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FEMTECH BRIDGING THE DIGITAL DIVIDE TO ACHIEVE HEALTH EQUITY

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Femtech Bridging the Digital Divide to Achieve Health Equity

Abstract

A study found that 84% of women reported experiencing instances where healthcare professionals failed to listen to their concerns.¹ Access to healthcare services for women faces numerous challenges, including geographic limitations for those in remote areas, cultural stigmas around sexuality and bodily autonomy, and socioeconomic inequalities that can make services unaffordable or unavailable without insurance. These barriers disproportionately affect marginalized groups, creating a double burden for women of color, low-income individuals, LGBTQ+ communities, and those living in rural areas. They may face a lack of culturally competent providers, navigate transportation difficulties, or experience more substantial social stigma around healthcare compared to their counterparts.

Femtech, a rapidly growing industry, offers innovative products and services leveraging technology to address these gaps. This study analyzes how Femtech bridges these gaps through three key areas: period-tracking apps promoting menstrual health awareness, telehealth platforms offering remote consultations with healthcare providers, and educational resources on fertility, contraception, and safe sex practices. Data and statistics are presented to illustrate the impact of Femtech solutions.

Femtech and its potential to empower women to manage their health.

Femtech emerges as a promising solution to address these longstanding healthcare disparities. According to Frost & Sullivan's Global Femtech Market Outlook, the portfolio of solutions on offer to cater to unmet needs in the market is expected to exceed \$50B by 2025. A 2020 study published in the Journal of Medical Internet Research Public Health and Surveillance highlighted that globally, women are less likely than men to have access to essential healthcare services.² This alarming gender gap necessitates innovative solutions, and Femtech offers a promising path forward in bridging the digital divide and achieving sexual and reproductive health equity. By leveraging technology, Femtech provides solutions to bridge the gap for many women who face challenges managing their health. This sector encompasses a wide range of technology-driven products and services designed to address women's specific health needs across various stages of life. Within this domain, Femtech is carving a significant niche, driven by the vast unmet needs in women's healthcare.

Femtech is emerging as a powerful force in tackling socioeconomic inequalities in women's healthcare in the following ways-

¹ <https://www.gov.uk/government/calls-for-evidence/womens-health-strategy-call-for-evidence/outcome/3fa4a313-f7a5-429a-b68d-0eb0be15e696>

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9589761/>

- **Accessibility:**
Femtech products and services, often available through mobile apps and online platforms, are readily accessible to women in remote areas or those with limited transportation. This can be a lifeline for women who struggle to reach traditional healthcare facilities.
- **Affordability:**
Femtech solutions can offer a more cost-effective alternative to traditional healthcare services, especially for preventive care and self-management of health conditions. This is particularly beneficial for low-income women who may struggle to afford regular doctor's visits.
- **Awareness:**
Femtech products are designed to be educational and informative. By providing women with clear information and resources about their health, Femtech empowers them to make informed decisions and actively manage their well-being. This is especially significant for topics traditionally shrouded in stigma or silence. Open communication and knowledge are essential to good health; Femtech helps bridge that gap.
- **Inclusion:**
Femtech embraces diversity and inclusion, catering to the unique needs of women from marginalized communities. Femtech products can be tailored to address the specific health concerns of women of color, LGBTQ+ women, and other groups who may have historically faced challenges in accessing appropriate healthcare.

Femtech has high potential to transform women's healthcare. By making healthcare more accessible, affordable, educational, and inclusive, Femtech can empower women to take charge of their health and well-being, ultimately leading to a more equitable healthcare landscape.

Analysis: Femtech as a Solution

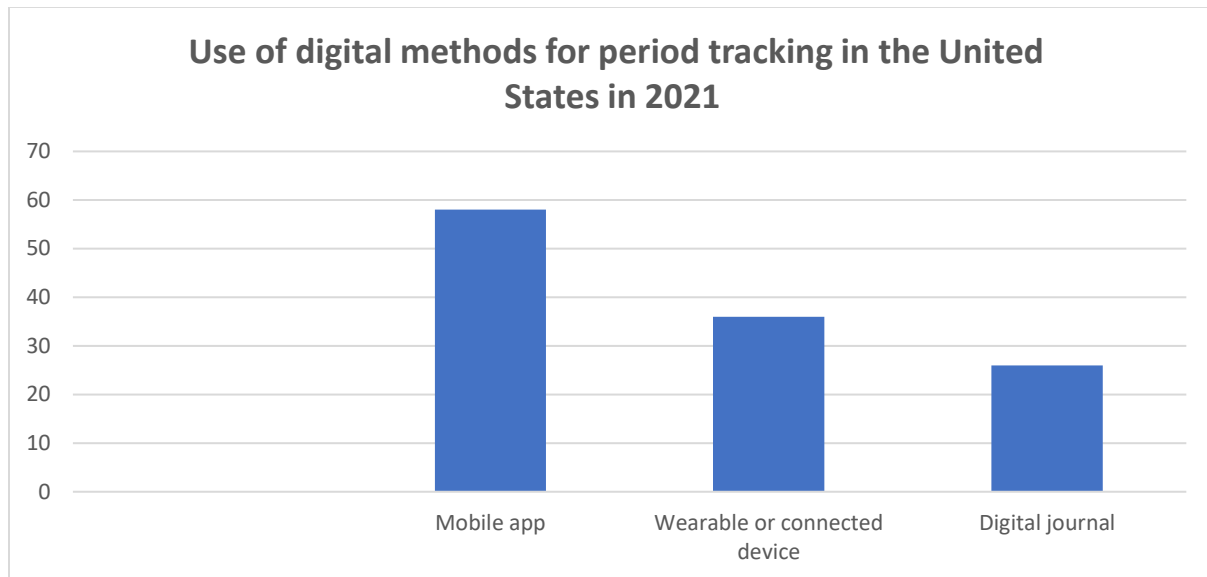
Femtech products and services provide innovative solutions to address critical gaps in women's healthcare access and delivery. Period tracking apps promote menstrual health literacy, telehealth platforms increase access to healthcare providers, and educational resources empower women with knowledge about their reproductive health. As the Femtech industry continues to evolve, its potential to revolutionize women's healthcare access and experiences is significant.

- **Case Study: Mobile Apps Promoting Menstrual Health Awareness**

Menstruation is a natural biological process, yet stigma and misinformation often surround it. Period-tracking apps empower women by providing a platform to track menstrual cycles, gather health data, and access educational resources. These apps help women understand their unique cycle patterns, predict periods and ovulation, and manage symptoms like cramps and PMS. Period-tracking applications (apps) have helped to menstruating individuals as a health literacy tool that increases menstrual and bodily awareness, allowing the users to better prepare for future periods, engage in conversations with healthcare providers, and monitor their bodies and sexual activity to be able to achieve their family planning goals.³ These apps contribute to a personalized and participatory healthcare system that helps individuals improve upon their

³ Levy J, Romo-Avilés N.. "A good little tool to get to know yourself a bit better": a qualitative study on users' experiences of APP-supported menstrual tracking in Europe. *BMC Public Health*. 2019;19(1):8. doi: 10.1186/s12889-019-7549-8.

menstrual awareness and increase agency among users to make informed choices about their overall health and matters related to it.⁴



According to Statista, in 2021, among those who were tracking their period digitally in the United States, 58 % reported doing so through a mobile app, 36 % tracked their period with a wearable or connected device, and 26 % were using a digital journal.

Period tracking applications enable users to monitor and understand their menstrual cycles, leading to better-informed health decisions. Similarly, logging symptoms, moods, and sexual activity within the app allows users to identify potential health concerns and track their progress over time. Many apps provide informative content on various aspects of menstrual health, dispelling myths and promoting self-care practices. Period tracking apps contribute to a more open dialogue about menstruation, fostering self-knowledge and potentially leading to earlier diagnosis of underlying health issues. Beyond these direct benefits, Femtech can also contribute to economic growth and job creation. By improving women's health outcomes, Femtech can increase their economic participation and productivity.

⁴ Eschler J, Menking A, Fox S, et al. Defining menstrual literacy with the aim of evaluating mobile menstrual tracking applications. *CIN: Comp Inform Nurs*. 2019;37(12):638–646. doi: 10.1097/CIN.0000000000000559.

CHALLENGES AND CONSIDERATIONS: FEMTECH AND HEALTHCARE

Femtech holds immense promise for advancing health equity, but navigating critical issues is crucial to ensure its human rights impact. Some key challenges and considerations in Femtech and human rights are:

Digital Divide:

Limited access to technology and the internet remains a significant barrier. A 2023 report highlights a 33% gender gap in global mobile internet connectivity, with women significantly underrepresented in digital access. This digital divide excludes vulnerable populations from the benefits of Femtech solutions. Initiatives are needed to bridge this gap, such as providing low-cost devices, data plans, and digital literacy training in underserved communities.

Data Privacy:

Femtech apps often collect sensitive health information. Concerns regarding data collection, security, and potential misuse of this data are paramount. A 2022 Pew Research Center survey found that 72% of Americans are concerned about the amount of data collected by private companies. Strong data privacy regulations and user-centric design principles are essential to ensure transparency, control, and secure storage of Femtech data.

Accessibility:

Language barriers can hinder non-native speakers' access to and understanding of the language. Additionally, a lack of Femtech products designed for specific health needs, such as those of the LGBTQ+ community, creates gaps in inclusivity. A 2021 study by the Center for LGBTQ Economic Advancement revealed significant disparities in health access and outcomes for LGBTQ+ individuals. Femtech developers must prioritize inclusivity by creating multilingual platforms and catering to diverse health concerns.

While Femtech presents great opportunities for health equity, addressing the challenges of the digital divide, data privacy, and accessibility is critical so that it is inclusive and accessible to all. By implementing targeted solutions, growing user trust, and prioritizing inclusivity, Femtech can empower individuals to claim their rightful access to healthcare services and well-being.

Recommendations: Bridging the Gap Between Women and Healthcare

Femtech's potential to address the digital divide lies in addressing existing challenges. Here are key strategies to bridge the gap:

- Affordable and User-Friendly Solutions:**
 Developing cost-effective Femtech solutions is important to make it accessible. A 2020 World Bank report highlights that out-of-pocket healthcare expenditures disproportionately burden low- and middle-income countries⁵. Femtech companies can explore tiered pricing models, freemium options with basic features, and partnerships with NGOs for subsidized access in underserved regions. Similarly, user-friendly interfaces that cater to varying levels of tech literacy are equally important.
- Digital Equity and Internet Access:**
 Advocacy for policies promoting digital equity is essential to bridge the digital divide and make Femtech inclusive. Women are 7% less likely to own any phone and 19% less likely than men to use mobile internet⁶. Policymakers can incentivize affordable data

⁵ <https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=XO>

⁶ <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/blog/the-mobile-gender-gap-report-2023/>

plans, subsidize internet connectivity in rural areas, and fund digital literacy programs to bridge the gender gap and ensure all have the tools to utilize Femtech solutions.

- **Robust Data Privacy Regulations:**
Strong data privacy regulations are important to improve the inclusivity and use of Femtech. Building on frameworks like the EU's General Data Protection Regulation (GDPR), Femtech-specific regulations can be established to ensure user control over data collection, robust security measures, and clear communication on data usage.
- **Inclusive Design Principles:**
Femtech development needs to prioritize inclusivity. A 2021 study revealed that 83% of consumers are more likely to do business with companies committed to diversity and inclusion⁷. By incorporating multilingual interfaces, catering to diverse health needs (LGBTQ+), and ensuring accessibility features for users with disabilities, Femtech can genuinely serve all.

By implementing these recommendations, Femtech can evolve beyond a technological solution and become a powerful human rights tool. Prioritizing affordability, advocating for digital equity, establishing better data privacy measures, and inclusive design principles are crucial steps toward ensuring that all individuals, regardless of background or circumstance, can access healthcare services and manage their well-being with dignity and empowerment.

To fully realize the potential of Femtech to improve women's health and achieve health equity, a multi-stakeholder approach is necessary. Policymakers must invest in digital infrastructure and promote digital literacy, while healthcare providers should integrate Femtech solutions into their practices. Femtech companies must prioritize inclusivity, affordability, and data privacy in their product development and marketing efforts.

Best Practices: Femtech companies working to bridge the digital divide

- **AVA AG**
Ava AG is a Femtech company committed to bridging the digital divide and making women's healthcare more accessible and inclusive. Their advanced cycle-tracking technology, powered by machine-learning algorithms, extends beyond fertility to address family planning, sleep, fitness, and other vital health areas. Ava's FDA-cleared fertility tracking solution, which accurately identifies the five most fertile days of a woman's cycle, has helped over 70,000 women in 36 countries to get pregnant. Known for combining artificial intelligence with clinical research, Ava ensures data privacy and security while delivering personalized reproductive health insights. Their innovation has been recognized globally, earning awards and recognitions such as "Best of Baby Tech" at CES, Women's Health "Editors' Choice," and inclusion in the CB Insights Digital Health 150.

⁷ <https://www.voya.com/voya-insights/5-compelling-reasons-diversity-good-business-and-organizations>

- **Clue**

Clue is a leading Femtech company at the forefront of bridging the digital divide and making Femtech more accessible and inclusive. As one of the world's first period-tracking apps, Clue continues to help millions of women monitor their menstrual cycles, enabling them to make informed decisions about their health, fertility, fitness, and self-care. Developed by Berlin-based BioWink GmbH, Clue's technology not only empowers individual users but also contributes valuable data to medical research and development, enhancing treatments and health outcomes for women globally. With over 15 million users in 180 countries and support from notable investors like Union Square Ventures and Mosaic Ventures, Clue remains a leader in mobile fertility tracking, providing women with accurate insights into their menstrual and reproductive health.

- **Isono Health**

Isono Health is a leading Femtech company dedicated to bridging the digital divide by making critical medical technology more accessible and inclusive. Their compact ultrasound scanner, ATUSA, revolutionizes breast health by providing a less stressful and more accessible alternative to traditional mammograms. The ATUSA scanner captures 3D images of the entire breast in just one minute, with real-time data relayed to a mobile app. Designed for use in various settings, the device can be operated by non-specialists, enabling point-of-care diagnostics and breast health monitoring at home, walk-in clinics, and mobile units. Isono Health is making advanced breast health technology portable and more widely available, ensuring that more women have access to essential healthcare.

- **Endomag**

Endomag is a leading Femtech company committed to bridging the digital divide and making advanced cancer treatment more accessible and inclusive for women. Based in Cambridge, Endomag is transforming the surgical landscape with innovative, less-invasive solutions for treating cancers that affect women. Their groundbreaking procedure uses a tiny magnetic seed, placed in cancer-affected lymph nodes, to monitor the response to chemotherapy. This cutting-edge nanotechnology allows surgeons to track cancer progress without the need for invasive surgery, such as complete lymph node removal. Endomag is pioneering more precise, patient-friendly cancer treatments, improving outcomes and accessibility for women globally. With Endomag, over 500,000 women have now accessed more precise and less invasive breast cancer treatment.

Conclusion

Femtech has the power to revolutionize women's healthcare by addressing long-standing gaps in access, equity, and education. By leveraging innovative solutions such as period-tracking apps, telehealth and educational platforms, Femtech empowers women to take control of their health and well-being. Realizing this potential, however, requires a holistic approach that goes beyond technological solutions, to fully bridge the gender gap in healthcare, Femtech must prioritize inclusivity through user-friendly, multilingual designs that cater to diverse populations, including marginalized communities such as LGBTQ+ individuals and women in low-income, rural areas.,



Strong data privacy regulations are also crucial to protecting users' sensitive health information and fostering trust in Femtech solutions.

Achieving zero human rights violations in healthcare requires collaboration between Femtech companies, policymakers, and communities. Community engagement is essential to ensure that Femtech solutions are accessible, affordable, and designed to meet the unique needs of all women. By aligning technological advances with human rights principles, Femtech has the power to pave the way for a more equitable, inclusive, and empowered future in women's healthcare.