

Mobile phone use to improve maternal and neonatal care in Bangladesh: Need policy initiatives to add UHC for MCH

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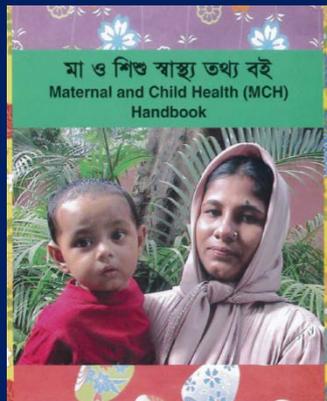
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The 11th International Conference on Maternal and Child Health Handbook

13 December 2018



Maternal and child health (MCH) handbook: Globally

MCH Handbook

- Communication and Information sharing tools
- To identify maternal and neonatal complications
- To raise health awareness
- To record health status of mother and neonatal
- To encourage health seeking behaviors
- To develop knowledge of the family members
- To become familiar with paper-based health education books



MCH problem in Bangladesh and objectives of this project

- Maternal and neonatal health services remains critically low, as only **31% pregnant women attend at least four ANC** visits,
- 37% of births occur in health facilities
- 36% women receive PNC within the first two days after birth (NIPORT, 2014 and 2016).
 - To assess the effectiveness of MCH handbook through mobile's text on improvement of MCH care in Bangladesh
 - To see maternal and child mortality rate and health seeking behaviors using MCH handbook

Project's background

Participants:

- 3000 pregnant women
- A randomized-control trial
- Two Upazilas in Bangladesh
- 3 years (April 2016 - March 2019)

3000 participants



1500 Participants



1500 Participants

Methods

- **RCT**

- Intervention group with handbook and mobile phone messages
- Intervention using only handbook
- Control group

Baseline survey



- Trained field staff collected data for whole the study period.

Data collection

Quantitative:

- Socio-demographic data
- Antenatal care records
- Delivery, postnatal care and perinatal outcomes
- Unit costs of health services



Qualitative:

- In-depth interviews
- FGDs
- Observed closely (even they call back several times)



Verbal autopsy

Expected outcomes

- Neonatal mortality
- Preterm birth, low-birth weight
- Maternal mortality and morbidities
- Timely identification of maternal complications
- Frequency of antenatal care visits
- Accessibility to facility-based delivery
- Referral for identified complications
- Utilization of postpartum care
- Cost of delivery

Qualitative: Relationship between community people and health care facilities

- **Pregnant women and community health workers**
 - Regular consultation
 - Mobile message understanding from the staffs
 - Any health problems
- **Attitude on health facilities**
 - They prefer private hospitals
 - Regular check-ups



Conclusion and recommendations

- Participants are very keen to learn about their health care and future babies
- They expect such handbook to manage other diseases
- mHealth (using device) is very interest to them

Recommendations:

- Such handbook should be for All pregnant women Globally
- Need to include Universal Health Coverage on MCH as it's costly during the delivery
- “No one left behind from such handbook”
- Such book for other disease's care and management

Acknowledgments

- Participants of this study
- Japan Society of Promotion Science (JSPS), JAPAN
- National Center for Child Health Development (NCCHD), JAPAN
- Bridge of Community Development Foundation, BANGLADESH
- Staffs in the field

Thank you very much for
patience hearing

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STUDY PROTOCOL

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Mobile-health tool to improve maternal and neonatal health care in Bangladesh: a cluster randomized controlled trial

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Abstract

Background: In Bangladesh, the targets on reduction of maternal mortality and utilization of related obstetric services provided by skilled health personnel in Millennium Development Goals 5 remains unmet, and the progress in reduction of neonatal mortality lag behind that in the reduction of infant and under-five mortalities, remaining as an essential issue towards the achievement of maternal and neonatal health targets in health related Sustainable Development Goals (SDGs). As access to appropriate perinatal care is crucial to reduce maternal and neonatal deaths, recently several mobile platform-based health programs sponsored by donor countries and Non-Governmental Organizations have targeted to reduce maternal and child mortality. On the other hand, good health-care is necessary for the development. Thus, we designed this implementation research to improve maternal and child health care for targeting SDGs.

Methods/design: This cluster randomized trial will be conducted in Lohagara of Narail District and Dharmal of Dhaka District. Participants are pregnant women in the respective areas. The total sample size is 3000 where 500 pregnant women will get Mother and Child Handbook (MCH) and messages using mobile phone on health care during pregnancy and antenatal care about one year in each area. The other 500 in each area will get health education using only MCH book. The rest 1000 participants will be controlled; it means 500 in each area. We randomly assigned the intervention and controlled area based on smallest administrative area (Unions) in Bangladesh. The data collection and health education will be provided through trained research officers starting from February 2017 to August 2018. Each health education session is conducting in their house. The study proposal was reviewed and approved by NCCD, Japan and Bangladesh Medical Research Council (BMRC), Bangladesh. The data will be analyzed using STATA and SPSS software.

Discussion: For the improvement of maternal and neonatal care, this community-based intervention using mobile phone and handbook will do great contribution. Thus, a developing country where resources are limited received the highest benefit. Such intervention will guide to design for prevention of other diseases too.

Trial registration: [UMIN000025638](https://www.clinicaltrials.gov/ct2/show/study?term=UMIN000025638) Registered June 13, 2016.

Keywords: Cluster randomized trial, Bangladesh, Mobile health network, Home-based health record, Maternal and neonatal care, Rural community