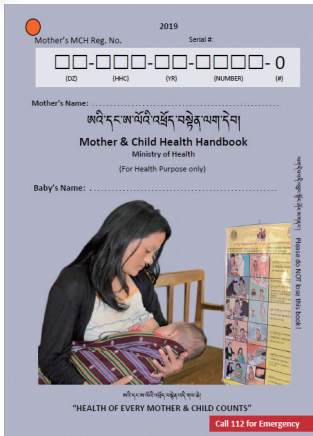




BHUTAN: Multiple functions of MCH Handbook in Bhutan



MCH Handbook, Bhutan, 2019

Background

The Royal Government of Bhutan provides free healthcare services across all levels—primary, secondary, and tertiary. Maternal and Child Health (MCH) services including antenatal care (ANC) and postnatal care (PNC) are provided free of cost through hospitals, primary health centres and outreach clinics. As part of its Reproductive, Maternal, Neonatal and Child Health Programme, the Ministry of Health (MOH) introduced the MCH Handbook in 2007, and revised it in 2014 and 2019. The 51-page MCH Handbook has three key functions for: i) record keeping, ii) health education, and iii) health management and information system.

MCH Handbook for record keeping

A pregnant woman is issued the MCH Handbook during her first antenatal contact with a health worker. After registration, health workers sit down with the client and explain the contents of the MCH Handbook with emphasis on key pages.

Antenatal and birth records:

The handbook has dedicated pages with extensive information regarding the client's demographic details, obstetric history, and other clinically relevant information. The handbook also contains a page for a detailed birth record.

Postnatal visits and vaccination:

Results of all PNC visits are recorded in the book with separate pages and tables to note the key events of each visit including physical exam findings for both mother and baby. The names of vaccines, which are offered in Bhutan as part of its Expanded Programme of Immunization and the dates on which the child receives them are recorded in the handbook.

Growth and development monitoring:

Physical growth is documented in the MCH Handbook through serial measurements of sex-specific weight, height and head circumference. The handbook also contains the "Bhutan Child Development Screening Tool (BCDST)" which records development milestones of the child.

As part of the BCDST, the MCH Handbook contains tables reflecting development milestones in four development domains (i.e., physical development, language and communication, cognition and

problem solving, and personal and social interaction) at nine different ages (i.e., 10, 14, 18 weeks, and 6, 9, 12, 18, 36, 48 and 60 months). A health worker assesses these domains through interview with parents and observation of child at appropriate ages. Any concerns for development delays are flagged and a follow-up plan noted on the same page.

MCH Handbook for health education

The MCH Handbook is a source of information and health education material. There are dedicated pages in both English and *Dzongkha*, the national language of Bhutan, with general advice for mothers, information on danger signs during pregnancy, and dental care for mothers during the antenatal period. Postnatal health information pages include advice on newborn care, danger signs in newborns, breastfeeding tips, expressing milk and cup feeding, recommendations on complementary feeding, child's development stages, dental care for children and key information on infant and child safety.

A cross-sectional study among 422 pregnant women during their ANC visits at the Gyaltuen Jetsun Pema Mother and Child Hospital, the National Referral Hospital in Thimphu, assessed the role of the MCH Handbook in improving knowledge of obstetric danger signs. Women aged 18 years and older coming for their ANC visits at the hospital were interviewed in May 2019–July 2020. Every third pregnant woman registered for their routine ANC visit for the day was invited to participate in the study. Data was collected through interviewer-administered questionnaire.

Knowledge of obstetric danger signs among the pregnant women surveyed was tested using two metrics: ability to spontaneously recall seven danger signs listed in the MCH Handbook, and their ability to identify the most appropriate action (from a provided list of options) when faced with one of the danger signs. A "knowledge score" was calculated out of 20 points by adding the number of danger signs recalled and the number of correct responses to the 13 questions. Knowledge was categorized as "good" (score $\geq 80\%$), "satisfactory (60–79%)" and "poor ($< 60\%$)" after converting it to percentage.



A health worker fills up the MCH Handbook during an antenatal care visit of a pregnant lady in Bhutan

Two-thirds of the interviewed women had satisfactory knowledge of danger signs and reading the MCH Handbook had significant association with the number of danger signs recalled. Almost 80% of the women (n=308) had read the MCH Handbook and nearly half of them (44%, n=165) cited the handbook as a source of information on obstetric danger signs (Figure 1). Among those women who had read the MCH Handbook, 199 (64.6%) women had "satisfactory" and 19 (6.2%) had "good" knowledge while among those who had not read the MCH Handbook, only 46 (40.3%) women had "satisfactory" and one woman had "good" knowledge of obstetric danger signs. Similarly, women who had read the MCH Handbook were able to recall two danger signs on average while those who had not read the MCH Handbook recalled only one danger sign on average.

MCH Handbook for health management and information system

Each handbook has a unique identification number that tracks the pregnancy through the *Druk* health management and information system.

Recording specialist referrals:

The MCH Handbook is also designed to screen, identify, and record any complications in both the mother antenatally and the mother/child postnatally. Although antenatal visits for most "low-risk" pregnancies are handled by health assistants, midwives, or nurses in the MCH Unit of each health centre, any referrals made to the doctor/obstetrician is recorded in the MCH Handbook with date and indication for referral. Similarly, if a child is referred to a pediatrician or other specialist health worker, these are also noted in the MCH Handbook.

Information for the Birth Register:

The MCH Handbook is expected to aid proper record keeping of MCH services in the country. The Birth Register, which is a vital recording tool for all births in the country, is completed with details of the birth as well as essential antenatal information transcribed from the MCH Handbook. A review of Birth Registers in the three tertiary hospitals of Bhutan in 2018 reported that 52.5% of women who received care for a delivery or miscarriage at the hospital had valid and complete antenatal records for the review. Of 868 reviewed births, 67% had a late first ANC visit (after 12 weeks), 1% did not come for ANC, and only half of them (51%) achieved the recommended eight ANC visits during pregnancy. As records in the health information system will be used for improvement of MCH services of the country, we can see that there is still room for improvement by using the MCH Handbook.

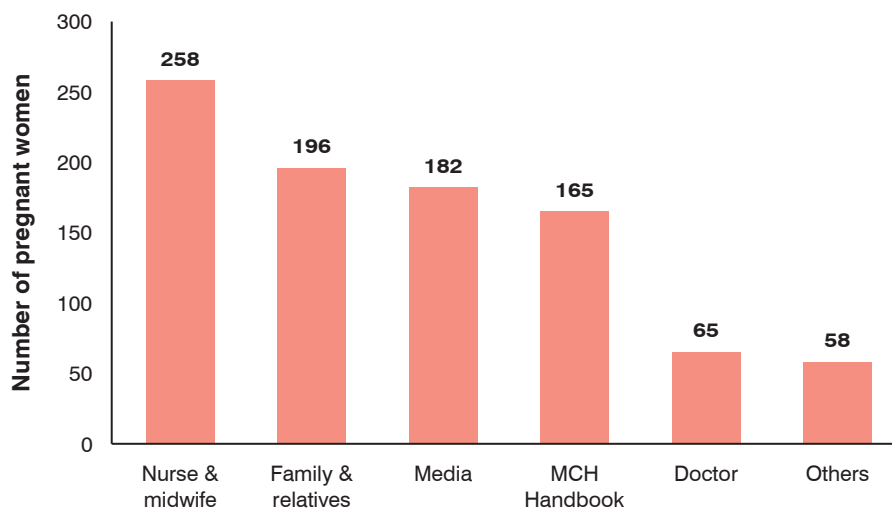
Conclusion

The MCH Handbook in Bhutan serves as a comprehensive document with multiple function for both health workers and clients alike. It acts as a useful source of information on pregnancy-related health issues for clients, and helps track and monitor a pregnancy and acts as a standard record-keeping document. The MOH should continue to have the handbook be used effectively and updated periodically for improved MCH service delivery.

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▲ Figure 1. Sources of information on obstetric danger signs reported by pregnant women attending antenatal clinic at Gyalsuen Jetsun Pema Mother and Child Hospital, Thimphu, Bhutan, May 2019–July 2020 (n=335)

Further readings:

1. Tamang ST, et.al. Knowledge and understanding of obstetric danger signs among pregnant women attending the antenatal clinic at the National Referral Hospital in Thimphu, Bhutan: a cross-sectional study. *BMC Pregnancy Childbirth* 2021; **21**(1).
2. Lethro P, et.al. BHUTAN: Development of the electronic MCH register linked to MCH Handbook. Vol 29. March 2019. Japan International Cooperation Agency, Tokyo.
3. Dorji T, et al. "If we miss this chance, it's futile later on"—late antenatal booking and its determinants in Bhutan: a mixed-methods study. *BMC Pregnancy Childbirth* 2019; **19**(1): 158.