

# Study reveals effectiveness of text message-based remote monitoring for postpartum hypertension

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Text messaging could hold the key to identifying postpartum women at-risk for developing potentially life-threatening complications resulting from preeclampsia, according to a new study from researchers at the Perelman School of Medicine at the University of Pennsylvania. The results are presented on Monday, May 16 at the American College of Obstetrics & Gynecology's (ACOG) Annual Clinical and Scientific Meeting in Washington, DC (poster #30-O).

Preeclampsia - the onset of high [blood pressure](#) resulting from pregnancy - is a leading cause of death and complications for women in the days following childbirth and discharge from the hospital. The sooner the doctors can detect the condition getting worse after delivery, the greater the chance there is of successful treatment with medication. However, since there is currently no effective way of predicting who is at-risk for increasing blood pressure, by the time worsening conditions are identified, patients often require more intensive care.

Recent ACOG guidelines recommend blood [pressure monitoring](#) via routine follow-up office visits within 72 hours of discharge and again at seven to ten days after childbirth. However, as many as 70 percent of patients do not attend these first follow-up appointments. With this in mind, and based on data showing that young women have high rates of cell phone use and text messaging, the Penn team hoped to determine whether implementing a remote blood pressure monitoring system for

patients diagnosed with [preeclampsia](#) would allow them to identify advanced cases and intervene before hospital readmission is necessary.

"Platforms that take advantage of telemedicine technology allow clinical care teams to evaluate, diagnose and treat patients remotely, and have been well established as an effective means of delivering care across a variety of specialties," said lead author Adi Hirshberg, MD, a fellow in the department of Obstetrics and Gynecology at the Hospital of the University of Pennsylvania. "By monitoring blood pressure levels for our postpartum patients who are at home with new babies and can't always get to office visits, we can provide a convenient and effective way of identifying those who are at risk for complications and may require follow-up care before the situation becomes critical."

In the study, 32 patients previously diagnosed with preeclampsia were given blood pressure cuffs when discharged from the hospital after childbirth. For seven days following discharge, text messages were sent reminding patients to take a daily blood pressure reading and send the results to their care provider. Patients whose blood pressure was high were then asked to take additional readings. Eighty four percent of participants reported a blood pressure reading within 24 or 48 hours of discharge, and 65 percent continued reporting test results for at least five of the seven days. As a result of the reports, two patients were identified as having elevated blood pressure and were put on oral medications, but none of the participants required readmission to the hospital.

"Our results show that remote blood pressure monitoring via text messaging is an effective, convenient and patient-centered way of identifying patients who could be at risk of developing potentially life-threatening complications related to the condition," said senior author Sindhu Srinivas, MD, MSCE, director of Obstetrical Services at the Hospital of the University of Pennsylvania and an associate professor of Obstetrics and Gynecology at the Perelman School of Medicine at the

University of Pennsylvania. "Further studies are necessary to determine the widespread efficacy of adopting telemedicine platforms for [obstetrics](#) care, but by all indications, it could become a cost-conscious way to improve care for [patients](#), allowing them the convenience of staying home and lowering their risks of readmissions or complications."

Provided by University of Pennsylvania School of Medicine

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