

Importance of Expanding Midwifery-led Units and Midwifery Care in Reducing Maternal Deaths in Nepal

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It is important to collect good quality routine data to assess the quality and functioning of any health system. In the recent past, the challenge with assessing the quality of Nepal's maternity services has partly been due to the absence of appropriate data sets. The Nepal Demographic and Health Surveys (DHSs), conducted every five years or so, have been the best possible data source to make comparisons over time.¹ The recently (2022) published Nepal Maternal Mortality Study (NMMS) is the first integrated national effort by the Government of Nepal to estimate the country's maternal mortality ratio (MMR) and the causes of maternal morbidity and mortality.² This study collected data on live births and deaths of women of reproductive age, for the last 12 months preceding the 2022 national census. The NMMS identified 622 maternal deaths from November 2020 to November 2021, however the detailed analysis is limited to 611 cases (due to missing information).

According to the NMMS, Nepal's MMR was 151 per 100,000 live births in 2021. The majority of maternal deaths (57%) occurred in health facilities, and a further 17% died on the way to a health facility. Of most of the women who died during childbirth and in the post-partum period (i.e., not during pregnancy), 76% gave birth at a health facility.² Out of the women who died at a health facility, the majority (62%) gave birth at a government institution. About half (46%) of births among the deceased women were assisted by a doctor. Yet, only one-fifth (19%) were attended by a staff nurse or midwife, and 10% were attended by an auxiliary nurse midwife (ANM). Among the women who died, 56% had a vaginal delivery and 38% had a caesarean section.

Causes of Maternal Deaths

Of the total maternal deaths, 68% were determined to be due to direct causes and 32% due to non-obstetric complications. The leading direct cause was obstetric haemorrhage (26%), followed by hypertensive disorders in pregnancy, childbirth, and puerperium. The causes of many of these deaths were identified as preventable (that could have been avoided with timely intervention).

Although the study highlights the importance of strengthening measures to improve the quality of maternal health services in health facilities, it is not clear exactly how the quality of these services at health facilities could be improved.

The recent maternal mortality data are presented by the three phases of delay identified by Thaddeus and Maine.³ The report highlights that a very large proportion of women who died, namely 74% had experienced one of the three delays, and most worryingly, 17% had experienced all three delays.² This is not a recent issue as Milne *et al.*⁴ found eight years ago in their study of potential barriers, at a time when Nepal had no properly trained midwives yet. Milne *et al.*'s (2015) first Phase of Delays covered: 1) lack of awareness

that the facility/services exist; 2) women being too busy to attend; 3) poor services; 4) embarrassment; and 5) financial issues. Themes for the second Phase of Delay were: 1) birthing on the way; and 2) bypassing the facility in favour of one further away, whilst the final Phase involved: 1) the absence of an enabling environment; and 2) disrespectful care.

Health Facilities

The 2021 Nepal Health Facility Survey which assessed government health facilities reported that although 98% of health facilities offered antenatal care (ANC) services, just over half of these facilities provided resources for normal vaginal delivery and only 5% could perform caesarean deliveries.⁵

Although eight in 10 facilities that offer normal delivery services have emergency transport services available, only one-fifth of facilities had all the medicines essential for normal vaginal delivery.⁵ A recent study by Tamang *et al.*⁶ reminded us that the availability of drugs and ambulances at health facilities can be a problem in Nepal. They conducted a cross-sectional study in Jumla district covering all 31 state health facilities to assess the availability of maternal and neonatal health services including appropriate workforce and access to essential medicines. Tamang and colleagues found that the majority of health facilities (21 out of 31) had experienced shortages of essential medicines within the three months prior to their study. Moreover, 20 facilities or their catchment communities did not have emergency ambulance transport for women and newborns.

Skilled Birth Attendants and Midwives

Midwifery and midwives are very important in achieving the targets related to reproductive, maternal, newborn and child health.⁷ Evidence on effective human resources for health (HRH) intervention for improved maternal health outcomes was lacking in 2016.⁸ Only recently has Nepal seen the first midwives graduating from its new midwifery colleges.⁹ More research in midwifery is necessary, along with national investment in midwives, their work environment, education, regulation, and management, that can improve the quality of care.⁷ Research has pointed out that midwifery care can have the greatest effect on preventing several maternal deaths, stillbirths, and neonatal deaths when provided with a functional health system with effective referral and transfer mechanisms to specialist care.¹⁰ As recommended by the International Confederation of Midwives (ICM), midwives can substantially help to reduce maternal and neonatal mortality and stillbirths in low and middle-income countries given they are equipped with skills and competencies.¹¹ In line with this, Nepal started its midwifery education programme in 2016 as per the long-term strategy of the Skilled Birth Attendant (SBA)

Policy 2006.¹²

Learning from Other Countries

Nepal needs to learn from the successful experience of establishing a new midwifery profession in Bangladesh.¹³ Bangladesh introduced its cadre of professional midwives in 2008 and since then 120 midwifery education programmes have been established across the country. Whereas in Nepal, only in 2020 did nine professional midwives graduate from the National Academy of Medical Sciences (NAMS) in Kathmandu.¹⁴ In terms of the number of midwives, Nepal is far behind Bangladesh. If Nepal aims to reach its Sustainable Development Goal (SDG) of decreasing the MMR to 70 deaths per 100,000 live births by 2030, major interventions such as expanding midwifery services throughout the country are essential.

Recently, Erlandsson *et al.*¹⁵ reported that Bangladesh has trained some 7,000 midwives and that more midwifery educators are needed to serve the country's population of 140 million. Midwives are deployed by 95% of government subdistrict hospitals, 50% of which have at least four midwives, and these midwives are in charge of 90% of the maternity wards and attend 75%-85% of the births. Professional launch of midwives, the roll-out of an education program aligned with the ICM, national deployment, enabling environments, and professional association all helped in establishing a successful midwifery cadre in Bangladesh and show the possibility of other low- and middle-income countries (LMICs), such as Nepal, to introduce a global standard for the midwifery profession.¹³

Nepal needs to consider expanding its midwifery services throughout the country by training and recruiting more midwives, especially in the rural areas of Nepal. In this context, lessons from the experiences in Bangladesh in scaling up and expanding the midwifery services in the health care system may prove to be useful.

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ABBREVIATIONS

ANM	Auxiliary Nurse Midwife
DHS	Demographic and Health Survey
HRH	Human Resources for Health
ICM	International Confederation of Midwives
LIMCs	Low- and middle-income countries
MMR	Maternal mortality ratio
MoHP	Ministry of Health and Population
NAMS	National Academy of Medical Sciences
NMMS	Nepal Maternal Mortality Study
SBA	Skilled Birth Attendant
SDG	Sustainable Development Goal

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