How to improve maternal health? Moms’ phones can offer answers

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For researchers trying to find the causes of—and possible solutions to—the high and rising U.S. maternal death rate, Tolúwala??é (La??é) Ajayi, MD, says technology such as smartphone apps can create new research and preventive care possibilities.

Among developed countries, the U.S. has the highest maternal mortality rate, and those numbers are on the rise. A report from the Centers for Disease Control and Prevention (CDC) shows that, in 2021, the maternal death rate in the U.S. rose 40% over the previous year. The most recent data—showing a rise in maternal mortality over a 20-year period and further documenting inequities—was published this month in JAMA®.

Despite the urgency, researchers struggle to find participants for pregnancy-related studies. Patients from historically marginalized racial and ethnic groups are even less often represented.

“One of the biggest gaps we see is, honestly, in the diversity of voices that participate in clinical research in pregnancy health care,” said Dr. Ajayi, director of clinical research for the Scripps Research Translational Institute. “We know that pregnancy research is already difficult to recruit and engage participants in. So that when you look at that disparity, having diversity in the participants is a huge gap that currently exists.”

This is where technology such as the PowerMom platform comes in, given that smartphone ownership pervasive among American women—including those who are Black or earn less than $30,000 a year.

In an episode of “AMA Update,” Dr. Ajayi—lead researcher for PowerMom—detailed how the platform developed by the Scripps team means participants can answer surveys and share data on their phones, at their own convenience.

Changes to care that make a difference
The PowerMom platform lets researchers track data from wearable devices such as Fitbit and Apple Watch, and offers surveys intended to shed light on all aspects of maternal health.

With so many already using smartphones, Dr. Ajayi said researchers can find mothers-to-be in diverse populations and across the country. Due to a 2017 partnership with WebMD, the PowerMom study signed up 4,000 participants in three months. She said researchers are hoping to hit the 10,000-participant mark to expand their app’s functionality.

The AMA advocates on several fronts for steps to reduce maternal death and morbidity, stressing that the causes of the problem are myriad. With that in mind, Dr. Ajayi said there are many ways technology such as the PowerMom platform can help reverse the trend in maternal health in the U.S.

“We can actually then use this data to anticipate and predict who's going to be more likely to have these negative outcomes,” she said. “Can we anticipate who's going to have preeclampsia, who's going to have these devastating maternal outcomes and severe morbidities, and then share these with our health care providers—share this with health care systems so they can make changes” to improve outcomes.

Physicians can “make changes at the bedside and really also empower our moms to then make changes in their behavior,” she added.

Payers, meanwhile, could take evidence-based steps to improve maternal health—for example, providing a device like a Fitbit if it’s likely to help prevent readmission or pregnancy complications.

The data “can change the way that we really practice medicine and that our participants engage with the health care system,” Dr. Ajayi said. “It’s really exciting.”

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