POPULATION COUNCIL
Ideas. Evidence. Impact.

Population Council
Knowledge Commons

Reproductive Health

Social and Behavioral Science Research (SBSR)

2017

Life-saving medicines and equipment in facilities in Bangladesh

Kanij Sultana
Population Council

Amy Dempsey
Population Council

Follow this and additional works at: https://knowledgecommons.popcouncil.org/departments_sbsr-rh

 Part of the Analytical, Diagnostic and Therapeutic Techniques and Equipment Commons, Demography, Population, and Ecology Commons, Family, Life Course, and Society Commons, International Public Health Commons, and the Maternal and Child Health Commons

How does access to this work benefit you? Let us know!

Recommended Citation

Sultana, Kanij and Amy Dempsey. 2017. "Life-saving medicines and equipment in facilities in Bangladesh," Ending Eclampsia Brief. Washington, DC: Population Council.

This Brief is brought to you for free and open access by the Population Council.

facility readiness

ENDING Eclampsia

BANGLADESH

LIFE-SAVING MEDICINES AND EQUIPMENT IN FACILITIES

Bangladesh has a health system with various levels of service delivery, from primary to tertiary facilities. Medical colleges and hospitals (MCH) and specialized hospitals make comprise the tertiary level. District hospitals (DH), mother & child welfare centers (MCWC) and upazila health complexes (UHC) comprise the secondary level, while the primary level is made up of union health & family welfare centers (UH&FWC), and community clinics.

Magnesium Sulphate ($MgSO_4$), a well-known, low-cost, and proven drug for managing pre-eclampsia and preventing eclampsia, and its antidote for toxicity, calcium gluconate, are two of 209 drugs listed on Bangladesh's Essential Medicines List. The Ministry of Health and Family Welfare (MOHFW) has approved and circulated the EML throughout all tiers of the health system.

THE RESEARCH

This research brief is a part of a larger landscaping analysis by Population Council, with support from USAID and the MacArthur Foundation. In 12 upazilas in four districts, it assessed the capacity of primary health facilities to manage pre-eclampsia and eclampsia (PE/E). This brief shares findings from 134 facilities on required infrastructure for providing maternal and newborn health (MNH) services, human resources, facility readiness, and MNH commodities and supplies.

Recommendations

- Make standard guidelines and protocols for PE/E available in every health facility.
- Make job aids available to service providers for managing PE/E cases.
- Review, revise, print, and distribute existing ANC/PNC/delivery registers for better monitoring.
- Train providers, especially primary facilities providers, to use ANC/PNC/delivery registers.
- Stock $MgSO_4$ and calcium gluconate regularly.
- Train secondary and primary providers on diagnosis and management of PE/E.
- Advocate with manufacturers for easier administration of $MgSO_4$.
- Ensure all UH&FWCs have clean water and 24-hour electricity.

AUGUST 2017

USAID FROM THE AMERICAN PEOPLE

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

The Population Council conducts research and delivers solutions that improve lives around the world. Big ideas supported by evidence: It's our model for global change. popcouncil.org

© 2017 The Population Council, Inc.

POPULATION COUNCIL
Ideas. Evidence. Impact.

FINDINGS

Guidelines and Protocols

Available written guidelines or protocol for diagnosis, treatment, and management of PE/E using $MgSO_4$ are pre-requisites for timely and successful treatment of women with PE/E.

All DHs reported availability of protocols and guidelines, but only 50 percent of MCWCs and 36 percent of UHCs have PE/E protocols and guidelines at the facility. No UH&FWC had any guidelines or protocols available for diagnosing and managing PE/E. There are no job aids or information, education, and communications materials on PE/E available in any health facilities.

Facility infrastructure, logistics, and readiness

All secondary (DH, MCWC and UHC) and primary (UH&FWC) facilities use registers to document antenatal and postnatal care, deliveries, and referrals. Only Directorate General of Family Planning (DGFP) facilities have formally printed and formatted registers, and service providers' abilities to enter pregnant women's information into the register was poor, with many entries missing information.

At Directorate General of Health Services (DGHS) facilities there are no formally printed and formatted registers. Facilities use general notebooks with hand-drawn tables to log information about pregnant women. Like DGFP facilities, many entries were missing information due to limited space in the notebooks.

While most secondary facilities have clean water supply and 24-hour electricity, primary facilities lack essential infrastructure and supplies for quality maternal and newborn health services. Only 59 percent of UH&FWCs have clean water, while 39 percent have 24-hour electricity.

Availability of equipment and supplies

Primary facilities are not designed to provide emergency care. They refer women to secondary facilities, of which had regular and emergency response materials.

It is essential that certain equipment and commodities necessary for providing PE/E-related care are available at all facilities. All secondary facilities have functional sphygmomanometers, but only 83 percent of primary facilities have functional blood pressure machines. Of 134 facilities, only 25 have self-retaining catheters, 25 have urine bags, and 58 have available normal saline (IV). All secondary facilities have oxygen machines and masks, but primary facilities have oxygen machines or masks.

Facility usage and procurement of $MgSO_4$

$MgSO_4$ was found in only four secondary facilities, and in no primary facilities.

Only four secondary facilities reported use of $MgSO_4$ regularly, while another seven reported its occasional use. Those facilities that use $MgSO_4$ use intramuscular (IM) and intravenous (IV) routes for administration. It is important to note that three out of four MCWCs (75 percent) and five out of 11 UHCs (45 percent) never use $MgSO_4$.

Those who use $MgSO_4$ mentioned using various concentrations. Some reported use of 20 percent solution, while others reported use of 4 percent water/volume, 50 percent solution, or were unable to name the concentration used for administration.

Of the 11 facilities that use $MgSO_4$, six facilities (55 percent) get it from Central Medical Store of Drugs (CMSD) regularly or they purchase it from local markets. The remaining five facilities (45 percent) reported that clients purchase it from local markets when necessary.

Two pharmaceutical companies in Bangladesh manufacture $MgSO_4$ in 20 percent solution (1 vial contains 100 ml; 4 gm) and 50 percent solution (1 ampule contains 5ml; 2.47 gm). A loading dose of $MgSO_4$ for preventing pre-eclampsia from progressing to eclampsia and managing eclampsia requires 10 gm IM and 5 gm IM, respectively, in each buttock. To administer this, providers must break four ampules to get 10 gm $MgSO_4$ in two syringes. This makes administration very difficult for providers, who reported fear of giving the loading dose during emergencies.

Facility readiness is vital to providing quality services to ANC patients, especially to women with PE/E. Without functioning equipment, ANC/PNC registers, essential medicines, electricity, and running water, women are less likely to seek and receive services in a timely manner.

FOR MORE INFORMATION

Kanij Sultana at Ksultana@popcouncil.org, info@endingeclampsia.org

For more information, visit www.endingeclampsia.org.

Citation: Warren, Charlotte, Sharif Hossain, Rahat Ara Nur, Kanij Sultana, Karen Kirk, Amy Dempsey. 2015. "Landscape Report on Pre-eclampsia and Eclampsia in Bangladesh." Washington, DC: Population Council.