

Current initiatives with the icddr,b Q-mat

Demonstration Study

Title: Integrating icddr,b Q-Mat into National Safe Delivery Guidelines and Standard Operating Procedures (SOP) and Learning from its Demonstration in Selected Health Facilities in Bangladesh

Rationale: The icddr,b Q-Mat was initially developed for home deliveries in Bangladesh, where most births occurred in the early 2000s, to provide an objective measurement tool for postpartum blood loss. With facility deliveries increasing from 9% in 2001 to 65% in 2022, its feasibility was assessed in several health facilities across Bangladesh and found to be effective. Overall, these studies demonstrate the standalone feasibility and validity of the icddr,b Q-mat to identify PPH in both home and facility settings (Figure 1).

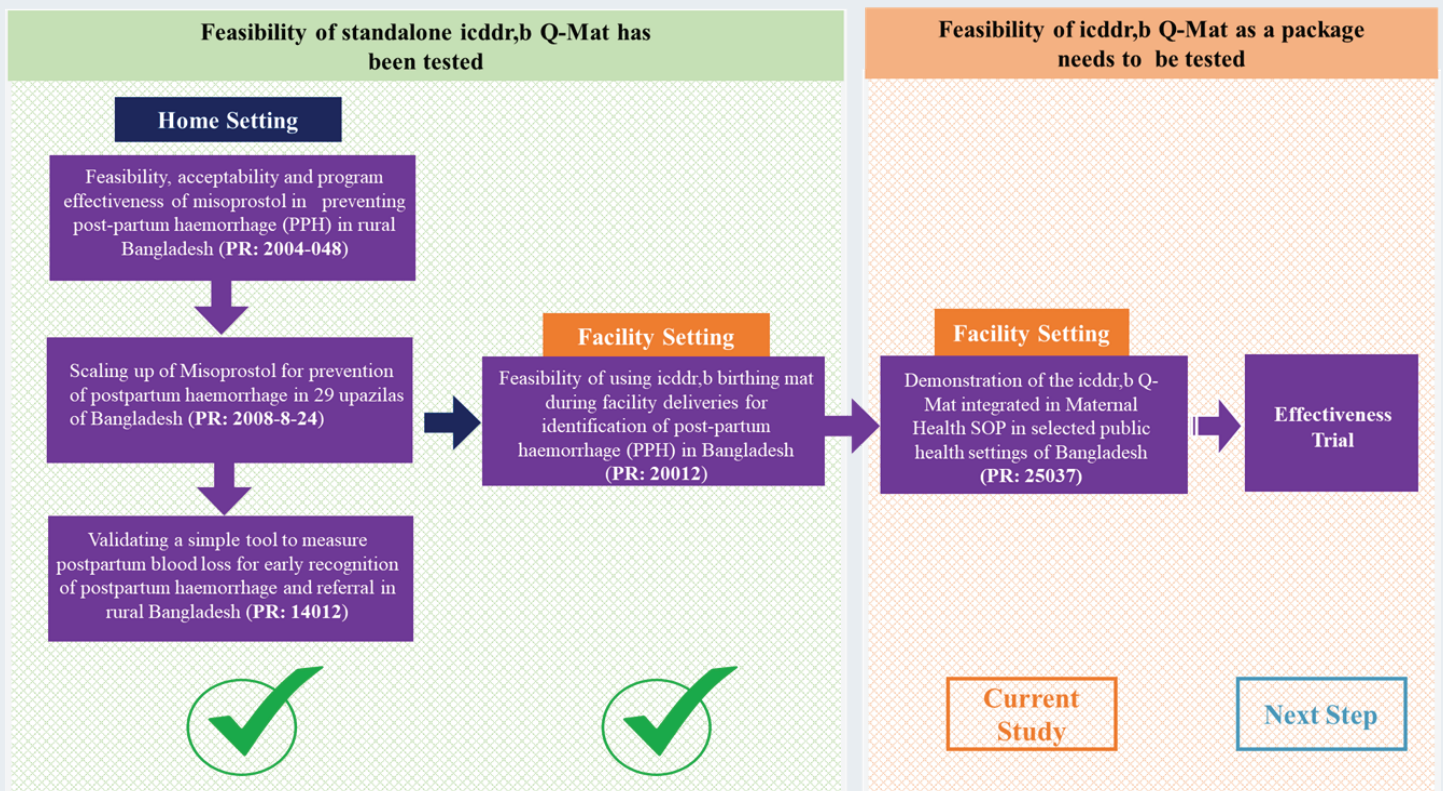


Figure 1: Completed Studies and Future Plans for the icddr,b Q-mat

However, the E-MOTIVE trial, which is endorsed by the World Health Organization introduced an innovative bundled approach to PPH management, where calibrated drapes was used to measure blood loss at the time of delivery on the labour bed (3). This provided strong global evidence that objective measurement tools can significantly improve PPH outcomes (3). However, calibrated drapes are designed only for the labour bed and cannot be used once women are transferred to the postnatal bed, at which point measurement stops. The icddr,b Q-Mat addresses this gap by enabling objective blood loss measurement on flat postnatal bed surfaces, supporting timely clinical action even after the women has been moved to the postnatal bed (5).

Objectives: We plan to build on these findings to demonstrate that the icddr,b Q-Mat is feasible in facility settings when combined with other innovations in the guidelines and SOP for PPH management. This will not be a nationwide policy revision at this stage, but rather a targeted feasibility study to determine how best to integrate the icddr,b Q-Mat at the appropriate point in the PPH management pathway and to assess system-level feasibility of the revised intervention package. This step is a critical precursor to a large-scale effectiveness trial and broader scale-up.

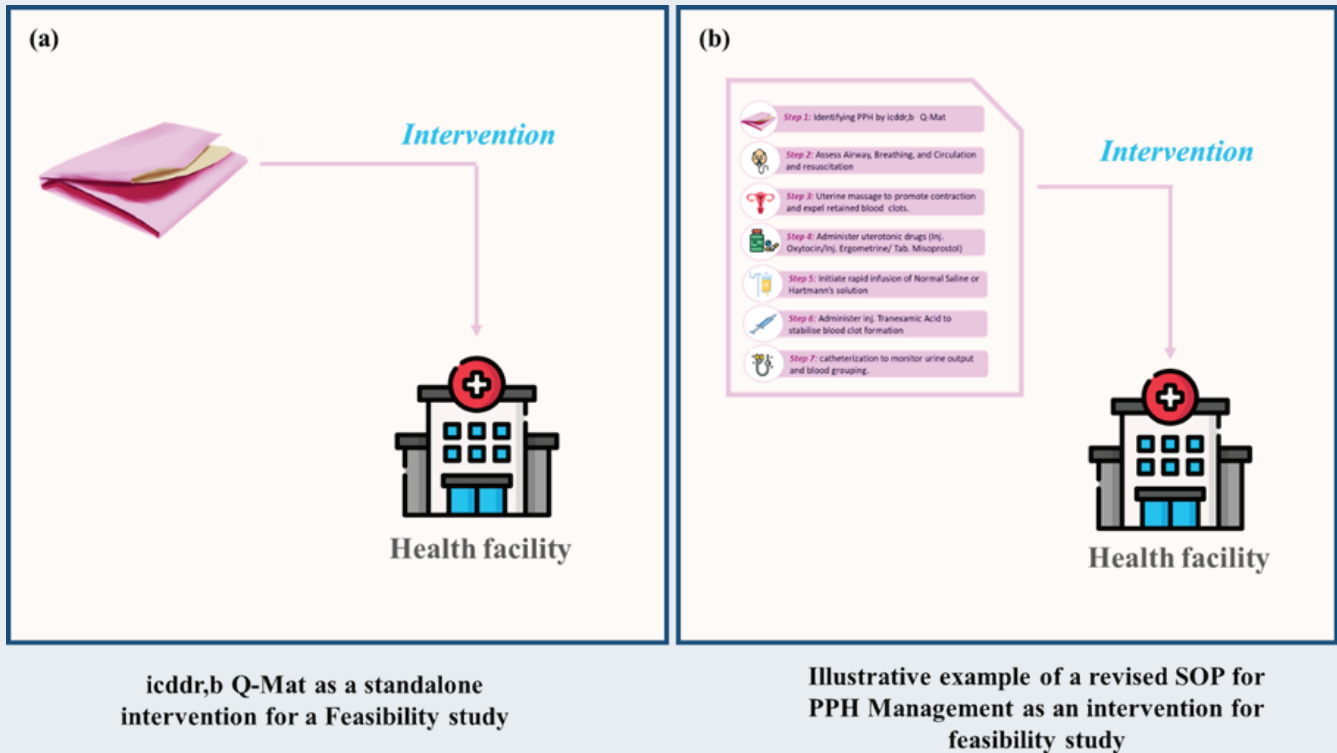


Figure 2: Design of the intervention package with icddr,b Q-Mat for identifying PPH

Figure 2a illustrates previous standalone interventions, while **Figure 2b** presents the current approach: integrating the Q-Mat into routine service delivery as part of a broader package of innovations, including Sayeba's method, the calibrated drape, and others.

Collaboration: The icddr,b Q-Mat is receiving growing international attention and recognition. A research team from the Africa Centre of Excellence for Population Health and Policy (ACEPHAP) at Bayero University Kano, Nigeria, has expressed interest in piloting the icddr,b Q-Mat within their ongoing project. The project aims to implement an evidence-based Delivery Innovation Kit addressing key maternal health challenges, including maternal anaemia, hypertensive disorders, maternal sepsis, malaria in pregnancy, and postpartum haemorrhage. Funded by the Gates Foundation, the project will be implemented in three northern Nigerian states (Kebbi, Sokoto, and Kwara), where home births remain common. As part of the Delivery Innovation Kit, the team plans to pilot the icddr,b Q-Mat to measure postpartum blood loss among intervention recipients, with comparisons made against a control group.

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