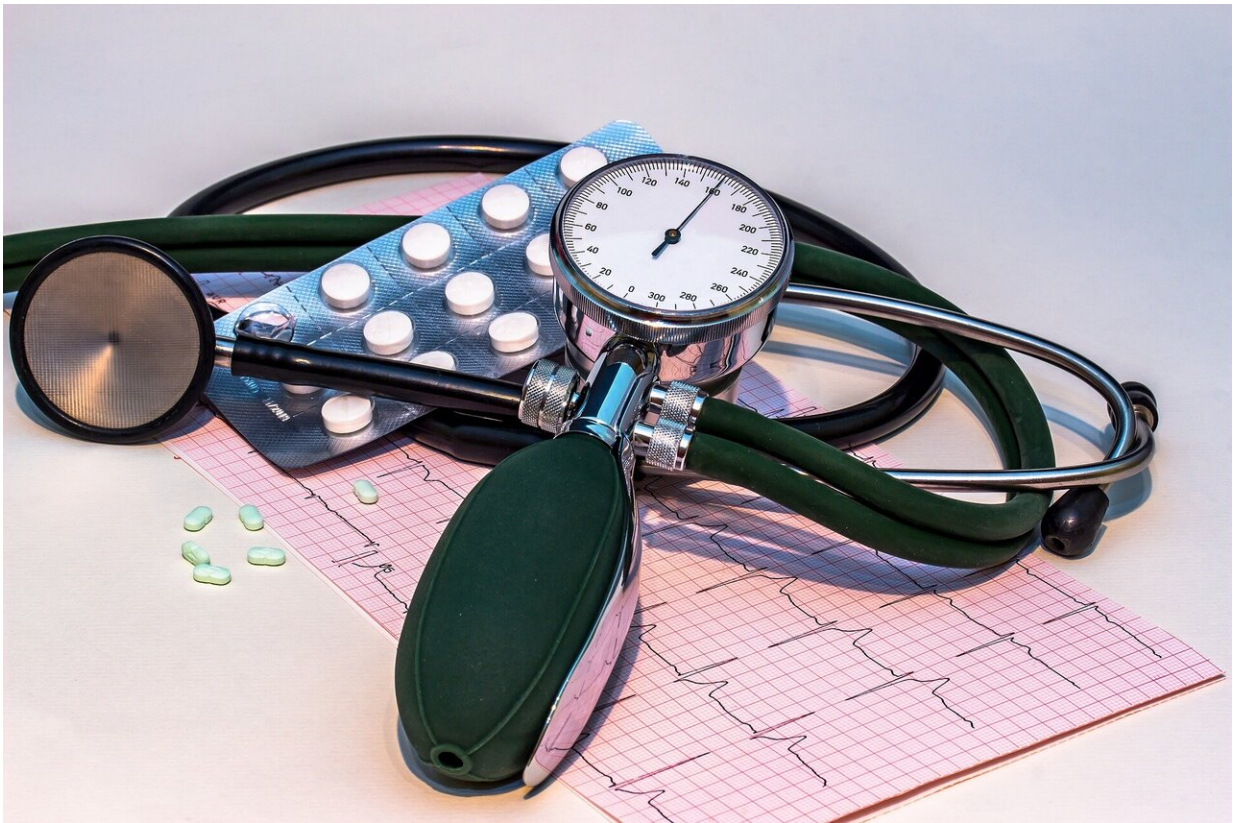


Limited postpartum follow-up may miss high blood pressure in 1 in 10 new moms

November 15 2022



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In an analysis of more than 2,400 women, about 1 in 10 without a history of blood pressure issues were diagnosed with high blood pressure in the year after childbirth, according to a research article published today in

Hypertension, an American Heart Association journal. Nearly a quarter of the women were diagnosed more than six weeks after delivery—a time when many women have stopped receiving follow-up care.

"The findings of our study have implications for postpartum care, particularly among [women](#) without a history of high [blood pressure](#)," said lead study author Samantha Parker, Ph.D., an assistant professor of epidemiology at Boston University School of Public Health. "We were surprised at the number of cases captured more than six weeks after [delivery](#), a period that falls well outside of routine postpartum follow-up. Monitoring during this period could mitigate severe postpartum and long-term cardiovascular complications."

High blood pressure after childbirth, called postpartum hypertension, is typically discovered within six weeks of delivery—either immediately after childbirth or during a woman's last postpartum clinic visit at 4-6 weeks after delivery. Data is limited for the time beyond 6 weeks since most studies have relied on blood pressure measurements during delivery or hospitalization, which includes just the first few days postpartum and captures only the most severe cases.

In severe cases, postpartum hypertension is associated with life-threatening complications, including stroke, heart failure, kidney failure and more. And, while it is well established that women with high blood pressure before or during pregnancy are at risk for [cardiovascular disease](#) later in life, very few studies have assessed cardiovascular risk for women who develop high blood pressure for the first time, or new-onset hypertension, after childbirth.

"Understanding more about high blood pressure beyond 6 weeks after delivery may provide insight into the alarming racial disparities in [maternal health](#)," said Parker. "Previous research has shown that new-onset hypertension after childbirth may be up to 2.5 times more common

among non-Hispanic Black women compared to white women."

The study aimed to estimate how common new-onset postpartum hypertension is among a racially diverse population. The researchers also wanted to determine contributing factors so healthcare professionals can identify pregnant patients at risk. Researchers evaluated medical records from 8,374 deliveries with a pregnancy length of at least 20 weeks from 2016-2018 at Boston Medical Center, a large, central, urban safety-net hospital in Boston. Safety-net hospitals tend to have a higher percentage of patients with low household income, and they are more likely to have no health insurance or rely on Medicaid for health care coverage.

Researchers assessed the risk of high blood pressure among the 2,465 women in the group who had no record of pregnancy-related high blood pressure or any prior history of chronic high blood pressure. Participants were ages 18 and older, with 54% identifying as non-Hispanic Black, 18% who identified as Hispanic or Latino, and they had all received prenatal care and delivered their baby at the same hospital. Demographic and reproductive characteristics from medical records were reviewed as well as weight and pre-existing illnesses, such as Type 2 or gestational diabetes.

For the study, new-onset postpartum high blood pressure was defined as systolic blood pressure (the upper number in a blood pressure reading) of 140 mm Hg or higher and/or diastolic blood pressure (the lower number) of 90 mm Hg or higher. Severe high blood pressure was defined as [systolic blood pressure](#) 160 mm Hg or higher and/or [diastolic blood pressure](#) of 110 mm Hg or higher. Blood pressure measurements were taken at least 48 hours after delivery, and additional blood pressure measurements were obtained from hospital records through the first year after delivery. Most of the patients (91%) had at least one clinical visit after delivery at which their blood pressure was measured.

The analysis examined risk factors individually and in combination, along with the timing of hypertension diagnosis. The data analysis found:

- 298 women (12.1%) with no prior history of high blood pressure developed hypertension in the year after delivery.
- Most postpartum high blood pressure diagnoses occurred shortly after delivery, yet 22% of cases were diagnosed more than six weeks after delivery.
- Risk factors for new-onset postpartum high blood pressure included women aged 35 years or older, delivery via cesarean, or being a current or former cigarette smoker.
- Women with all three risk factors had a 29% risk of developing new-onset postpartum high blood pressure, and the risk was elevated to 36% among women who also self-identified as non-Hispanic Black.

The study notes that determining best care practices for a racially and ethnically diverse population first requires a systematic approach to identify women with new-onset postpartum [high blood pressure](#).

The researchers add that future research should aim to understand adverse outcomes associated with [postpartum](#) hypertension, such as hospital readmissions, subsequent pregnancy complications and cardiovascular disease. "Additionally, understanding the relationship between pregnancy and hypertension is particularly important in addressing inequities in maternal cardiovascular disease and death for people of color," said Dr. Parker.

The study limitations include that it was a single-center study, and the results are not necessarily generalizable to other regions or to pregnant people younger than age 18. In addition, data was from electronic [medical records](#) of standard office visits, meaning there was not a protocol for proactively collecting blood pressure measurements for the

analysis; due to this, factors such as inconsistency in timing and frequency of measurements may have caused variability in the analysis. Also, clinic blood pressure measurements may not reflect "true" average blood pressure: some people exhibit much higher or lower blood pressure measurements at office visits that may not reflect their [blood pressure](#) under normal conditions.

Co-authors are Ayodele Ajayi, M.B.B.S., M.P.H.; and Christina Yarrington, M.D.

More information: De Novo Postpartum Hypertension: Incidence and Risk Factors at a Safety-Net Hospital, *Hypertension* (2022). [DOI: 10.1161/HYPERTENSIONAHA.122.19275](#)

Provided by American Heart Association

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