



Maternal Health Task Force



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Postnatal Care in Nepal

**Components of care, implementation challenges,
and success factors**

OVERVIEW OF NEPAL

Nestled between India and China in the Himalayas, Nepal is a small, landlocked nation with about 30 million inhabitants. Its geographic location means that Nepal is particularly impacted by the effects of climate change and is vulnerable to earthquakes.¹ Administratively, the country is divided into 14 zones and 75 districts, which are further divided into village development committees (rural) and municipalities (urban). Kathmandu is the capital city and principal urban centre.²

Figure 1: Map of Nepal^A



Nepal has undergone significant political changes in the last two decades which have influenced the accessibility and proliferation of its social welfare programs. While Nepal has officially been a democratic republic since mid-2008, it still does not have a permanent constitution, which has limited the government's effectiveness.³

Historical and Political Context

Nepal has been characterized by political instability since becoming a democracy in 1990. Since this time, the country has had 20 different governments.⁴

A monarchy for most of its history, a cabinet system of government was instituted in 1951. In 1990, a constitutional monarchy with a multiparty democracy was established. However, dissatisfaction with the lack of progress expected from a democratically-elected government grew within the population. A decade-long conflict ensued from 1996 between the Nepal Communist Party (Maoists) and government forces, culminating in the King dissolving the government and assuming power in 2005. After weeks of mass protests, parliament was reconvened in April 2006 with a peace agreement between the seven-party opposition and the Maoists, along with an interim constitution. In 2008, the monarchy was obliterated, and the country was declared to be secular and federal.² However, the Constituent Assembly failed to draft a permanent constitution by their provisional deadline of May 2012.⁴

Economy

In Nepal's post-conflict transition phase, economic growth has been hampered by political uncertainty; however, GDP growth rose from 3.5% in 2010/2011 to 4.9% in 2011/2012. Inflation in 2012 was at a three-year low at 7%.⁵

In addition to the political instability, other factors including topography, limited natural resources, rapid population growth, and reliance on traditional agriculture have also been major challenges to economic growth. The hilly and mountainous terrain, lack of modern transport in many areas, low road density and limited communications infrastructure means that much of the country remains inaccessible.⁶

Table 1: Socioeconomic and demographic indicators

INDICATOR	NEPAL
Population (millions) ⁹	27.47
Urban population (%) ⁷	17.3
Population under 15 (%) ⁹	35.58
Population median age (years) ⁹	22.02
Household size (mean) ²	4.4
Human Development Index (HDI) ⁷	0.463
Gross national income (GNI) per capita (US\$) ⁵	700
Gini coefficient ⁷	32.8
Population below national poverty line (%) ⁵	25.2
Primary school enrolment, net (% / % female) ⁵	97.4 / 50.4
Years of schooling (mean) ⁷	3.2
Literacy rate, adults ≥15 (%) ⁹	60.3
Access to improved water source (% households) ²	88.9

Nepal's human development index (HDI) in 2012 ranked 157th out of 186 UN member states.⁷ Although it is one of the poorest countries in the world, the percentage of people below

the international poverty line (earning less than \$1.25 per day) has been halved in just seven years.⁴ 80% and 43% of people have access to an improved drinking water source and sanitation facilities, respectively.⁸

Demographics

The population of Nepal has more than doubled over the last four decades. The average population density is 181 people per square kilometre, but population density varies widely across the country. The capital of Kathmandu has the highest density at 4,408 while Manang in north central Nepal has the country's lowest of 3 people per km². Nepal's population is predominantly rural despite increasing urbanisation, and 76% of households rely on agriculture for their livelihoods.² Some key socioeconomic and demographic indicators are summarized in Table 1.

Status of Women

Nepal ranks 102nd out of 148 countries in the Gender Inequality Index and 121st out of 136 countries in the Gender Gap Index.^{7,10} Women lag behind men when it comes to educational attainment, literacy and exposure to mass media. The literacy rates for women and men are 66.7% and 87.0%, respectively. Among married adults, 76.8% of women are employed versus 98.2% of men. Women primarily work in the agricultural sector and few have skilled jobs. Furthermore, 61% of married women are not paid in any way for their work, while this figure is just 12% for men.²

Nepal's Three-Year Interim Plan (2010/2011–2012/2013) included promotion of women's empowerment, gender equality, and elimination of gender-based violence. As of the 2008 election, women make up over 30% of representatives in parliament.¹¹ And despite the gender inequalities present in Nepal, almost all women consider themselves to be sole or joint decision-makers in their households.² At the same time, a key decision-maker in Nepali households is the mother-in-law, who may have decision-making power over the woman regarding the seeking of antenatal care or in the event of an obstetric emergency.¹²

HEALTH IN NEPAL

Average life expectancy has increased significantly, from about 41 years in 1971 to 55 years in 1991 to 69 years most recently in 2011.² Communicable diseases still constitute the majority of the disease burden, but the increasing contribution of lifestyle-related non-communicable diseases is significant.⁸ Nepal's total expenditure on health was 5.4% of their GDP in 2011.⁹ Key health indicators are summarized in Table 2.

Health system

The Ministry of Health and Population oversees health care in the public sector, through Regional Health Directorates and District Health Offices. Public health services are delivered in central,

Table 2: Health and epidemiologic indicators

INDICATOR	NEPAL
Average life expectancy at birth (years) ⁷	69.1
Physicians (per 1,000 population) ⁷	0.2
Midwives, nurses, and doctors (per 1,000 population) ¹³	0.7
HIV prevalence, adults 15–49 (%) ⁹	0.3
Anti-retroviral therapy coverage in people with advanced HIV (%) ⁹	26–38
Anti-retroviral therapy coverage in pregnant women living with HIV (%) ⁹	7–29

regional, and sub-regional, zonal and district hospitals, primary care centres, health posts and sub-health posts.¹⁴ Health posts and sub-health posts, which are the most peripheral health facilities in Nepal, have a catchment area of 5,000 to 10,000 people. These posts are staffed by paramedics and community health workers (CHWs), with support from female community health workers (FCHWs) who are unpaid volunteers working about six hours per week.¹⁵ FCHWs have an important role in acting as a bridge between the community and health facilities.

The expanding private sector consists of for-profit and not-for-profit institutions. Two-thirds of the country's hospital beds and three-quarters of its health laboratories are in private health care facilities. However, minimal regulation has resulted in varying quality and pricing of services.¹⁴

In recent years, Nepal has taken several steps to increase access to health care across the country. In 2006, some services including emergency and inpatient care at district hospitals and primary health care centres (PHCCs) were made freely available for various target groups, including the poor, the elderly, and handicapped persons.¹⁶ The following year, Nepal's 2007 interim constitution declared health care to be a basic human right and the government made basic services at PHCCs and health posts free of charge for all.¹⁷ By 2009, institutional deliveries were provided for free to all Nepali women.¹⁶ However, overall out-of-pocket payments remained high, making up nearly 60% of total health expenditure.¹⁷ The Nepal Health Sector Programme II 2010–2015 prioritises strengthening and expanding equitable access and utilisation of health services for disadvantaged groups.¹⁸ Although the policy also addressed strengthening human resources, the mid-term review found that this was an area that showed limited progress.¹⁹

Since 2003, the government has implemented community-based health insurance (CBHI) in six pilot schemes. Additional

CHWs and FCHWs in Nepal²

Maternal and Child Health Workers

- Training duration: 6 months
- Placement: sub-health post, health post, primary health centre
- Responsibilities: first aid, ante-natal and postnatal care, family planning

Village Health Workers

- Training duration: 6 months
- Placement: Placement: sub-health post, health post, primary health centre
- Responsibilities: first aid, immunisation, management of diarrhoea and pneumonia

Female Community Health Workers

- Training duration: 18 days
- Placement: based on terrain and population density
- Responsibilities: education and health promotion (delaying marriage and childbearing, family planning,antenatal/delivery/postnatal/newborn care, immunisation), management of diarrhoea and pneumonia

CBHI schemes which are run by non-governmental organizations and cooperatives are also in existence. In January 2012, a directive from the Prime Minister's Office instructed the Ministry of Health to formulate a national health insurance policy. However, a comprehensive review in December 2012 by the Department of Health Services found that the scope and impact of the current CBHI schemes was still limited.²⁰ In March 2013, the Ministry of Health began a pilot of a national insurance programme in five districts.²¹

Maternal Health

The Nepal Safer Motherhood Project was initiated in 1997 to increase availability of and access to quality obstetric services

in nine selected districts. This highlighted the importance of skilled birth attendance and emergency obstetric care, becoming the foundation for the Support to Safer Motherhood Programme in 2005. The National Safe Motherhood and Newborn Long Term Plan 2002–2017 shifted the focus from subnational projects to a national system strengthening approach.²²

The current Safe Motherhood Plan aims to increase access to quality maternal and newborn health services in an equitable manner.¹⁴ For the first time in 2006, a policy endorsing development of professional midwives was introduced, making way for in-service training for skilled birth attendants. 4500 skilled birth attendants had been trained by mid-2013.²³ However, there are still no “direct-entry midwifery” education programs for people without previous birth attendant background, no midwifery regulatory body, and no protected title or official definition for the profession.¹³

There have been several incentive schemes to increase uptake of maternity care services. The Maternity Incentive Scheme (2005) provided cash incentives to cover transportation for women to deliver in public and certain private health facilities depending on ecological region: 1500 rupees for high mountain districts, 1000 rupees for hill districts, and 500 rupees for *terai* (plain) districts.¹⁷ It also provided cash incentives for trained providers to assist in institutional or home deliveries, as well as cash incentives to health facilities in 25 districts with low Health Development Indices districts. This scheme was upgraded to the Aama Programme in 2008, which made deliveries in government-run birthing centres free of charge for all, in addition to issuing cash incentives to both patients and providers.²⁴ In 2009, the Safe Motherhood Programme also began providing 400 rupees to women who received at least four antenatal care visits and at least one postnatal care visit.²⁵

Maternal mortality in Nepal remains high but decreased substantially between 1996 and 2011, from 538 to 170 deaths per 100,000 live births. This decrease was largely due to improvements in maternal health services and increasing recognition of the importance of skilled birth attendants.² Efforts have also been made to expand 24-hour emergency obstetric services, to encourage women to give birth at health facilities where delivery is free of charge, to improve physical accessibility of services, and to raise awareness of pregnancy complications. This decline in maternal mortality means that Nepal has already achieved Millennium Development Goal (MDG) 5(a), to reduce maternal mortality by three-quarters, and is actually on track to achieve most of its MDG targets.²³ However, child mortality has not seen the same level of improvements, and two-thirds of infant deaths occur in the neonatal period.⁸

Some maternal and child health indicators which are indicative of access to health services are summarized in Table

3. Skilled birth attendance has increased five-fold over the last twenty years,²³ but still only 36% of births were attended by a skilled provider between 2006 and 2010. Furthermore, this figure hides important discrepancies throughout the country between urban and rural areas, social and age groups, as well as across ecological regions. For example, only 10% of women in the lowest wealth quintile had a skilled birth attendant, compared to over 80% in the highest wealth quintile. Additionally, skilled birth attendance varies depending on geography; according to the most recent DHS data, 19% of women living in mountainous regions and 43% of those living in *terai* regions, respectively, gave birth with a skilled attendant.²

Table 3: Maternal and child health indicators

INDICATOR	NEPAL
Total fertility rate (live births per woman) ⁹	2.39
Maternal mortality ratio (per 100,000 live births) ⁹	220
Under-five mortality rate (per 1,000 live births) ⁷	50
Infant mortality rate (per 1,000 live births) ⁷	41
Neonatal mortality rate (per 1,000 live births) ²	33
Immunisation coverage, all basic, among 1-year-olds (%) ²	87.0
Contraception prevalence rate (% of married women 15–49) ²	49.7
Unmet need for family planning (%) ⁹	27.0
Age at first birth (median, women 25–49) ²	20.2
Antenatal care coverage, at least 1 visit / 4 visits ^a (%) ⁹	58.3 / 50.1
Births attended by skilled provider ^b (%) ⁹	36.0
Births in a health facility (%) ²	35.3
Birth weight <2500g (%) ²	12.4
Births by Caesarean section (%) ²	4.6
Postnatal care visit within 2 days of birth (%) ²	30.1

Uptake of maternal health services depends on several factors including the woman's age, level of education, employment and income, socio-economic status, urban or rural residence, and geographic location. In addition, women who have more than three living children have been found to be less likely to use maternal health services.²⁶ Culturally, many feel that pregnant women need only go to hospitals when complications occur. Among those women who give birth at home, delivery alone or with family members is more common than delivery with a traditional birth attendant.¹⁴

POSTNATAL CARE IN NEPAL

Postnatal care (PNC) is an important part of maternal care, as serious and life-threatening complications can occur in the postpartum period, even in a woman who had an uneventful pregnancy and delivery. PNC is also crucial for detecting and managing neonatal problems. Postnatal care in Nepal is historically uncommon, and most mothers and newborns make their first postnatal contact with health services at the time of the baby's first immunisation at 6 weeks postpartum.²⁷ The period following delivery represents a source of significant mortality for women and their babies. Postpartum haemorrhage is in fact the most common overall cause of maternal death in Nepal,²³ and although under-five mortality has been declining between 2006 and 2011, neonatal mortality has remained constant.²⁸

The Ministry of Health and Population recommends at least three postnatal visits at specific times: within 24 hours of birth, on the third day of the newborn's life, and on the seventh day of life. According to DHS, overall about 45% of Nepali women and 32% of their babies receive some form of PNC in the first seven days after delivery; this care is most often provided by a nurse or midwife.² The strongest predictor of receiving a postnatal check-up is having delivered in a health facility. Other factors that make women more likely to receive PNC include living in urban settings, residing in a *terai* location rather than hill or mountain areas, higher socio-economic status and higher level of education.²

a: Due to data limitations, it is not possible to determine the type of provider for each visit. Content of visit is not measured.

b: 'Skilled provider' is defined by the WHO as a doctor, nurse or midwife trained in life-saving obstetric care, as well as in providing care during pregnancy, childbirth and the postpartum period.⁹

Several factors have been shown to affect uptake and utilisation of primary care in Nepal. Barriers to care include lack of awareness of the need for PNC, increased distance to a health facility, lack of transport or adequate roads, absence of skilled health workers in the community, financial barriers, and low women's empowerment and decision-making ability,

particularly regarding mobility or spending.²⁹ Mothers-in-law often have decision-making power regarding whether women receive antenatal care, which in turn affects utilisation of PNC; women who receive ANC are substantially more likely (OR = 24.6, 95% Confidence Interval 3.39 to 500.92) to return for postnatal care.²⁹ One study exploring the impact of male involvement found that women assigned to receive antenatal education with their husbands were more likely to attend a postpartum visit within two weeks of delivery than women receiving no education (RR = 1.29, 95% CI 1.04, 1.60) or women attending antenatal education alone (RR = 1.25, 95% CI 1.01, 1.54).³⁰ Type of delivery care provider also plays a factor; women who gave birth with a midwife as the primary provider were more likely to receive postnatal care at a hospital clinic than those women attended by a physician (RR = 1.3, 95% CI 1.18–1.51).³¹ Furthermore, cultural beliefs and some sociocultural practices like maternal seclusion for two to four weeks post-delivery represent additional barriers to seeking and accessing care.²⁹

In recent years, Nepal has had several initiatives focused on increasing access to high-quality postnatal care. Many have been supported by the Government of Nepal, while others are run by private or multilateral organizations. Some of the flagship programs and their impact on maternal and newborn health outcomes are described below.

Community-based Neonatal Care Package (CB-NCP)

The National Neonatal Health Strategy was launched in 2004 by the Ministry of Health to address the high neonatal mortality rate.³² In 2007, an assessment of newborn health in Nepal found that although individual health-promoting activities existed, an integrated comprehensive programme was missing. This led to the development of the Community-Based Newborn Care Package (CB-NCP) that same year, which was piloted in ten districts starting in 2010 through a partnership between the Government of Nepal, Save the Children, Care, Plan, and UNICEF.^{33,34} The programme relies on mobilising existing Female Community Health Volunteers (FCHVs) to expand neonatal health services at the community level, a method which had already proven successful in child health interventions like the Community-Based Integrated Management of Childhood Illness (CB-IMCI), the Vitamin A Supplementation (VAS) Programme, and the Expanded Programme on Immunisation (EPI).³³ The CB-NCP programme works to change health-related behaviours in the community, promote institutional deliveries or clean, hygienic home births, and provide postnatal care visits at home on days 1, 3, and 7 of life.³⁴ It also teaches mothers about Kangaroo Mother Care for low birth weight babies and trains FCHVs in managing and preventing infections and other essential newborn care.³⁴ The FCHVs are key players in linking the community with health facilities, to which they

refer more complicated cases that cannot be managed directly within the community.³³ Particularly when birth has occurred at home, the early home visit and basic interventions which FCHVs provide shortly after birth are crucial for preventing severe morbidity and mortality for both mother and newborn.³⁵

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The pilot of CB-NCP aimed to determine the programme's effectiveness and scalability to guide further expansion. Evaluation included monitoring data, comparison of baseline and endline indicators, and qualitative data from community members, FCHVs, and stakeholders. Overall, midterm reviews showed promising results; but while coverage and utilisation of newborn care services improved, quality of data and service provision was questioned.³³ Data from Bardiya, one of the pilot districts, demonstrated an increase in the percentage of women receiving a postnatal check-up within two days of delivery from 65% at baseline to 94% after 18 months.³² Across all of the pilot districts, the percentage of women who were informed of pregnancy complications during antenatal care increased from 75% to 96% between baseline and endline; women were also more likely to have a birth plan (70% vs. 97%).³⁴ Although assessment of sustainability is ongoing, the Ministry of Health has been expanding the CB-NCP since 2011, and expects the programme to be scaled up nationally by 2015.³⁴

Nepal Family Health Program II (2007–2012)

The Nepal Family Health Program II (NFHP II) was a five-year bilateral project funded by the United States Agency for International Development (USAID). The project was initiated in 2007 by JSI under supervision from the Ministry of Health and Population, in order to increase access to maternal and child health services in rural areas. The Program focused on improving the commodity supply chain, increasing access to family planning and basic health services, improving maternal and child health outcomes, and improving provider skills. Through its various collaborations, the NFHP II increased the proportion of women receiving postpartum care in target areas from 41% in 2008 to 55% in 2011.²⁸

POST-PARTUM FAMILY PLANNING SERVICES

The NFHP II recognized the significant need for post-partum family planning (PPFP) in Nepal. Much of the unmet need was due to poor knowledge of PPFP needs among care providers in Nepal. Poor coordination of family planning services, ANC providers, maternity wards, and postnatal care providers also contributed to the high unmet need for PPFP.³⁶

The NFHP II worked with the Ministry of Health and Population's Family Health Division to develop training

materials for a three-day workshop on PPF. The workshop aimed to teach providers to promote healthy timing and spacing of pregnancy, increase their knowledge of contraceptive methods appropriate for postpartum and post-abortion women, and work to better integrate services among different types of providers in different facilities.³⁶

The training workshop was piloted in 2008 and 2009 in ten districts, reaching 240 providers. Nursing staff and medical officers alike attended the training sessions, and reported increased knowledge of postpartum family planning needs after the workshop. In addition, statistics from the pilot hospitals showed that after the training, provision of PPF increased to 44% of new mothers compared with just 4% before the training. Uptake of family planning services saw a similar increase, from 20% to 31% for postpartum women and from 61% to 74% for women receiving post-abortion care.³⁶

COMMUNITY-BASED DISTRIBUTION OF MISOPROSTOL TO PREVENT PPH

In settings in which skilled birth attendants are not present and oxytocin is unavailable, misoprostol (600 µg orally) administration by community health workers and lay health workers is recommended for the prevention of PPH.³⁷ Like the later CB-NCP, the NFHP II relied on Female Community Health Volunteers (FCHVs), already trusted members of their communities, to maximize the reach and acceptability of misoprostol. FCHVs were trained to disseminate accurate, quality information on misoprostol in women's groups and home visits. Misoprostol was promoted as *Matri Surakchya Chakki* or 'mothers' safety pills' and was distributed directly to women in their eighth month of pregnancy.³⁸ FCHV training for the NFHP II lasted seven days, three of which focused on misoprostol.³⁹

Endline data showed that 73% of recently delivered women received misoprostol, of whom 74% used it. This resulted in significant increases in uterotonic coverage among women with vaginal births from 11% to 74%, with the most dramatic changes seen among home deliveries. Importantly, observed maternal mortality (72 per 100,000) was significantly lower than the expected mortality (281 per 100,000) and also lower than non-users (292 per 100,000).³⁹ Following the success of this intervention, the Government of Nepal expanded community distribution of misoprostol, targeting remote areas with low rates of institutional delivery, with the aim to scale up nationally.³⁸

Birth Preparedness Package (BPP)

Nepal's Safer Motherhood Project, which ran from 1997 until 2004, was a DFID-run programme which included several interventions to improve the quality of maternal health care and reduce maternal deaths.⁴⁰ One such initiative was Birth Preparedness Packages (BPPs), which encouraged women and

their families to plan for their pregnancy, delivery, and the postnatal period, allowing them to deal with an emergency effectively if one does occur. The programme provided families with information about what to do at each stage of a normal pregnancy and labour, helped identify danger signs, and encouraged families to save money to cover normal births and possible complications.⁴¹ BPPs relied on key messages and behaviour change via community health volunteers, in order to address the 'three delays': delay in recognising a problem, delay in seeking care, and delay in receiving care at a facility.⁴²

SNL supported a district-wide field trial of the BPP in the Siraha district between 2002 and 2004 using a birth-preparedness/complication-readiness (BP/CR) matrix. 54% of pregnant women were exposed to BPP messages, and knowledge of use of health services and emergency-preparedness increased significantly. Receipt of PNC within the first week after delivery increased from 11% at baseline to 25%. However, skilled birth attendance and use of emergency obstetric care remained unchanged. The authors concluded that BPP is feasible to implement but that it needed to be integrated into the national Safe Motherhood Programme.⁴²

Many postnatal programmes have been scaled up to a national level; thorough, high-quality care guidelines, community buy-in, and an adequate number of appropriately-trained personnel have proved crucial to success.

Indeed, by 2009 the Government of Nepal had rolled out a revised version of BPP in all 75 districts; the flip chart for community education and the birth preparedness card for pregnant women were updated to better reflect the continuum of care and emphasise the importance of postnatal care for both the mother and newborn.⁴³ The government integrated the community-based provision of misoprostol with the BPP in 2010, and organized several 'training of trainers' sessions to provide up-to-date skills for the FCHVs.⁴⁴ The fiscal year 2010/2011 saw training on the BPP and misoprostol distribution for FCHVs in 25 districts, and completion of the national roll-out.⁴⁵

Nepal's success with reducing maternal mortality is linked to the government's political will regarding maternal health, its promotion of postnatal care, and its focus on community-based delivery of care. Both demand- and supply-side interventions have played important roles in improving maternal and newborn health throughout the country. The prominence of maternal health in Nepal's national health planning documentation has resulted in a substantial attention from programmes dedicated to this area. Community-based

programmes encourage familial acceptance of and participation in care, and promote care-seeking behaviour. Many postnatal programmes have been scaled up to a national level; thorough, high-quality care guidelines, community buy-in, and an adequate number of appropriately-trained personnel have proved crucial to success.

INSIGHTS FROM MATERNAL HEALTH PROGRAMMES IN NEPAL

- **Expansive health cadres improve access.** Community-based programs have been successful largely due to Nepal's extensive network of peripheral health facilities, Community Health Workers, and Female Community Health Volunteers.³² This allows the postnatal care programs to make use of existing human resources and bridge the gap between community and health facilities, especially among disadvantaged and hard-to-reach rural populations.
- **Remuneration must reflect responsibilities.** Increasingly high demands and continually greater expectations have increased frustration among primary health care workers, particularly with their level of compensation, which has caused some programmes to provide additional incentives in cash or in kind.³²
- **Centralised programmes improve synchronicity.** Central-level committees which oversee the scaled-up postnatal care programmes are vital for coordination between districts.²⁸
- **Independent women are healthy women.** Empowering women and improving education for girls has been shown to positively impact maternal and child health.⁴⁶
- **Strong advocates help leaders drive change.** A country's political context and commitment to targets such as the MDGs is crucial to developing programs which can have true impact on maternal and child health outcomes. This requires collective action by policymakers, programme developers, and community leaders as well as the use of contextually relevant solutions. Nepal's political and programmatic actions have underlined the country's prioritisation of maternal and neonatal health.⁴⁷

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