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CODE BLUE // DOT-MOM // GUEST CONTRIBUTOR

High Blood Pressure: Pregnant and Postpartum Women Face Hidden Danger

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This article is part of the Maternal Health Initiative's CODE BLUE series, developed in partnership with EMD Serono, a business of Merck KGaA, Darmstadt, Germany. Every year, 18 million women of reproductive age die from non-communicable diseases (NCDs) which poses a growing and often overlooked challenge to global maternal health. The CODE BLUE series aims to bring to light and explore these issues.

One-third of all maternal deaths can be traced to high blood pressure in pregnancy and in the

weeks after giving birth. Yet many women don't know how dangerous high blood pressure can be. And they may not realize they are at risk for many life-threatening conditions such as pre-eclampsia and eclampsia. Because high blood pressure can be asymptomatic, women with hypertension may not feel unwell or even know that their health is compromised.

Hypertension can lead to serious and even fatal complications in women. Among them, pre-eclampsia may result in seizures (eclampsia) and liver and kidney failure. Eclampsia, which in Greek means "lightning strike," can hit suddenly during pregnancy and up to six weeks after childbirth. However, if a pregnant woman receives routine antenatal care, her healthcare provider will be able to recognize the major signs of pre-eclampsia, which include high blood pressure after 20 weeks pregnancy and protein in the urine, and manage symptoms safely (REF fact sheet EE website/PE Foundation animation).

Hypertensive disorders of pregnancy and the postnatal period (gestational hypertension, pre-eclampsia, and chronic hypertension) can lead to several long-term problems including complications in future pregnancies and elevated lifetime risk of non-communicable diseases including cardiovascular disease, kidney disease, diabetes, obesity, and mental illness. Postnatal hypertension is most often caused by high blood pressure from pre-eclampsia and gestational hypertension that continues after delivery. Pre-eclampsia may develop for the first time after childbirth; 45 percent of eclampsia occurs in the immediate postnatal period, within the first four days, but may occur four to six weeks postnatally. If left untreated, women who experience high blood pressure in pregnancy are also three times more likely to develop heart problems later in life.

As such, it is critical to improve women's access to necessary health education and care across the maternal health continuum. All pregnant women should have their blood pressure measured early in pregnancy and regularly. And they should all know the symptoms of complications and have access to long-term medical care.

Bringing Essential Care to Pregnant Women

Many women around the world—especially those in low-and-middle-income countries (LMICs)—have limited access to quality antenatal, childbirth and postnatal care. Moreover, many clinical guidelines recommend that women with conditions such as pre-eclampsia be managed in a hospital setting. However, the focus should also be on early detection and prompt management of the condition at lower levels of a health system, such as in a primary healthcare (PHC) setting. The Population Council's Ending Eclampsia project found that it was possible to scale up a primary healthcare model for detecting and managing pre-eclampsia and eclampsia.

In Bangladesh, Nigeria, and Pakistan we worked closely with the Ministry of Health to train 1,296 frontline health workers in 316 PHC facilities and at the community level. The work involved risk assessment, early detection of pre-eclampsia by accurately measuring blood pressure, testing urine, and ensuring adherence to treatment. If severe pre-eclampsia was suspected, then providers administered the first dose of magnesium sulphate (the medicine recommended by the World Health Organization for managing severe pre-eclampsia and preventing eclampsia) and referred the women to the nearest hospital.

In Bangladesh and Nigeria, we found that PHC providers were able to, with adequate mentorship and support, manage hypertension during the late antenatal period by properly prescribing antihypertensive drugs. In Nigeria and Pakistan, we found that group-based educational strategies offered promising avenues to improve women's routine and urgent care seeking and experience. Although we saw an increase in women receiving more antenatal check-ups, reaching women for postnatal care continues to be a challenge at the PHC level.

Identifying Gaps in Research

We also realized that one significant blood pressure management challenge relates to women who resist going to the hospital when referred for blood pressure control. They may avoid going because they do not feel any symptoms or they may lack transportation. The hospital may be too far away. And a lack of money may compound the problem.

This lack of awareness of pre-eclampsia danger signs in some settings points to the need for advocacy around seeking early antenatal care, regular check-ups throughout pregnancy (at least eight contacts), and close follow-up after childbirth. More research is needed to study the intersection and integration of community-based education, health promotion, peer influence, and PHC-moderated access to advanced health services.

We found little documentation on the follow-up care of women who had experienced pre-eclampsia into the extended postnatal period (up to one year) in LMICs. In Bangladesh and Nigeria, where we surveyed women in the extended postnatal period, one-third of women continued to have problems with high blood pressure a year after experiencing hypertension during pregnancy. We also found that women resist seeking routine postnatal care due to a range of social and normative barriers related to reaching facilities.

Yet a failure to get the care they need can put women at risk for longer term complications. We know that non-communicable diseases (NCDs) are exacerbated by pregnancy and that pre-eclampsia can also be a precursor to NCDs later in life. For example, women who experience pre-eclampsia are four to five times more likely to develop kidney disease. Heart disease is three

times more likely in women who experienced pre-eclampsia. Obesity, diabetes, and poor nutrition (iron-deficiency, high-sodium, and low calcium) place women at elevated risk for pre-eclampsia; while traumatic experiences during pregnancy, childbirth, and postnatal periods can lead to maternal depression.

What's Next?

While we still do not know the cause of pre-eclampsia as a pregnancy complication, we do know how to identify it and treat it. If women know the signs and symptoms and health providers detect early signs through quality antenatal and postnatal care, near where women live, then—with a good referral system to hospitals that provide advanced care—this complication can be managed effectively. Integrating PHC and community care within broader health systems offers a template that can be adapted to varied low-and-middle-income countries. With improved routine antenatal and postnatal care access, women's pre-eclampsia will be managed more effectively and may reduce long-term health risks. Bringing preventive and treatment services nearer to where pregnant women live makes sense.

Read More:

- Cardiovascular disease can be a silent killer during pregnancy and beyond.
- How women with Multiple Sclerosis can navigate pregnancy.
- Care for maternal health and non-communicable diseases must be integrated.

This post is based primarily on the Reproductive Health commentary, "A primary health care model for managing pre-eclampsia and eclampsia in low- and middle-income countries."

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Sources: American College of Cardiology, Ending Eclampsia, Reproductive Health, The Preeclampsia Foundation.

Resources: FIGO (International Federation of Gynecology and Obstetrics) guidelines to combat pre-eclampsia; World Health Organization guidelines; Postnatal Care High impact practice; Ending Eclampsia; and Population Council-led Reproductive Health Article

Photo Credit: A woman health worker from a charity visited a house in a village to check the blood pressure of a pregnant mother as part of an antenatal checkup, Diamond Harbour, West Bengal. Photo courtesy of Shutterstock.com, All Rights Reserved.