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# Assessing maternal and newborn health commodities in Bangladesh

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# ASSESSING MATERNAL AND NEWBORN HEALTH COMMODITIES IN BANGLADESH

The UN Commission on Life-Saving Commodities for Women and Children aims to increase access to 13 commodities in 50 countries. As part of this global effort, the Population Council conducted a landscape analysis in Bangladesh to review policies, guidelines, availability, and use of these commodities.

The landscaping exercise had two objectives: 1) To provide a comprehensive description of maternal and newborn health (MNH) commodity issues from policy to point of care; and 2) To engage stakeholders in rolling out the UN Commission recommendations.

Specifically, the goals of this study were to:

- Engage with national leaders to determine national priorities and information gaps;
- Examine policies and guidelines that impact the use of the 13 lifesaving commodities;
- Explore procurement mechanisms, manufacturing capacity, availability of quality assurance guidelines/policies, product packaging policies, distribution mechanisms, cost to end users, and financing;
- Examine access to, and availability of, the 13 lifesaving commodities in public facilities at the district, sub-district, and community levels, and in private drugstores;
- Assess stakeholders' interest and participation in ensuring access to commodities; and
- Stimulate discussion to identify policies for increasing access and availability.

## METHODS

This landscape assessment exercise had three components: In-depth interviews, web searches, and site visits. Twenty one in-depth interviews with representatives from the Ministry of Health and Family Welfare (MoH&FW), professional associations, development partners, pharmaceuticals, and NGOs complemented the searches and provided greater detail.

Online searches for drug manufacturers were conducted at <http://www.bddrugs.com/>, and individual websites of pharmaceutical companies and the Directorate General of Drug Administration (DGDA) at <http://www.dgda.gov.bd>.

To validate the availability of the commodities, researchers visited public facilities and private drugstores at the district, sub-district, and community levels, and assessed which of the 13 commodities were available, which were out of stock, and how the drugs were stored (including humidity and temperature control/refrigeration) the day of the visit.

Following data collection, policy makers, program managers, regulators, pharmaceutical industry representatives, and other stakeholders attended a workshop to share and discuss the assessment findings and identify priority activities to strengthen the implementation of the UN Commission's recommendations.

Another study operationalized and assessed the ability of community facility health providers to detect, prevent, and treat pre-eclampsia and eclampsia (PE/E), as well as administer a single loading dose of MgSO<sub>4</sub> before referral to secondary facilities. See accompanying *“Operationalizing National Protocol for Preventing and Managing PE/E in Community Facilities in Bangladesh.”*

TABLE 1. BARRIERS AND IMPACT (GLOBAL)		
Commodity	Examples of key barriers	Potential five-year impact
Maternal health commodities		
1. Oxytocin - post-partum haemorrhage (PPH)	Often poor quality	15,000 maternal lives saved
2. Misoprostol - post-partum haemorrhage (PPH)	Not included in national essential medicines lists	
3. Magnesium sulphate (MgSO <sub>4</sub> ) - severe pre-eclampsia and eclampsia	Lack of demand by health workers	55,000 maternal lives saved
Newborn health commodities		
4. Injectable antibiotics - newborn sepsis	Poor compliance by health workers	1.22 million neonatal lives saved
5. Antenatal corticosteroids (ANCs) - preterm respiratory distress syndrome	Low awareness of product and impact	466,000 neonatal lives saved
6. Chlorhexidine - newborn cord care	Limited awareness and demand	422,000 neonatal lives saved
7. Resuscitation devices - newborn asphyxia	Requires trained health workers	336,000 neonatal lives saved
Child health commodities		
8. Amoxicillin - pneumonia	Limited availability of child-friendly product	1.56 million lives saved
9. Oral rehydration salt (ORS) - diarrhea	Poor understanding of products by mothers/caregivers	1.89 million lives saved
10. Zinc - diarrhea		
Reproductive health commodities		
11. Female condoms	Low awareness among women and health workers	Almost 230,000 maternal deaths averted
12. Contraceptive implants - family planning/contraception	High cost	
13. Emergency contraception	Low awareness among women	

DISCLAIMER: \*The table above was adapted from the Commissioner's Report from UN Commission on Life-Saving Commodities for Women and Children, September 2012. It provides estimates of how many lives could be saved if common barriers were overcome and equitable access achieved for 13 lifesaving commodities. The numbers presented are draft estimates meant to give a general overview of the barriers certain commodities face and the potential impact if these barriers were surmounted. These draft estimates are based on a systematic analysis approach.

## FINDINGS

### Drug policies and guidelines

An important component of the National Drug Policy (NDP) is to ensure quality drugs are available and affordable. The policy also requires that quality assurance measures occur during manufacturing, transit, and storage, along with testing at different time points before it reaches the end user. All drugs, medicines, and other commodities in final dosage forms that are manufactured, imported, distributed, marketed, or consumed in the country must be registered with the DGDA in the specific dosages and strengths recommended by the Drug Control Committee.

The landscaping exercise found all 13 lifesaving commodities, except female condoms, are registered but not available in the specific dosages needed for particular MNH conditions or indications. For example,  $MgSO_4$  is not available as a single loading dose in community facilities. Additionally, some drugs were out of stock and shortages were reported. See Table 1 for more information.

Interviews with policy makers and program managers suggest those responsible for implementing MNH policies and services were unaware of specific commodity policies, the UN Commission report, and its recommendations.

There appears to be a lack of coordination between drugstore keepers and providers. As a result, providers are not aware of which drugs and commodities are available in facility stores. Also, many providers reported not being able to estimate the consumption rate of drugs and commodities in their facilities due to a lack of data.

### Quality control and quality assurance

The NDP requires that each pharmaceutical company have quality control and quality assurance systems, which monitor the entire manufacturing process from the acquisition of raw materials to its conversion into a finished product. It also requires that all pharmaceutical companies have documented standard operating procedures based on World Health Organization recommended guidelines for each product.

Findings from interviews with drug authorities and pharmaceutical representatives reveal drug testing laboratories have limited manpower and logistics capacity. These quality control mechanisms can only test 30% of the 3,500 products developed each year.

### Logistics and ordering of supplies

The MoH&FW follows the World Bank procedure for procuring drugs and commodities through an open bidding process. The lowest bidder gets the order if they have requisite qualifications and can fulfill the specifications required in the tender. By this process, MoH&FW gets the lowest price.



Above: MNH drugs stored in a public facility. Below: Workshop participants. Photos by Population Council.



There are several domestic pharmaceutical manufacturers producing most of the 13 commodities. The DGDA regulates the prices of local products, and without its approval no pharmaceutical company can fix the price of drugs or commodities.

Pharmaceutical manufacturers generally teach correct storage practices to distributors, but not to drugstores, and as a result, a knowledge gap for proper storage remains in community drugstores. Currently, there is no public private partnership for pharmaceutical products.

Usually, drugs and commodities are ordered at the national level, stored at central warehouses, and then distributed to districts and facilities. At the sub-district level, there is no scope for local procurement.

In facilities, most respondents were unaware of the quality control and quality assurance guidelines. However, pharmaceutical company representatives mentioned that the DGDA quality assurance guidelines required them to have their own standard operating procedures. They also said end users are unwilling to pay for the drugs. This low demand for oxytocin, misoprostol,  $MgSO_4$ , antenatal corticosteroids, zinc, and emergency contraceptive pills serves as a disincentive to stock them.



## Private drugstores/pharmacies

Researchers visited 27 private drugstores and pharmacies at all levels to determine the availability of the drugs and commodities. Overall, the most available drugs were amoxicillin, zinc, and oral rehydration salts. However, oxytocin, misoprostol, and MgSO<sub>4</sub> were less available. Almost all drug sellers reported low demand for them, as they require a doctor's prescription and their volume of sales depended on the extent to which doctors prescribed them. Drugstore keepers explained that they lose money if the drugs expired on the shelf due to low sales, and so they do not stock them.

## Packaging of product

Individual packaging for each of the 13 commodities is unavailable. Many of them are available in universal dosages, from which service providers must decide the amount given for specific MNH indications. For example, antibiotics for neonatal sepsis are available in various dose forms of drop, suspension, tablet, and injection in different concentrations. It is not specifically packaged for neonatal sepsis, but simply mentioned as one of the indications.

Similarly, MgSO<sub>4</sub> is available in solution, but in different concentrations. There is no separate packaging for a loading dose of 10 mg in a vial. Available forms are 2.46 grams per 5 ml or 4 grams in per 100 ml vial, which means four vials are required as a loading dose in community facilities before referral.

No drug is included in existing bundles, such as the delivery kit, but there are ongoing discussions about this. The prospect of separate packaging had enormous support from all respondents, as they felt separate packaging of appropriate doses would help with proper dosages for specific indications.

## Financing

The government supplies all drugs and commodities for free to providers in facilities or during doorstep deliveries. However, in reality services and drugs at the facilities are not free of cost, and end users have considerable out of pocket expenses. They may have to pay informal service fees or purchase drugs from external sources.

Drug sellers feel that health expenditures and out of pocket expenses in the market are within reach for most end users. They also said there must be a safety net provided for ultra-poor people. All respondents felt products should be included in conditional cash transfer coupons, vouchers, or other similar schemes, particularly the ongoing public sector maternal health voucher schemes.

## RECOMMENDATIONS

- Stronger advocacy with pharmaceutical companies to manufacture a single loading dose of MgSO<sub>4</sub> solution;
- Essential drugs and commodities should be available in UH&FWCs, where normal vaginal deliveries are planned and conducted;
- Formation of a forum at the Directorate General of Family Planning (DGFP) to advocate access to, and use of, MNH drugs and commodities;
- Further initiatives that ensure drug quality, appropriateness of dosage, and reliable availability in the private and public spheres; and
- DGDA, DGFP, and Directorate General of Health Services should be updated regularly on global MNH and other public health issues.

## RESOURCES

- Maternal Health Commodity Landscaping Exercise: A Snapshot of Bangladesh Program, 2013. Population Council.
- Drug Policy of the Government of Bangladesh, MOH&FW
- Quality Manual of Directorate General of Drug Administration, Bangladesh, MOH&FW
- Operation plan of DGHS and DGFP for the period of 2011-2016, MOH&FW
- "Training Manual of Use of Misoprostol to Prevent Postpartum Hemorrhage (PPH)", MOH&FW, United States Assistance for International Development (USAID) and EngenderHealth.
- "Information Kit on Use of Misoprostol to Prevent PPH at Home Delivery", MOH&FW and EngenderHealth
- "National Protocol for Providing Loading Dose of Magnesium Sulphate (MgSO<sub>4</sub>) by the Community Level Service Providers", MOH&FW, Obstetrical and Gynecological Society of Bangladesh (OGSB), EngenderHealth, Maternal and Child Health Integrated Program (MCHIP), and Population Council
- "Family Planning Manual", Directorate General of Family Planning (DGFP), MOH&FW
- Trainer's Handbook of "Active Management of Third Stage of Labor", MOH&FW
- Meeting minutes of the National Core Committee, Neonatal Health (NCC-NH), MOH&FW
- Meeting Minutes of the National Technical Committee (NTC), DGFP
- Revised supply manual 2013, DGFP.

*Suggested citation: Maternal Health Commodity Landscaping Exercise: A Snapshot of Bangladesh Program Brief, 2013. Population Council.*