ASSESSING FEASIBILITY AND ACCEPTABILITY OF CHEWS TREATING HYPERTENSION IN PREGNANCY

In Nigeria, hypertensive disorders of pregnancy—mainly pre-eclampsia and eclampsia (PE/E)—are the most common cause of death in pregnant women, and account for 23 percent of maternal deaths in tertiary health facilities. Averting deaths from PE/E requires early detection, timely delivery of the baby, effective use of antihypertensive drugs to control the associated hypertension, and administration of magnesium sulphate (MgSO₄) to prevent and treat convulsions.

Primary health care (PHC) providers (Community Health Extension Workers - CHEWs) are authorized to administer the loading of MgSO₄ prior to referring a pregnant woman to a secondary or tertiary health facility. However, the Nigeria task shifting policy is unclear whether these frontline providers—often the first point of contact for pregnant women—can administer antihypertensive drugs to treat hypertension in pregnant women. If hypertension is not controlled, this puts women at risk of cerebrovascular accident, a common cause of death from PE/E. Currently, there is no evidence on whether primary health care providers can administer antihypertensive drugs to pregnant women with hypertensive disorders.

RESEARCH AIM

This study intends to test the feasibility of CHEWs detecting and managing hypertension, and administering alpha methyldopa at PHC facilities as part of package of care for women with PE/E. In Ebonyi State, CHEWs received training on accurate measurement and categorization of hypertension in pregnancy as normal, mild, moderate, or severe hypertension using alpha methyldopa. An endline evaluation will measure improvements in knowledge retention and early detection, prevention, and management of PE/E using antihypertensive drugs.

Highlights

- Pre-eclampsia (PE) is a condition of pregnancy marked by increased blood pressure and protein in urine after 20 weeks gestation.
- High-quality antenatal care improves prevention and early detection of pre-eclampsia and can prevent progression to eclampsia.
- Eclampsia is a life-threatening condition characterized by convulsions in women with PE.
- Women in developing countries are 300 times more likely to die from eclampsia than women in developed countries.
- It can be managed by administering antihypertensive drugs and magnesium sulphate (MgSO₄).
- MgSO₄ is the safest and most effective treatment for severe pre-eclampsia and eclampsia, and recommended by the 13 UN Life-Saving Commodities for Women and Children.
- Pre-eclampsia and eclampsia and other hypertensive disorders in pregnancy increase the risk of preterm births, which can lead to low birth weight, anemia, and stunting.
- Understanding CHEWs’ capacity to manage and treat hypertension in pregnancy with antihypertensive drugs, and administer MgSO₄ in emergency situations, could inform national policy and save the lives of women and babies.
Referral to secondary hospitals

Providers’ training updates include details of counselling and referrals to be made and providers receive training on the policy guidelines for referral and places of referral. All referrals are tracked to assess health outcomes. Each week, the local government health officer collects a list of all referrals made from each facility and cross references with the referral facilities to confirm that women with PE/E sought services. If patients do not show-up in the referral facilities, he/she will follow up with the patients directly.

EXPECTED OUTCOMES

Data collection for the endline survey will take place in early 2018. Researchers will evaluate women with pre-eclampsia and severe hypertension who receive a loading dose of MgSO₄ before referral. They will also assess women who take alpha methyldopa throughout their pregnancy, the proportion of PE/E patients referred to higher level facilities, PE/E patients presenting for care at comprehensive emergency obstetric and neonatal care facilities, absolute increase in facility births, as well as the number of maternal deaths, stillbirths, and neonatal deaths or complications of uncontrolled hypertension.

The research team is measuring outcomes such as proper diagnosis and classification of hypertensive disorders, appropriate use of antihypertensive drugs, effective control of hypertension, use of MgSO₄ when necessary, and maternal and fetal outcomes.

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Recruitment

Women recruited into the study are 15 years and older, those who visit PHC facilities for routine antenatal care (ANC) and have high blood pressure recordings, provide informed consent, and are willing and able to attend follow-up visits, including at least one postpartum visit. Once recruited, CHEWs open a special medical record for each client and record all vital clinical services and outcomes. Researchers evaluate the facilities to review the records and provide mentoring support to the study sites.

Intervention

CHEWs in the intervention facilities prescribe and dispense alpha methyldopa to women who have moderate to severe hypertension. If the drug is not available at the facility due to stock-outs, women and their families may have to obtain the drug at outside, local pharmacies, which are widely available in rural areas at a very affordable price. CHEWs will then ask women to return to health facilities for refills, and will check their blood pressure every month during pregnancy. If hypertension is not controlled, women are referred to a hospital. In an impending case of severe PE/E, the woman receives the loading dose of MgSO₄ according to national policy and then is referred to a higher level facility.

Comparison sites

In comparison facilities, CHEWs will not provide alpha methyldopa. Instead, they refer patients with moderate or high blood pressure to referral hospitals. If physicians are available in comparison facilities, physicians can dispense and prescribe antihypertensive drugs, depending on their clinical judgement to best address the woman’s condition. They will document this in the patient’s record, and researchers will study these cases during analysis.

Post intervention

During the post-intervention follow-up survey, researchers will interview all pregnant women who received alpha methyldopa to inform findings around compliance with the drug and its outcomes. In addition, women are invited for monthly follow-up visits at the facilities after initial identification. During each monthly follow-up visit, CHEWs assess the woman’s general health, progress of pregnancy, and physical examination, including any complications (e.g., severe headache, blurred vision, upper abdominal pain, pulmonary edema, low urine output (oliguria), blood pressure measurement, urine albumin assessment, drug compliance, and nutrition supplementation. They also inquire about referral and support during labor and delivery time.