

Missed period? The significance of period-tracking applications in a post-Roe America

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Period-tracking applications (apps) have been perceived positively as a health literacy tool that increases menstrual and bodily awareness, thereby empowering 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.¹ Period-tracking apps are part of a fast-growing FemTech business industry, with an estimated current market value worth upwards of \$60 billion.² Recently, however, the data and privacy around this revolutionary tool have justifiably been called into question in a post-Roe America.

FemTech, first coined by entrepreneur Ida Tin in 2016, encompasses a large range of technology-enabled products to improve healthcare for women, including issues related to sexual and reproductive health.³ These companies are positioned to disrupt the current healthcare system by empowering users to take greater charge of their bodies and lives through the analytics of their own health data. For people who menstruate and have access to digital technologies, period-tracking apps can be a valuable means to better understand their menstrual cycles. Period-tracking apps analyse users' inputs around their reproductive cycles to enable the user to better recognise body patterns or identify any changes or abnormalities within their cycle.⁴ It is estimated that 50 million women worldwide use apps to track their menstruation, receive predictions for the start of their future cycles, estimate windows of fertility,

and examine a variety of other cycle-related factors.⁵ This personal health information can enable bodily autonomy through improved awareness and knowledge of one's own reproductive health.

Period-tracking apps can contribute to a more participatory and personalised healthcare system that enables individuals to improve upon their menstrual literacy and increase agency among users to make informed choices about their overall health.⁶ However, there exists a polarising debate surrounding the broader ethical concerns of introducing increased tracking and self-surveillance that can implicate harmful standards of individual health.^{7,8} Furthermore, as most period-tracking apps do not charge users money, the apps often earn profits by selling users' data to third parties, even if there is a promise of privacy advertised by the companies.⁹ Profiting off users' sensitive health information by sharing it to third parties unknown by the user denies menstruators control over their personal health data.¹⁰ While criticism over the monetisation of user data through the storing, processing, and distribution to third parties is not new to the FemTech industry,¹¹ concerns regarding the disclosure of users' reproductive health data are heightened since the overturning of *Roe v. Wade* in June 2022. The US Supreme Court ruled in *Dobbs v. Jackson Women's Health Organization* that the right to abortion is not constitutionally protected, allowing individual states to independently decide the legal parameters around abortion, with many already restricting or moving to ban it.¹²

When abortion is illegal, seemingly harmless digital data could potentially become criminal evidence. The concern is that health data stored in period-tracking apps could be used to infer whether the user has had an abortion in order to prosecute them in states where abortion is now banned. With at least 24 states having banned or likely to ban abortion,¹³ it is possible that prosecutors in states hostile to abortion rights could view unprotected and self-tracked personal health data as advantageous in identifying individuals seeking to end a pregnancy.¹⁴ Some period-tracking apps even explicitly state that they may disclose users' personal data at the request of law enforcement or government agencies.¹⁵ Not only does this cause alarm for users who choose to have an abortion, but miscarriages, irregularities in menstrual cycles, and/or imperfect engagement with a period-tracking app have the potential to be mischaracterised as abortions.

The question regarding the use of personal health data created by period-tracking apps to implicate a person of an abortion in a state hostile to abortion rights remains unanswered; however, legal experts point to digital trails created by other uses of technology that have been used to incriminate people of illegal abortions as a potential indicator of what could happen with this sensitive health information. For example, data from online search engines have been previously used to prove criminal intent in cases where abortion has been tried as murder.¹⁴ It is especially of concern for young Black, Indigenous and People of Colour (BIPOC) and/or low-income people who are disproportionately surveilled at higher rates compared to their white and/or higher-income counterparts.¹⁴ With this in mind, it has been suggested that users use caution with regard to their period-tracking apps in the aftermath of the overturning of *Roe*.¹⁶ The Supreme Court's decision in *Dobbs* has no bearing on the bodily awareness and empowerment period-tracking apps can provide to users. However, the decision has had a chilling effect based on the fear that the personal health information derived from these apps could be used against menstruators, with some experts advising people who menstruate to track their periods on paper as opposed to using an app.¹⁷

If users could be assured that their sensitive health data are protected, period-tracking apps could be a valuable instrument in helping to

safeguard bodily autonomy in a post-*Roe* landscape. For some, the overturning of *Roe* may have created a heightened sense of urgency to better understand one's own menstrual cycle. Paying closer attention to menstrual cycles could help users avoid an undesired pregnancy and identify when a period is missed so they are better positioned to access abortion services within the legal limits. In Texas, for example, where a gestational age ban that prohibits abortion as early as six weeks is in effect, data analytics from a period-tracking app could be interpreted by the user to identify a missed period on the first day of the expected cycle, enabling them to test for pregnancy earlier and access abortion services within the legal gestational age timeframe. However, it should be noted that relying solely on data from a period-tracking app in a legal environment hostile to abortion rights may be an effective tool only for users experiencing regular menstrual cycles.¹⁸

To ensure the safety of users in a post-*Roe* America and enable period-tracking apps to perform their originally intended function of empowering menstruators, a series of actions will need to take place, including:

Ensuring privacy around sensitive health data

The lack of synchrony between the pace of technology and privacy laws leaves massive gaps in the protection of health data. In an era of increasing digital surveillance, the burden should not be placed only on the users to protect their own digital health information. As FemTech mobile apps currently fall outside of the scope of the *Health Insurance Portability and Accountability Act*, which protects sensitive health information from being disclosed by covered entities without the patient's consent or knowledge,¹⁹ it is more important than ever that privacy laws around health-related data are enacted and supported by the FemTech industry. Upon the overturning of *Roe*, President Biden issued an Executive Order on Protecting Access to Reproductive Healthcare Services that partially addresses digital surveillance related to reproductive healthcare services to ensure the safety of patients,²⁰ but Congress could take it a step further by passing the *My Body, My Data Act* that would create a new national standard to protect personal reproductive health data in

the wake of *Dobbs*.²¹ States can also implement laws to protect digital reproductive health data to further protect individuals, such as a law recently passed in California which gives technology companies incorporated or headquartered in the state legal recourse to resist data information requests from law enforcement agencies seeking to facilitate the investigation of a crime related to an abortion that is legal under California law.²² To safeguard health-related data in the digital age more broadly, US lawmakers should look to the European Union’s General Data Protection Regulation (GDPR), considered the global privacy standard, for inspiration. The GDPR mandates privacy rights pertinent to protecting period-tracking app users’ data, specifically the stipulation that the controller, such as FemTech companies, present digital users with “easy-to-understand” language that includes explicit justification for data collection and retention length, as well as instructions for users to request personal data erasure.²³ It is important to note that any regulation protecting personal health data must evolve alongside technology in order to safeguard users’ privacy, especially in a time when abortion is criminalised.

Empowering users to have control over their own personal data

With the overturning of *Roe*, individual FemTech companies are having to reconsider their security and protection policies. Flo, a popular period- and fertility-tracking app, for example, created an anonymous mode to make it more difficult to connect user information with health data.¹⁵ FemTech companies must also further scrutinise the security surrounding user data that is collected, stored, and shared with third parties. Users should be given options regarding how their data are stored and utilised. Ensuring that users can customise and voluntarily participate in transparent data-sharing options can encourage bodily self-governance, an especially important undertaking without a federally protected right to abortion. However, the FemTech industry must also support strong federal-level privacy protection laws regarding health-related data, so users have control over their own personal health information.

Establishing a federal right to abortion

Mandating a federal right to an abortion is imperative to ensuring the privacy and protection of users of period-tracking apps. The *Women’s Health Protection Act* is a piece of federal legislation that would create a statutory right for healthcare providers to provide abortion care, as well as a corresponding right for patients to receive abortion care, no matter in which state they live.²⁴ While standards to protect personal health-related data would still be in need for ethical and privacy reasons, a federal right to abortion would mean there would be no reason for individuals’ sensitive health data from period-tracking apps to be subpoenaed by law enforcement or government agencies as evidence in a criminal case related to abortion since it would be legal throughout the US.

An individual’s ability to observe and analyse their menstrual health data, along with their state of mental and physical well-being and associated symptoms, has the potential to be empowering. Gaining a holistic understanding of one’s menstrual cycle is also a critical aspect of bodily autonomy. FemTech companies are uniquely positioned to mobilise many to take ownership of their reproductive health and improve their knowledge and awareness of their own bodies. Period-tracking apps have the potential to help individuals become better attuned with their cycles, but it is essential that the safety and privacy of the users is ensured. Without strong privacy protection laws and a federal right to abortion, unprotected extraction of people’s personal reproductive health data for profit puts individuals at risk. Collective action from reproductive health advocates, policymakers, and FemTech companies can help ensure period-tracking apps are utilised to safeguard the bodily autonomy of users and not to be used as a weapon against them.

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