

New 'signal functions' have the potential to more accurately assess quality of intrapartum and immediate postpartum care in Bangladesh

Every year more than 280,000 women die across the world due to complications in pregnancy and childbirth, and about 14 million women suffer from acute maternal complications.^{1,2} Intrapartum and immediate postpartum periods are critical for both a pregnant woman and her fetus, and poor care during these periods is associated with an estimated 42% of maternal deaths, 23% of neonatal deaths and 32% of stillbirths.³

Ensuring quality of care is a major challenge for maternal and neonatal health care service delivery programmes in low- and middle-income countries like Bangladesh. Assessment of the quality of care during labor and immediate postpartum period in a systematic way can potentially help identify areas that need improvements at healthcare facilities.

Our study evaluated the quality of care at six health facilities in Bangladesh using 26 new 'signal functions' that include routine obstetric and newborn care as well as basic and comprehensive emergency obstetric and newborn care.⁴ We collected information by interviewing health care providers and managers, reviewing hospital registers, and through observation

by members of a study team. We then categorized our selected health facilities as high, intermediate, and low functioning based on their performance.

Our study found all the selected health facilities to be 'low functioning'. These facilities do not provide comprehensive emergency obstetric and newborn care 24 hours a day. Most of the facilities do not have a sufficient number of skilled health care providers^a and do not use the 'partograph' as a decision-making tool. These facilities also do not practice 'assisted vaginal deliveries' and 'Kangaroo Mother Care' for preterm or low birthweight babies. We found most of the public health facilities do not take infection prevention measures and the referral services appear weak. The majority of the facilities do not provide thermal protection^b. The World Health Organization's signal functions—in comparison to the new signal functions we used to evaluate these health facilities—seem to have overestimated their correlation with quality of care. However, both scoring by new signal functions and that of the World Health Organization agree that NGO-led health facilities were better functioning in comparison to the public health facilities

Table 1: Category of performance by health facilities based on new signal functions

Performance based category	Health facility
High functioning (performs all 26 new signal functions)	None
Intermediate functioning (performs 24-25 of the functions)	None
Low functioning (<24)	All selected health facilities

¹ World Health Organization (May 2014) Available data by the World Health Organization at <http://www.who.int/mediacentre/factsheets/fs348/en/>

² Hofmeyr GJ, Haws RA, Bergström S, Lee AC, Okong P, Darmstadt GL, et al. Obstetric care in low-resource settings: What, who, and how to overcome challenges to scale up? *International Journal of Gynecology & Obstetrics*. 2009; 107:S21-S45.

³ Lawn JE, Lee AC, Kinney M, Sibley L, Carlo WA, Paul VK, et al. Two million intrapartum-related stillbirths and neonatal deaths: where, why, and what can be done? *International Journal of Gynecology & Obstetrics*. 2009; 107:S5-S19.

⁴ Gabrysch S, Civitelli G, Edmond KM, Mathai M, Ali M, Bhutta ZA, et al. New signal functions to measure the ability of health facilities to provide routine and emergency newborn care. *PLoS medicine*. 2012;9(11):e1001340.

^a Skilled health care provider was defined based on availability and number of post and EmOC training

^b Thermal protection was defined as drying, wrapping, skin to skin contact and advice mother not to bathe for six hours.

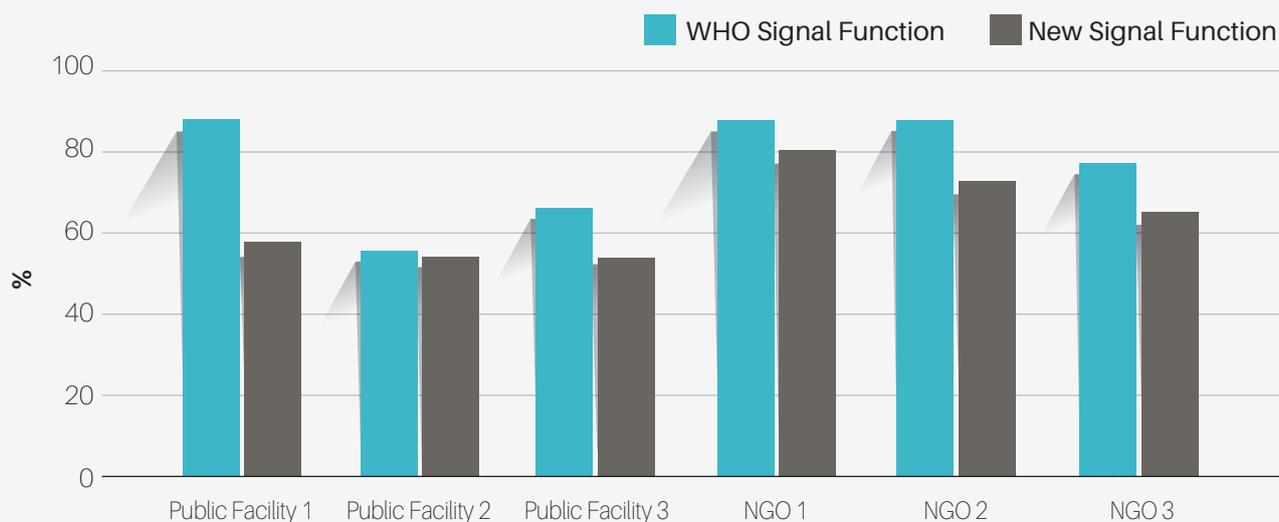


Figure: Score based on Signal Function

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