

Researchers launch real-time study of smartphone fertility app use

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In what is believed to be the first study of its kind, researchers at Georgetown University Medical Center's Institute for Reproductive Health (IRH) are recruiting as many as 1,200 women to study, in real time, a smartphone app that calculates a woman's chance for pregnancy on a daily basis.

The [app](#), called [Dot](#), (Dynamic Optimal Timing), was created based on data from several published studies. Dot has been available for about a year and is increasingly being used globally.

Dot is one of the few fertility tracking apps—there are estimated to be about 100 such apps—that is based on empirical evidence, says Victoria Jennings, PhD, director of IRH.

In the current issue of the *European Journal of Family Planning and Reproductive Health Care*, Jennings and a group of statisticians [report the data upon which Dot is based](#). This includes a detailed fertility analysis of about 1,000 women in six geographical and cultural diverse settings. The World Health Organization provided most of the data, with additional data from clinical research in the U.S.

The researchers say their analysis determined that Dot, from the beginning, would be 96-98 percent effective in women if used correctly. And as a woman continues to use it, the app increases its individual accuracy.

Recognizing that each woman's menstrual cycle can vary, the app allows for menstrual cycles that last as little as 20 days or as long as 40 days. It relies solely on a woman's period start date to provide her with tailored, accurate information about her chance of pregnancy for each day of her cycle—and it alerts a woman if she is on a high or low risk day for the purpose of planning or avoiding pregnancy.

"The more you use Dot—the more Dot gets to know you," Dot's creator, Cycle Technologies, says on its homepage.

Now Jennings and her team at Georgetown's IRH will study how women use the app. "To our knowledge this is the first prospective study on the effectiveness of a 'fertility app,'" Jennings says.

They are recruiting study volunteers in the U.S. who have downloaded and are using Dot. "Our goal is to test the efficacy of Dot as a method to avoid unplanned pregnancy in a real-time situation," says Rebecca Simmons, MPH, a senior research officer at IRH.

Not only will the Georgetown researchers calculate how efficient and effective Dot is, they will collect social factors related to an individual woman's use of Dot, such as how the app might affect a couple's relationship and if a woman tires of using the app and why, among other questions. The participants will be interviewed four times in the yearlong study, and they will answer questions that pop-up in the app that are sent by the researchers.

"We are all smartphone based, and this study will be conducted on the phone and the app—which is novel but quite appropriate," says Simmons.

To enroll in the study, women must download the app. When they use it as a means to avoid pregnancy, they will be invited to participate.

More than 220 million women worldwide have an unmet need for family planning, says Jennings. "Our work has shown that simple fertility awareness messages are extremely attractive to a wide range of women and can address their [family planning](#) needs. A method that only requires a user to enter her period start date is likely to appeal to many [women](#)."

Provided by Georgetown University Medical Center

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