



Gaps and opportunities for pre-eclampsia and eclampsia care in Ethiopia

MARCH 2018



Made possible by the generous support of the American people through the United States Agency for International Development (USAID).

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BACKGROUND

Each day around the world, 830 women die from pregnancy- or child-birth-related causes. Pre-eclampsia and eclampsia (PE/E) is the second most common cause of maternal mortality globally, leading to 76,000 maternal deaths every year. The WHO reports high rates of PE/E in the Americas and Africa, with the highest burden of eclampsia in low and middle-income countries in Africa. Global recommendations related to task-shifting advocate for community level administration of magnesium sulfate ($MgSO_4$).

In Ethiopia, 19% of maternal deaths result from PE/E, but the dynamics between women, communities, and health systems that shape the experience and burden of PE/E are not well understood. Evidence to-date comes mainly from research in hospital settings, with scattered studies at the community level.

OBJECTIVES

The purpose of this research was to 1) Investigate the knowledge, attitudes and practices surrounding PE/E at multiple levels; 2) Describe the barriers to provision/utilization of prevention and management of PE/E, including antenatal care, delivery, and postnatal care; and 3) Assess the policy and health systems environment related to PE/E diagnosis, referral, and treatment, and identify potential bottlenecks in the supply chain. This brief presents findings and recommendations from a qualitative study in the Southern Nations, Nationalities, and Peoples Region (SNNPR), an analysis of the Ethiopian Demographic and Health Survey (DHS) 2016, and a desk review of policies and guidelines.

METHODS

Under the Ending Eclampsia project, researchers investigated perspectives across the health system through qualitative data from SNNPR, a desk review of 43 documents – peer-reviewed publications and maternal health-related textual guidelines and policies – and analysis of the DHS.

Researchers also conducted in-depth interviews with 21 policy makers and stakeholders at national, regional, and woreda levels, as well as with 38 health workers at health posts, health centers, and hospitals. In communities, the research team conducted 16 focus group discussions with men and women (6-9 persons per group) who were married men and women with children (18 years and older) and 17 in-depth Interviews with women who have experienced PE/E.

KEY FINDINGS

Data from the study reflected aspects of access to, and quality of, PE/E care. Findings showed barriers to receiving quality care, including persistent gaps in policy and programming and inadequate provider knowledge and capacity for detecting, preventing, and treating maternal complications. Other barriers to PE/E care were service provision, supply chain bottlenecks, and insufficient processes. In communities, women's decision-making to seek care and community awareness of maternal health and complications also impact PE/E services.

Facts about pre-eclampsia and eclampsia

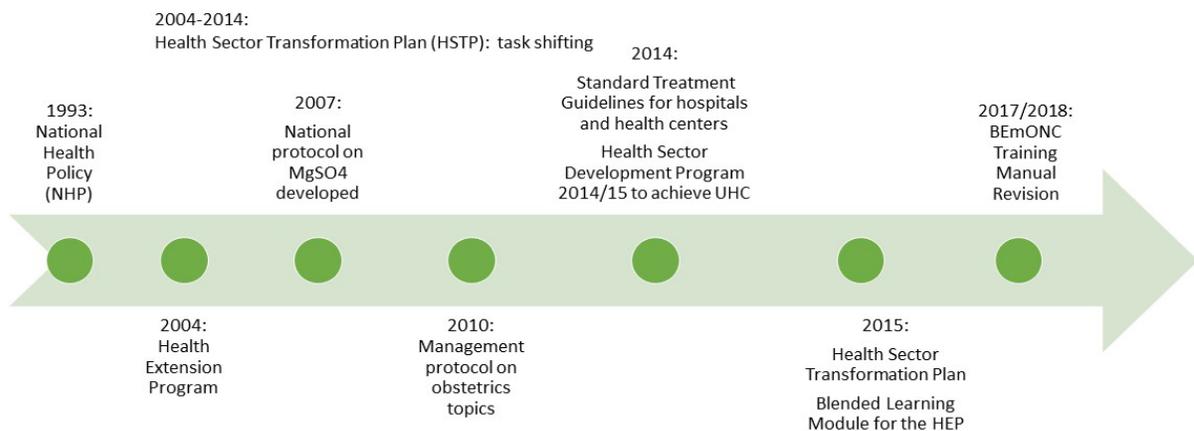
- Pre-eclampsia (PE) is a condition of pregnancy marked by increased blood pressure and protein in urine after 20 weeks gestation.
- High-quality antenatal care improves prevention and early detection of pre-eclampsia and can prevent progression to eclampsia.
- Eclampsia is a life-threatening condition characterized by convulsions in women with PE.
- $MgSO_4$ and antihypertensive drugs are the safest and most effective treatment for high blood pressure, and pre-eclampsia and eclampsia. $MgSO_4$ is one of the 13 UN Life-Saving Commodities for Women and Children.

Maternal Health in Southern Nations, Nationalities, and Peoples Region of Ethiopia

- In 2016, 69% of women who gave birth in the last five years had antenatal care, compared to 62% nationally.
- About 38% of women made four or more antenatal care contacts, higher than the national average of 32%.
- The percentages of women who had skilled birth attendance and delivered in a health facility were 28% and 25%, respectively, levels similar to the national averages.
- Postnatal care is relatively higher, with 20% of women attending postnatal care visits, compared to 19% nationally.

The Ending Eclampsia project seeks to expand access to proven, underutilized interventions and commodities for the prevention, early detection, and treatment of pre-eclampsia and eclampsia and strengthen global partnerships.

Figure 1. Policy and programming timeline



Gaps in policy and programming in PE/E

Desk review and qualitative findings show national policies, guidelines, and manuals have direct implications on the provision of maternal health care, including management of PE/E. Despite policy changes increasing access to care for complications through task shifting and focused care at the community level, there is ambiguity related to health worker roles in PE/E diagnosis, administration of MgSO₄, counseling, and referral. See Figure 1.

Provider knowledge and capacity

Provider knowledge and capacity for detecting and managing pre-eclampsia is mixed across community, health extension workers (HEW), nurse-midwives, policy makers, and stakeholder perspectives. HEWs are relatively knowledgeable in their role of community health providers. They can correctly identify at least two symptoms of hypertension and report counseling women on prevention measures.

“If there is swelling in a woman’s body and if there is something different in her health like shaking, we send her to the health center. After the woman is referred, we get the feedback as a report from the health center on that woman’s condition.”
(HEW, rural health center, female, 25)

Skilled providers in SNNPR, including nurses and midwives, are more aware of hypertension in pregnancy, signs and symptoms, management with antihypertensive drug, and basic understanding of MgSO₄. Despite theoretical knowledge of PE/E, skilled providers are not always available at health centers and lack confidence in administering MgSO₄, face drug shortages, and subsequently only provide direct referrals. In hospitals, respondents perceived a lack of capacity and inability among younger providers to address complications in pregnancy.

“Even the most senior and experienced people are unwilling to administer the drug [MgSO₄] at the health centers. This plays a decisive role. A health worker gave a referral letter to a woman without giving her a pre-referral dose, delaying her proper care at the hospital. She had convulsions at home and died.” (IDI, midwife)

The desk review confirmed a confidence gap at the national level. The Ethiopian Emergency Obstetric and Newborn Care Assessment in 2016 showed that 20% of nurses said they would never administer the MgSO₄ loading dose.

Health systems and supply chains

Commodity shortages, including a lack of blood pressure machines and expired or no essential medicines for maternal health at health posts and health centers were described across communities, HEWs, skilled providers and policymakers. While these life-saving drugs are supposed to be available at health centers and provided to women for free and blood pressure machines are meant to be supplied to HEWs, there are gaps in allocation and distribution mechanisms, leading to perceptions of low quality care and a need to improve the supply chain.

“When there’s a shortage of drugs, they [health centers and hospitals] refer people to private pharmacies with no health equipment. The materials at health centers and health posts are also insufficient...They cannot provide a required service. Sometimes we are skeptical of whether health professionals are using the drugs for themselves or the shortage arises from the government distribution mechanisms.” (FGD, rural men, 18-24 years)

Monitoring and feedback systems

Distribution and monitoring bottlenecks in the MgSO₄ supply chain compound the challenges in the procurement and reimbursement processes, and result in expired or nearly-expired drugs at health facilities. The quality of drugs distributed by the Pharmaceutical Fund Service Agency is low, as drugs may expire within two to three months after arrival. This may be caused by delays in procurement from international/foreign sources, as well as sub-standard storage mechanisms at health centers, packaging, and transportation issues that keep medications from reaching facilities before the drugs expire.

“The places where they store the drugs are not built for drug storage. They are given one room to store the drugs... There are no shelves and they keep drugs on the floor. When we go for supervision, we observe how they store the medical equipment outside on the veranda and it is easy to steal.” (IDI, regional policy maker, pharmacist)

Community awareness

Communities and women of reproductive age are moderately knowledgeable about pregnancy-related problems and when to seek care. They know to seek emergency obstetric care at a hospital when complications arise during labor and delivery. Despite not knowing the formal definitions of PE/E, they know high blood pressure is problematic during pregnancy, and had moderate-to-high knowledge of PE/E-related danger signs and symptoms - headache, blurred vision, dizziness, swelling, energy loss, sweating, and convulsions.

“I had blurred vision, swelling of my hands and legs, and headaches, so I went to the health center. I recognized what I had been taught before... I was tested, and it was BP, which is what I guessed.” (IDI, pre-eclampsia survivor, rural, 28 years)

“High blood pressure and convulsions can be managed by improving our nutritional status and visiting health centers... Women should receive antenatal and postnatal care. A woman and her husband should be aware of the problem and regularly follow up.” (FGD, urban men, 18-24 years)

In contrast to women’s and community-reported moderate awareness, health providers at the hospitals, health centers, and health posts (including HEWs) perceived communities as considerably less aware of complications, PE/E, and timely care seeking. They attributed low maternal health service uptake to religious beliefs and practices.

“The community attributes pre-eclampsia and eclampsia to evil spirits. They don’t know she is pregnant... They fail to bring her to a health center.” (Health worker, rural health center, male)

All respondents describe multiple avenues for increasing awareness, including HEW door-to-door visits, community health and development forums for women and youth (ande le amidst/limat buden/ande le selasa cooperative groups), use of media like television programs (e.g. “Tena Bebetiwo”/“Health at your home” or “Ande shi kenat”/“One Thousand Days”), community theater, and innovative strategies like the Lucy mobile text intervention.

RECOMMENDATIONS

- Formalize protocols on PE/E diagnosis, referral, and management to eliminate policy gaps.
- Advocate for budget allocation to ensure essential supplies for adequate PE/E care, like blood pressure machines, antihypertensive drugs, and MgSO₄, reach health centers and health posts.
- Increase skills of nurses and midwives for PE/E care by providing practical refresher trainings on proper use of MgSO₄.
- Build HEW capacity to screen pregnant women for high blood pressure, administer antihypertensive drugs, and refer women to facilities.
- Build capacity of routine monitoring and feedback systems at the woreda level to incorporate maternal complications, such as PE/E.
- Raise community awareness of birth preparedness, healthy diets, complications in pregnancy, and antenatal, delivery, and postnatal care.

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