icddr,b highlights urgency for strengthening of the health system for emergency obstetric and newborn care (EmONC) services in Bangladesh

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Since early 1990s, the Government of Bangladesh has taken the initiative to establish Emergency Obstetric Care (EmOC) services by strengthening of the district hospitals (DHs), establishing of the mother and child welfare centres (MCWCs) and upgrading the Upazilla Health Complexes (UHCs). Thus EmOC services are provided from health facilities under both the Directorate General of Health Services (DGHS) and Directorate General of Family Planning (DGFP). Side-by-side of the public sector, in Bangladesh private facilities are also providing selected components of the EmOC services. In 2006, the World Health Organization (WHO), incorporated the newborn care component in the EmOC with a view to integrate the maternal and newborn health care services to effectively offer from the same platform, thus the EmONC was introduced.

WHO also has a guideline on geographic distribution of the health facilities which are designated to offer EmONC services. This is because women should be able to reach a designated EmONC facility within the quickest possible time during emergency health condition. Based on the selected EmONC services termed as signal functions, a facility is either comprehensive or basic. From a designated basic EmONC (BEmONC) facility, seven specific services should be available round-the-clock. These seven services are administration of parenteral antibiotics for treatment and management of infection; administration of parenteral oxytocics for prevention and management of post-partum-hemorrhage; administration of magnesium sulphate for treatment and management of eclampsia; manual removal of placenta; removal of retained products; assisted vaginal delivery and neonatal resuscitation. From a designated comprehensive EmONC (CEmONC) facility in-addition to the above seven specific services two additional services viz. cesarean section delivery and safe blood transfusion to be available round-the-clock.

The WHO guideline recommends that for every 500,000 population there should be at least 5 designated EmONC facility of which at least one should be able to offer comprehensive EmONC services and the rest should offer basic EmONC services. For a functional basic or comprehensive EmONC facility, the respective services should be available from the designated facility round-the-clock. For a facility to be functional for BEmONC and CEmONC services, the required infrastructure, human resources, drugs equipment and logistics should be available. Above all, the available services should be of acceptable quality for effectively treating the complications.

icddr,b conducted a ‘needs assessment study’ to identify the health systems gaps in the above areas by covering all the in-patient health facilities in both public and private sectors in 24 low performing districts in Bangladesh. The study was conducted under the joint UN-GoB-MNH programme in partnership with UNFPA, Bangladesh and with funding support from Department of Foreign Affairs, Trade and Development (DFATD), Canada.

Based on the study findings, icddr,b has published a set of policy brief series with specific policy recommendations for strengthening of the health system for improvement of service delivery for EmONC and other related MNH care services. The key findings along with the related policy recommendations are
summarised below:

**Low coverage of services by public EmONC facilities:**

In the 24 study districts, Bangladesh has the required number of comprehensive facilities in the public sector (1.2 facilities per 500,000 population), which satisfies the minimum requirements as per UN guideline. However, GIS analysis showed that after assessing accessibility to the comprehensive facilities by considering the available road network and transportation system, only 72% of the population in the study districts can access a designated public comprehensive EmONC facility within 2-hour travel time (as recommended). For accessibility to a public EmONC facility for basic services within 1-hour travel time, the coverage is only 41%. However, combining the public and private sector together shows enough coverage of facilities even though the private facilities do not have specific guideline and policy to provide all the signal functions that are essential for EmONC. Also, Hill districts and riverine districts have worse accessibility to EmONC facilities within a reasonable travel time.

Thus there is need to use GIS application for planning of health system for greater coverage of EmONC facilities considering travel time and population density. For increased coverage of comprehensive services, strategic private facilities should be identified and strengthened for services through public-private partnership. For increased coverage of basic services, strategic UH&FWC to be identified in areas currently not covered and strengthen those to function as BEmONC facility through deployment of additional manpower and resources.

**Low availability of signal functions:**

The health facilities designated to offer EmONC services should be able to offer specific services (9 and 7 specific services from CEmONC and BEmONC facility respectively) round-the-clock. Our study documented that except for medical college hospitals and district hospitals, many of the signal functions were not performed in the other types of health facilities at different tiers of health system. Blood transfusion services were not available in more than 40% of the MCWCs and UHCs which were designated to offer comprehensive services.

Again, although about 90% of the private for-profit facilities had caesarean section delivery, about one-third of these did not have blood transfusion service which is essential to manage complications. So, initiatives should be taken to establish blood transfusion unit in MCWCs designated as comprehensive facility and private facilities, which is currently non-existent. Private facilities should also be designated as basic or comprehensive facility based on their capacity and relevant Government approval. Necessary human resource, drugs and logistics should be made available to every facility to ensure availability of respective signal function by type of facility.

**Urgent need for private sector engagement:**

In Bangladesh although the private facilities is growing very fast, the study documented relatively low contribution of private sector than public sector for providing vaginal delivery care and management of obstetric complications. But, the contribution of the private sector for C-section delivery was more than two times than that of the public sector. This discrepancy in utilization of obstetric care demands urgent need to engage private sector to be more accountable in contributing to vaginal deliveries and obstetric complication management. Also, the current private clinic act for service provisions should be reviewed to explore the reasons for low contribution of the private facilities in obstetric complication management. Use of partograph should be mandatory for all the women in labour, irrespective of the type of facility in order to avoid unnecessary caesarean sections. Moreover, further exploration is required to identify the reasons (medical and social) of high caesarean section rate in private facilities.

**Gaps in infrastructural facilities:**
Infrastructure is a fundamental requirement in providing health care services. The study documented that in public facilities for maternity care there is a shortage of about 42% of the beds based-on current requirements. The mean number of maternity beds allocated for EmONC facilities is very low (only about 20 in each DHs and MCWCs and <=5 in UHCs). Separate labour/delivery room that is essential to provide obstetric care though available in most of the public EmONC facilities, about 42% of the private facilities do not have this infrastructure. On the other hand, post-partum ward was not available in majority of the public and private facilities. In union and below level facilities electricity and own source of water supply was a huge scarcity. The essential infrastructure needs to be ensured in every facility for provision of quality MNH care services.

**Gaps in drugs, equipment and supplies:**

Drugs such as antibiotics, oxytocics, magnesium sulphate are essential for treatment and management of obstetric and newborn complication. Oxytocics, which is a lifesaving drug for routine use to prevent postpartum haemorrhage, was not available in two-thirds of the basic MCWCs and more than 25% of the UHCs. Magnesium sulphate, which is required to manage Eclampsia was though available in most of the DHs but it was not found in about three-fourths of the MCWCs (both comprehensive and basic) and basic UHCs.

For obstetric services like vaginal and C-section delivery and specific services complete instrumental pack is necessary. The study found a major gap in availability of the required packs of instruments. About 30%-60% of the public facilities did not have at least one vaginal delivery pack. About 25%-75% of the public facilities designated for CEmONC did not have at least one C-section pack. There was shortage of instruments for other services like D&C, vacuum extraction etc. Thus, it is recommended that all facilities designated for EmONC services must have all the necessary drugs, equipment and instruments.

**Acute human resource shortage and minimum required HR for round-the-clock EmONC service:**

The shortage of trained manpower in health facilities is the major problem in delivering EmONC and other MNH care services. Not only the current configuration of manpower is inadequate, a huge number of vacant posts of doctors and nurses cause great impediment to provide round-the-clock services. Surprisingly, about 20-50% posts of medical doctors with various specialization and 30-60% posts of nurses of different categories are vacant in district hospitals. Also, about 70%-95% posts of consultants in Obs/Gynae, anaesthesia and paediatrics are vacant in UHCs. Most alarmingly, the UHCs that are designated to offer C-section services, 70% of them have no pair of Obs/Gynae and Anaesthesia specialist for providing surgical interventions.

Urgent initiatives should be taken to fill-up the current vacancies with the appropriately trained providers. Moreover, the current human resource configurations for different health facilities should be updated by creating additional/new posts to fill-up the gaps to ensure round-the-clock services. For some of the posts of the doctors and nurses, dedicated posts are needed to offer uninterruptable quality services. To address the problem of high attrition of the providers in rural and hard-to-reach areas, various innovative financial and non-financial incentivized models should be developed for implementations for enhanced motivation of the providers. Also policies should be adopted for opportunities for higher education by young medical doctors for serving in rural areas. Above all, good governance and accountability need to be ensured in terms of transfer/posting and retention of the providers. Successful implementation of a digitalized personnel management information system is likely to have an impact in this regard.

**Low quality of MNH care services:**

Our observational study to assess technical competency in providing MNH care services revealed that the quality of care was unacceptably low for antenatal care, postpartum examination, newborn examination and postnatal care as less than 40% facilities (both public and private) could follow the WHO...
recommended steps to perform these procedures. Training should be provided to the healthcare providers to follow the standard clinical guideline. Besides a supporting supervision system should be introduced to maintain the technical competency of the providers in offering the EmONC and other MNH care services.

**Way forward**
For application of the above recommendations, policy advocacy will be continued with the Government and relevant stakeholders, including UN agencies and other development partners. Through these consultative processes, priority recommendations should be identified to incorporate into the current sector programme for implementation by the Government.

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**For further details please contact:**

Nasmeen Ahmed  
Senior Manager  
Communications & Development Services  
icddr,b  
Phone: +880-2-984-0523 (ext. 3106)  
nasmeen@icddrb.org