** to suit different audiences including pregnant women and healthcare professionals.

# Menopause Telemedicine – a Digital Revolution



MyMenopauseRx

By: Dr. Barbra Hanna, DO, NCMP Founder & CEO at MyMenopauseRx

# Menopause Telemedicine – A Digital Revolution



**Menopause can be a confusing time in a woman's life.** Brain fog, poor memory, and fatigue are just a few contributing symptoms. Finding midlife health and wellbeing for women should not be difficult, yet it is. Many women complain their menopause symptoms are dismissed and with good reason. Most primary care providers and ob/gyn get little to no formal training in treating menopause. Since better healthcare during perimenopause and menopause can positively impact women's health risks later in life, midlife women need improved access to menopause specialists. Menopause care is women's healthcare. **Telemedicine platforms like MyMenopauseRx revolutionize menopause care through its easy and convenient digital healthcare journey.**

Vital to encouraging patient compliance with self-care, the clinical team at MyMenopauseRx serves as a woman's partner in perimenopause and menopause. Women enjoy unlimited HIPPA compliant messaging with clinical staff, recommended personalized lifestyle interventions, supplement recommendations, evidence-based treatments, and aftercare summaries, all available from their patient dashboard. **Easy access to personalized healthcare recommendations is essential since 40-80% of the medical information provided by healthcare providers is forgotten immediately by patients.**

Empowering women with education, value and choice are paramount to creating a satisfying healthcare experience.



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# Menopause Telemedicine – A Digital Revolution



**MyMenopauseRx begins each woman's digital healthcare journey with on-demand scheduling of virtual menopause visits**, thus eliminating the average 24 day wait time for a new patient appointment at a primary care provider or ob/gyn. Appointment booking times are flexible to fit their busy schedules, eradicating a woman's need to miss work or significant life events.

No different from ordering off a menu in a restaurant, women confidently know the cost of their healthcare visit before it begins. The **MyMenopauseRx telemedicine platform includes transparent fixed out-of-pocket costs that take the guesswork out of healthcare expenses**. Point of care payment options right on the patient dashboard make paying for one's care a breeze.

Since midlife women transitioning through menopause are at increased risk for chronic diseases such as high cholesterol, diabetes, and osteoporosis, many women find lab testing helpful to reinforce their lifestyle choices and self-care. **Other midlife women are re-entering the dating world and require confidential testing for sexually transmitted infections**. MyMenopauseRx made obtaining traditional prescription-based lab testing easy. Women can self-order lab testing on-demand from their patient dashboard with price transparency for each test. Lab testing is completed at national standardized facilities, no different than receiving a lab order at a traditional in-person doctor's visit. **Results are reviewed by clinical staff and then made available for viewing on one's patient dashboard once complete.**



The HIPPA compliant patient dashboard at MyMenopauseRx serves as the women's command center for menopause care, putting all the needed resources at their fingertips. Women who utilize telemedicine platforms like MyMenopauseRx enjoy convenient, evidence-based digital healthcare journeys, finding the menopause health and wellbeing they deserve.



# Navigating the Data Explosion in the FemTech Market Leveraging AI/ML



SG Analytics  
excellence, **BEYOND**

By: Dr Siddhartha Dutta, Practice Head at SG Analytics Inc.

# Navigating the Data Explosion in the FemTech Market Leveraging AI/ML



## The Puzzle Around FemTech Data

We have been tracking the 'FemTech' industry for the past 6 years and have keenly observed the hype and enthusiasm. In the past 2 years, we had the opportunity to speak with several FemTech opinion leaders across the globe. Quite a few interesting observations came out during such interactions. Most of them firmly believed that this segment had the potential to disrupt the future of healthcare. Currently, this space is driven by selected female entrepreneurs due to their personal experiences and aspirations.

Many service providers were dependent on their existing client pools and were busy retaining them compared to planning a new market entry. Players based out of crucial US states were not well informed about the preferences and sentiments of women across Western Europe, China, or India. Every player in the market had a reliable source of data that they were using. We doubt if there was any validation of these numbers.

## Who Validates the Market Numbers?

While the internet and social media are full of optimism, no validated and actionable numbers support the phenomenon. FemTech has garnered much attention ever since its inception. An article published in Forbes claimed that \$800 million were invested in FemTech start-ups in 2019 (Jaramillo n.d.).

For 2020, the investment was projected at \$1.3 billion ("Despite Industry Buzz, FemTech Funding Still Lags" 2021). One of the leading 'FemTech' promoters in the US and my mentor who got me interested in 'FemTech' stated, "Digital health investment in 2020 was \$14.1 billion out of which, 'FemTech' was only \$254 million, around 1.8% of the total investment," while projecting the market to reach \$1.15 billion by 2025 ("The COVID-19 Pandemic & a Rising Focus on Women's Untapped Healthcare" n.d.).

Several published reports also projected global investments of \$520 million in 2020. However, other sources claimed investments to reach \$22.8 billion in 2020 ("FemTech Market Size 2021-2027 | Growth Forecast Report" n.d.).

# Navigating the Data Explosion in the FemTech Market Leveraging AI/ML

## Who Validates the Market Numbers?

Proving the actual worth of this FemTech market is a struggle as the numbers do not match. In the blockchain and data engineering era, 2 plus 2 is just not adding up to 4. We sincerely love this optimism, though we can see other ambiguities as well.

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# Navigating the Data Explosion in the FemTech Market Leveraging AI/ML

## Ambiguity in Coverage

While some leaders promote menstrual health, PMS, and sexual wellness, other key healthcare bodies claim anemia in pregnant women, breast cancer, and CVD equally important. When we think of 'FemTech,' why only think of menstruation and childbirth? Menstrual issues are also related to PCOS, endometriosis, stress, lifestyle, and other conditions. All these are interconnected. While we have medicines for some, we don't have products and services for others. The definition of 'FemTech' and 'female health' remains disconnected. While we have data for some (even as old as 2015), we have data missing in others. It was surprising to track the prevalence of anemia in pregnant women on a critical global healthcare data site that added 2019 data in 2021.

**Data available in today's market lacks uniformity and validation and is not statistically significant.** This leads to monetary losses, and eventually, slower segment growth. Most of the FemTech service or product manufacturers rely on their end clients for perception, sentiments, and market demands.

## Use Case - Same Product, Different Prices, Similar Perception

Recently, we did a perception analysis of US women and Indian women who used intimate wipes regularly. While herbal, pH balance, or natural categories were typical, we were surprised to find users paying 3 times more in the US than in India.

A pack of hygiene wipes (40 wipes) was priced INR175/USD2.37 in India compared to USD 9.99 in the US.

The fact that the same product with the same quality can be manufactured and sold at a lower cost went unnoticed, increasing the user base. However, such studies and data are not available anywhere.



USD 2.37 in India  
USD 9.99 in the US

The same product with the same quality

# Navigating the Data Explosion in the FemTech Market Leveraging AI/ML

## Possible Scenarios and Solutions

If there are problems, then there must be solutions for solving these problems. Let's talk!

### 1. Use AI/ML to generate and analyse data

It's a universal fact that in today's world, 2 plus 2 is not adding up to 4. However, using ML tools, running surveys, and analyzing perceptions, sentiments, and more, data can be generated by ethnicity, usage, price, age group, and more. The fast-track data-gathering process has replaced the rudimentary excel sheets, and there is no harm trying them at least once. Manufacturers and service providers must create these databases. It will save them money and effort and keep them updated on demands.

### 2. Make this segment inclusive

'FemTech' by women and for women is great, but we also have men driving product portfolios in female health across pharma and medical devices. Inclusiveness is imperative for the success of this segment and will add value. At the same time, gathering data, including the buyers (women) and facilitators (men who sometimes buy or sell these products). Inclusive data gathering has far more impact than one-sided data. Inclusive data has helped many players save money and time.

### 3. Break the taboo

Social media awareness campaigns are running across the public domain. Companies are conducting webinars, podcasts, and conferences. Is there a measurable account of the impact of these initiatives? Probably not! Measure the impact of campaigns such as menstrual leave in a workplace, men/boyfriends/fathers buying tampons for their loved ones, and so forth. Running such campaigns can break the taboo and create more awareness.

# Navigating the Data Explosion in the FemTech Market Leveraging AI/ML

The struggle has just begun, and only data can consolidate this market. With no data in hand and no coordinates to look up to, it appears to be an uphill task in 2021. I am reminded of a recent poem that gathered much attention on social media.

***“The hill we climb, if only we dare....”*** She read Amanda Gorman’s poem at the inaugural ceremony of the Presidential swearing-in ceremony in the US. This poem states the accurate picture of the ‘FemTech’ industry today. Yes, it is true that out of the 3.9 billion women population globally, only some of the brave hearts have dared to challenge the *status quo* and break the female health glass ceiling. It’s challenging to find sufficient and reliable data to accelerate the ‘FemTech’ phenomenon. Hence, manufacturers, social media advocates, ‘FemTech’ promoters, and buyers must come together to increase data. **The future is female, but not without data.**

## References:

1. Jaramillo, Estrella. n.d. [“FemTech in 2020: Investors Share Trends and Opportunities in Women’s Health Technology.”](#) Forbes. Accessed September 28, 2021
2. [“The COVID-19 Pandemic & a Rising Focus on Women’s Untapped Healthcare.”](#) n.d. Insights.frost.com. Accessed September 28, 2021
3. [“Despite Industry Buzz, FemTech Funding Still Lags.”](#) 2021. MobiHealthNews. July 16, 2021
4. [“FemTech Market Size 2021-2027 | Growth Forecast Report.”](#) n.d. Global Market Insights, Inc. Accessed September 28, 2021.

# What Are the Problems Women Face Today: Key Facts and Figures

# What Are the Problems Women Face Today: Key Facts and Figures



At least **48% of Dutch women** deal with one or more **sexual issues**. Low libido or difficulty reaching orgasm are common problems. Causes may vary from traumatic experiences, a lack of proper education and access to reliable information.

More than **2/3 of the women** we surveyed state they feel they **don't have sufficient knowledge about their own body** concerning their cycle and hormones. The main reasons many women have this sentiment are because of a general lack of education and because they have no clue where to get reliable information.

It's estimated that **endometriosis affects 1 in 10 women**, meaning it would affect approximately **176 - 200 million women in the world**. Endometriosis affects women most in their reproductive years (25-35). It may even affect women in their youth, starting as early as age 11.

**The average time before a diagnosis is reached is 7 to 9 years**. Endometriosis can significantly impact the quality of life of whoever suffers from it. There is currently no known cause of endometriosis, nor is there a cure.

**Polycystic ovary syndrome (PCOS)** is a health problem that **affects 1 in 10 women** of childbearing age and is one of the main reasons women experience difficulties getting pregnant.

The risk of absenteeism<sup>1</sup> is exceptionally high during (peri)menopause. **At least 1/3 of absenteeism is related to (peri)menopausal** symptoms such as fatigue, depressive feelings, or lack of concentration. It's a shame that it's not often recognized as a symptom of menopause because of the risk of misdiagnosis.



# What Are the Problems Women Face Today: Key Facts and Figures



## Heavy Menstrual Bleeding

- **Between 10% and 35% of women experience heavy menstrual bleeding**, which can severely impact daily life.
- **Only 5% of women** on average **contact their doctor to discuss this**.
- Most women do not consider this a health issue to be dealt with but rather see it as 'normal.' In most cases, however, there is an underlying issue that can be solved.

## Perimenopause

- **More than 50% of women state** they are **not well informed about (peri)menopause** and what to expect.
- **Perimenopause lasts between 5-12 years** and tends to be quite a transformation.
- Women are often misdiagnosed with burnout when they experience **(heavy) menopausal symptoms**.

## Influence of Menstruation on the Lives

- The **influence of menstruation on women's lives** and society is heavily underestimated.
- Studies show that **women lose 9 productive days per year** on average caused by menstrual issues.
- When they call in sick for work or school, **only 1 out of 5 will share the real reason for staying at home** that day.
- There are still lots of taboos surrounding periods.

# The Future of FemTech Postpartum

# The Future of FemTech Postpartum

LEIA

**Female Health is currently undergoing intense digital disruption.** Postpartum care, however, has been left behind with devastating consequences. 9 out of 10 women giving birth are presently experiencing mental and physical difficulties the following year, affecting not only them but their families as well.

The months following birth are critical, setting the long-term health and wellbeing stage. **To optimize recovery, postpartum care should be an ongoing process**, rather than a single encounter, with services and support tailored to each woman's individual needs.

**LEIA's vision is to redefine postpartum health through digitalization and AI and help women worldwide have a happier and healthier entry into motherhood.** We use AI to offer personalized and actionable insights to optimize women's post-pregnancy recovery by taking a data-driven, prevention-focused, and person-centered approach. By tracking the user's mental and physical wellbeing, we also can detect signs of postnatal depression and postpartum complications at an earlier stage and refer them to the relevant caregiver enabling earlier treatment and preventive measures.

**One of the key challenges in building FemTech products is the lack of data and research in this field, as it's been under priority historically.** By creating a data set of key factors affecting mental and physical health postpartum, we will be able to apply machine learning to the data and, together with our research partners, help form the future of postpartum health.



- **Powered by AI**
- **Personalized & Actionable insights**
- **Early detection and preventive measures**

# FemTech & Longevity: Today & Tomorrow



By: Veronica Chiaravalli, the Founder, CEO, CINO, CISO, CFO, and CRO at Emerging Technologies Sweden

# FemTech & Longevity: Today & Tomorrow



FemTech plays a very important role in the present and the future. We are seeing more and more events about FemTech and it is time to learn more about it.

## Why Do FemTech Businesses Struggle with Funding?

People are too busy building their business, learning new skills to stay ahead of the competition, and also surviving the global impact of the Covid-19 pandemic. Even though technology advances exponentially, we still have to work hard to bridge the knowledge gap and gender equality gap. Today we need to be more aware of the solutions that FemTech brings to the table, which are many and have a considerable impact on health and women. In short, we need a change of mindset.

The solution is first to change the mindset by publishing more books, inviting different networks, writing more articles, etc. We need to spread the word among other groups. FemTech should be included as part of the education since we are moving towards a world where we will be even more connected than we are today. This world has avatars, flying cars, the Internet of Senses (IoS), and the Internet of Everything (IoE).

Health plays a crucial role as we live longer and have several different generations working together.

It is essential to build this ecosystem where elders have personal assistants, health apps, and FemTech at their reach. FemTech is about innovation, and as such, it has to go through the famous innovation chasm. This means that it takes time for people to trust the new technologies before they adopt them in their lives. The pandemic has created more uncertainty even among the investors. But challenges also bring opportunities. Education is also moving fast, which is very important because people will learn more quickly. There is an issue with the trust that companies are seeing in people. Marketing and sales are changing on an ongoing basis, and marketing specialists keep track of trends every day.

We also need a change of mindset on how we approach our lifestyle and investments. People should not expect to get things for free. Technology costs money, and to support these companies working with FemTech; we have to invest.

# FemTech and Longevity: Today and Tomorrow



## Why Should We Invest in FemTech?

Investing in FemTech means investing in health, wellbeing, and the future of humanity. We have to be prepared for possible future pandemics or similar challenges. These challenges have an enormous impact on the global economy as well.

Looking into the near future, we have the Artemis program that will send both women and men to the moon, where they will be stationed. This marks the beginning of a new era where women will be in space. This raises many questions: How much do we know about the effects that space has on women?

There is a world of opportunities for FemTech and investors, in other words, the possibility of creating products for people traveling outside of the Earth or stationed on the Moon or Mars.

Take a look at the company [Space Perspective](#) as an example.

There is absolutely no doubt that there will need for FemTech that offers innovative products and solutions. Most of all, what FemTech does is open up and talk about crucial topics without any problem. This goes straight to the hearts of the people that are in need.

Health is a responsibility and is now in people's hands thanks to apps monitoring the pulse and more. This offers safety, knowledge, and speed because as soon as the person notices that something is wrong thanks to the app or device that detected it, they can contact the doctor and be on time to get the proper treatment.

Another advantage of FemTech is that it provides fast virtual assistance. Gone are the days when you had to wait for a long time to get help.

The healthcare system has not provided the best service during the years, and it is time to change this.

Download the report "[Current State and Future of the FemTech Industry](#)" published by [the Untitled Kingdom](#).

# FemTech & Longevity: Today & Tomorrow



## The Future of FemTech & Longevity

Peter Diamandis and Steven Kotler talked about the future of exponential and converging technologies. They stated "there are many changes and to make things manageable, we focus on six shifts we are seeing in technology: four are technological and two are paradigm shifts."

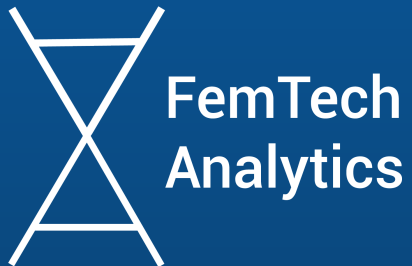
They clarify as follows:

”On the technological front, every step in the medical treatment train is being re-invented. The convergence of sensors, networks, and AI is upending medical diagnostics on the front end. In the middle, Robotics and 3D printing are changing the nature of medical procedures. On the back end, AI, genomics, and quantum computing are transforming medicine themselves. Concurrently, two major paradigm shifts are underway due to these convergences. The first is the shift from sick care to healthcare, from a retrospective, reactive, and genetic system to one that is prospective, proactive, and personalized. The next is a change in management. For most of the last century, the healthcare industry was an uneasy partnership between big pharma, big government, and the full spectrum of doctors, nurses, and trained medical professionals. Now we’re witnessing an invasion. Many of the big technology companies are getting into this game, all intent on making an impact.”

(from the book "The Future is Faster Than You Think")

I can only stress that we should embrace FemTech and support it because it clearly represents the world that we are moving into.

And all this is just the tip of the iceberg.



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