

# Policies and actions to reduce maternal mortality in Nepal: perspectives of key informants

Rajendra Karkee <sup>a</sup>, Kirti Man Tumbahanghe,<sup>b</sup> Alison Morgan <sup>c</sup>, Nashna Maharjan,<sup>d</sup> Bharat Budhathoki,<sup>e</sup> Dharma S. Manandhar <sup>f</sup>

a Associate Professor, School of Public Health and Community Medicine, BP Koirala Institute of Health Sciences, Dharan, Nepal. *Correspondence:* rkarkee@gmail.com

b Consultant, Mother and Infant Research Activities (MIRA), Kathmandu, Nepal

c Associate Professor, Nossal Institute for Global Health, University of Melbourne, Melbourne, Australia

d Research Officer, Mother and Infant Research Activities (MIRA), Kathmandu, Nepal

e Field Manager, Mother and Infant Research Activities (MIRA), Kathmandu, Nepal

f Executive Director, Mother and Infant Research Activities (MIRA), Kathmandu, Nepal

**Abstract:** *Nepal made impressive progress in reducing maternal mortality until 2015. Since then, progress has stagnated, coinciding with Nepal's transition to a federation with significant devolution in health management. In this context, we conducted key informant interviews (KII) to solicit perspectives on policies responsible for the reduction in maternal mortality, reasons for the stagnation in maternal mortality, and interventions needed for a faster decline in maternal mortality. We conducted 36 KIIs and analysed transcripts using standard framework analysis methods. The key informants identified three policies as the most important for maternal mortality reduction in Nepal: the Safe Motherhood Policy, Skilled Birth Attendant Policy, and Safe Abortion Policy. They opined that policies were adequate, but implementation was weak and ineffective, and strategies needed to be tailored to the local context. A range of health system factors, including poor quality of care, were identified by key informants as underlying the stagnation in Nepal's maternal mortality ratio, as well as a few demand-side aspects. According to key informants, to reduce maternal deaths further Nepal needs to ensure that the current family planning, birth preparedness, financial incentives, free delivery services, abortion care, and community post-partum care programmes reach marginalised and vulnerable communities. Facilities offering comprehensive emergency obstetric care need to be accessible, and in hill and mountain areas, access could be supported by establishing maternity waiting homes. Social accountability can be strengthened through social audits, role models, and empowerment of health and management committees.* DOI: 10.1080/26410397.2021.1907026

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## Introduction

Nepal is predominantly a patriarchal country with high gender disparity, early marriage of girls, and low utilisation of health facilities for births.<sup>1,2</sup> Nepal identified safe motherhood as a national priority with the launch of the National Safer Motherhood Programme in 1998.<sup>3</sup> The Safer Motherhood Programme has attracted international donor support for programmatic activities and infrastructure development with formulations of several strategies.<sup>4</sup> Interventions on the supply side included improving the skills

and competencies of health workers, increasing health facility resources, addressing accessibility issues through improving geographical coverage of services and reducing the distance to health facilities, provision of emergency referral vehicles, establishing maternity waiting homes, supporting 24-hour availability of health facilities, promoting social and health system accountability, and ensuring the quality of protocols and clinical guidelines. Interventions on the demand side included community health education and promotion, incentives to compensate for transport

or lost working time, establishing an emergency loan fund, and organising community transport.<sup>5</sup>

Nepal adopted many of these interventions targeted at both the supply and demand sides, including a national programme to scale-up the number of skilled birth attendants (SBAs) and birthing facilities, free maternity care, monetary incentive schemes for antenatal care (ANC) visits and delivery at a health facility, and the national scale-up of the birth preparedness and complication readiness programme.<sup>6</sup> As a result, there have been impressive increases in institutional deliveries between 1990 and 2015. According to the National Demographic Health Surveys, the proportion of institutional deliveries increased from 8% in 1996 to 18% in 2006 and 57% in 2015. The maternal mortality ratio (MMR) was estimated as 539 per 100,000 live births in 1996, 281 in 2006, and 239 in 2015.<sup>1,7</sup> This trend indicates that there has been slow progress between 2006 and 2015 in reducing maternal mortality in Nepal, despite the steep increase in institutional deliveries during the same period.

The stagnation suggests that the existing policies and their implementation deserve further examination to assess whether they address the current context. It is essential to assess the complex interplay between policymaking, supply side changes, and responses at the household level that affect quality and access to maternal health care in Nepal. In particular, the policies and interventions may need revisiting as causal factors shift from more distal (e.g. community understanding of the need for facility-based births) to more proximal (e.g. quality-related health system factors or accessibility issues) factors. Nepal has recently moved to a federal structure, with the devolution of health system management to newly formed provincial and municipal governments. Local governments (rural and urban municipalities) have been authorised to adapt, develop and implement health policies and interventions, coordinating with local health offices and health facilities. The local adaptation of health policies and interventions demands increased local government capacity and accountability for maternal health care in this new decentralised Nepal.<sup>8</sup> Maternity services are provided by health posts, primary health care centres, and district hospitals, which are monitored by rural and urban municipalities in association with district health offices.

There is now a need to understand and identify corrective policies and actions, to increase

maternity service utilisation and further reduce maternal mortality in Nepal. This article aims to present the perspectives of key informants on policies responsible for the reduction in maternal mortality, reasons for the stagnation in maternal mortality since 2006, and interventions that they believe are needed to scale up in Nepal for a faster decline in MMR. This study's outcomes are expected to help the policymakers at the central, provincial, and local levels to prioritise actions and policies for further reduction of maternal mortality in Nepal.

## Methods

### Study design and data collection

This article is a part of a larger mixed-design study to understand the factors contributing to maternal mortality in Nepal. One of the objectives of this study was to identify corrective policies and actions required to prevent avoidable maternal deaths in Nepal. We identified key informants in the maternal health sector in Nepal and approached them for interviews. We conducted semi-structured key informant interviews (KII) with 36 key informants, including representatives from donor agencies, maternal health experts working in the governmental and non-governmental sectors, and maternal health focal persons from federal, provincial, and local levels. Service providers (heads of Gynaecology and Obstetrics and Nursing In-charges of maternity wards) were also interviewed (Table 1).

The interview guide contained questions on supply- and demand-side interventions and existing maternal health policies and programmes of Nepal, including the following themes: (i) effective policies and plans to increase maternity service utilisation; (ii) essential reasons behind the stagnation of maternal mortality in Nepal; (iii) specific interventions that need to be prioritised; (iv) ways to improve social and health system accountability in Nepal; and finally (v) any corrective or innovative policies. Three of the authors who have long experience in qualitative enquiry in maternal health conducted the KIIs in the Nepali language by visiting the participants in their workplaces. Interviews were digitally recorded.

Ethical approval for this study was obtained from the Nepal Health Research Council (Reg. no. 87/2019). Written informed consent was obtained from all key informants, including for audio-recording and using excerpts in

**Table 1. Characteristics of key informants (n = 36)**

Key informants	Number (n)
<i>Maternal Health Experts (MHE)</i> Experts who have long experience of working in key roles in safe motherhood programmes in both governmental and non-governmental organisations	7
<i>Representatives of Donor Organisations (DO)</i> Representatives of major donor organisations involved in supporting, developing and designing of safe motherhood programmes in Nepal	5
<i>Representatives of Ministry of Social Development (MSDP)</i> Representatives from Ministry of Social Development at provincial level responsible for making provincial level health policy and programmes (Provinces 2, 5, and 6)	3
<i>Gynaecologist of Regional Hospitals (RH)</i> Head of gynaecology departments of provincial level hospitals responsible for providing maternal health services.	3
<i>Health Officers (HO)</i> District Health Officers from the study districts who have long experience of working in the public health sector	2
<i>Maternity Ward In-Charge of District Hospitals (MWIDH)</i> Maternity Ward In-Charge of district hospitals of study districts and has been involved in conducting facility deliveries	4
<i>Health Coordinators (HC)</i> Health coordinators from municipalities of study districts, responsible for planning, implementing and monitoring of local health facilities and programmes	6
<i>Chairperson of Health Management Committee (HMC)</i> Chairpersons of Health Management Committees of local health facilities in the study districts; these are local elected leaders and involved in community participation and social accountability	6

publications. The purpose of the study and utilisation of the findings were explained to each informant.

### Data analysis

All KIIs were digitally recorded and were later transcribed in the Nepali language. We applied a framework analysis for the interview data with pre-determined codes as this study was guided by a supply and demand-side framework.<sup>9</sup> However, we also kept in mind any emerging ideas. We proceeded by familiarising ourselves with the data by reading and re-reading the transcripts. We then identified concepts and all the key interventions and issues in each transcript as informed by our objectives and the framework; developed numerical codes for all the identified interventions and issues; made a chart by arranging the codes into appropriate themes; and finally, interpreted the themes to answer the study objectives. The coding and themes searching process was initially done by two authors manually and later verified and crosschecked by the first author. During the analysis, all the authors met and discussed the dominant themes. We translated the final themes and their interpretation with selected quotes into English. The sources of the quotes in the results section are identified according to the abbreviations provided in [Table 1](#).

### Results

#### Policies and actions for safe motherhood in Nepal

Participants identified several documents on various aspects of safe motherhood in Nepal, including policy directives, implementation plans, safe abortion, competent health workers, incentive guidelines, gender issues, maternal death surveillance, communication strategy, maternal nutrition, quality, and respectful maternal care. They agreed that there were policies covering key concerns in maternal health. They pointed out three policies as the most important to maternal mortality reduction in Nepal: Safe Motherhood Policy, Skilled Birth Attendant (SBA) Policy, and Safe Abortion Policy. The launch of the Safe Motherhood Policy in 1998 provided important directives for subsequent policies, strategies, and programmes for safe motherhood in Nepal. This policy had a main role in the scale-up of the provision of obstetric services, including caesarean section services, in Nepal. Most of the participants stated that the

Skilled Birth Attendant Policy of Nepal helped to generate and supply skilled human resources to lower-level and remote health facilities. They also agreed on the role provided by the Safe Abortion Policy in Nepal because many maternal deaths occurred while undergoing unsafe and illegal abortions.

Participants said that maternal health-related programmes have always been priority programmes for the government of Nepal, and many policies, plans, strategies and guidelines have been developed to support maternal health. The government recently passed The Right to Safe Motherhood and Reproductive Health Act that made a commitment to enhancing the quality of maternal health services in Nepal. They also mentioned that the current maternal health policies and plans were adequate and that changing or formulating new policies would not solve the problem of stalled progress in maternal health.

*“Changes in policy do not solve the problem. Policies are good.”* (MSDP-03)

*“... Documents are piling up. People (also staff) don’t know what to do with these books... We have to focus on the existing policies and programs rather than making new ones.”* (DO-03)

However, participants stated that the context in different geographical regions, the epidemiology of maternal deaths, and accessibility of services vary across Nepal. They pointed out that policies needed to be locally relevant and suitably adapted. In addition, in the current reformation of health care in Nepal, local municipalities have their own budget and can make their own health plans and strategies. Although there can be national-level policies and guidelines, these need to be reviewed at the local levels for specificity. Participants pointed out that there had been revision and clarity of selected policies and plans.

*“... We followed a blanket approach... We missed out analysis of context-specific disaggregated data and to make a plan of action accordingly, especially in the present context (of federalism).”* (MHE-04)

The SBA Policy was formulated in 2006 with short, medium, and long-term strategies. The long-term strategies of educating and deploying higher-level midwives have still not materialised, with the continuation of training Auxiliary Nurse Midwives, a basic nursing cadre, to be SBAs.

Similarly, referral guidelines for delivery services are not clear in various contexts and are not effective.

*“The Skilled Birth Attendant policy should be modified and scaled up. We are still training ANMs (Auxiliary Nurse Midwives) instead of higher-level midwives who can do a cesarean section, laparotomy, blood transfusion and also conduct the delivery.”* (MHE-07)

### Reasons for stagnation in maternal mortality

We identified seven themes providing reasons for the stagnation in maternal mortality: four on the supply side (inadequate and unskilled human resources, poor infrastructure and maintenance, inaccessible health facilities, and negative provider attitudes) and three on the demand side (lower utilisation by poorer families, lack of perceived need, and persistent unsafe abortion). The central tenet of all seven themes, however, was the quality of maternity services. Providing or increasing availability of services was not enough to save maternal lives. Because of the poor quality of care in local birthing centres, pregnant women were bypassing these and seeking services from the tertiary public and private hospitals. However, tertiary referral hospitals were challenged in providing quality care to women with obstetric complications, especially when receiving large numbers of delivery cases. Quality was perceived as poorer in public health facilities.

#### *Inadequate and unskilled human resources*

Human resource deployment and retention in rural and remote areas of Nepal is challenging. Participants felt that human resources are inadequate and those available lacked skills and competencies. The problem is not only in lower-level health facilities but also in referral urban facilities. Health workers often do not go where they have been deployed. Some nurses employed in lower health facilities to provide delivery services do not have skilled birth attendance training, while others who had that training do not conduct deliveries. Unskilled health workers cannot diagnose complications early. Even trained SBAs are often not sufficiently competent to provide quality services and manage obstetric complications. Delivery services are often not available 24 × 7, and some facilities employ an auxiliary nurse midwife under a short-term contract, and they are not available all the time.

*“There are still many nurses who do not have the SBA training. Even after having SBA training, some nurses are not able to perform correctly, for example, correctly filling the partograph and handling of infection prevention.”* (MHE-05)

*“Competency of our SBAs to save lives is poor ... I felt that we give them a very big responsibility requiring lots of skills (specialized care) beyond their level.”* (MHE-04)

*“... there are no skilled human resources in remote areas. There is a problem of retention of skilled human resources.”* (DO-04)

*“Another factor is lack of doctors in the referral centers ... More women have started going to referral centers. But the centers are not ready for the patient flows, resulting in high maternal deaths in the referral centers.”* (DO-01)

*“There are no doctors or nurses available after 5 o'clock (pm) in primary health centers ... Women in labor are found crying alone until health workers arrive next morning.”* (HMC-03)

#### *Poor infrastructure and maintenance*

Many lower health facilities such as health posts and primary health centres offer birthing services. But participants believed that many of these were just “anatomical” without proper functioning due to a lack of medical supplies, equipment, and skilled health staff. Some even lack a water supply and soap for handwashing. Besides, there has not been adequate maintenance, and many do not have standby ambulances to refer women with complications. This could restrict these facilities' capacity to recognise complications and to refer cases.

*“We have established birthing centers and CEmOC centers, but we don't know whether these centers have the SBAs, adequate medical supplies, and equipment, or not.”* (DO-01)

Some participants, however, pointed out that there is adequate equipment, medicines and infrastructure, but these are not used properly, or maintained. Some participants were concerned that the budget is not adequate in the health sector. First, the national-level budget that the Ministry of Health receives is less compared to other sectors, and second, the health sector is not prioritised at the local municipality level.

*“There is enough equipment and infrastructure in health facilities; the government has invested a*

*lot in the safe motherhood program, but I think there is a lack of maintenance.”* (DO-5)

*“We don't have much budget in health as well ... the municipality doesn't allocate a separate budget for health ... at the local level, we do not have other resources for health.”* (HMC-04)

#### *Inaccessible health facilities*

The hills and mountainous geography of Nepal leave many places very remote and inaccessible. Health facilities are often in the more accessible places within these remote, inaccessible areas. Even where road connections are available, the roads are in poor condition and reliable transportation is not available. This poses difficulties in transporting expectant women to referral health facilities when complications arise and even to local birthing centres for anticipated normal delivery.

*“It takes hours and hours even to reach local birthing centers in some villages (in provinces 6 and 7) ... almost impossible to access CEmOC centers.”* (DO-02)

*“Also, women think that their local birthing center can't manage a complication, but as the higher center is too far away, she takes the risk and gives birth at home, that leads to maternal mortality.”* (DO-01)

*“Stretchers are not enough. The vehicle is not readily available when required and does not operate in the rainy season. Women are giving birth at home.”* (HC-03)

#### *Negative provider attitudes*

The attitude and behaviour of maternity service providers affect both utilisation and outcomes. Participants commented that doctors in public health facilities lack interest and respect when providing maternity services in public health facilities. They often refer women to private clinics and hospitals run by themselves.

*“Not only skilled care, but the health facilities might also lack respectful care. If a woman does not get respectful care, then she won't visit the health facility.”* (DO-04)

#### *Lower utilisation by poorer families*

Respondents described a range of socio-cultural determinants of facility-based births. Women from the lower castes (*Dalit*, *Dom*), backward

(*Mushar*), and religious minorities (Muslim) are less likely to have pregnancy check-ups and to give birth in a facility despite the government's policy of prioritising these hard-to-reach communities and of providing free maternity services. These communities are illiterate and the poorest in society, with poor status of women in the household's decision-making. The lack of awareness of danger signs and fear of the cost of going and delivering in a health facility prevented them from seeking preventive obstetric services, including delivering in a health facility.

*"... But the problem is some people, backward castes and marginalized groups, are so poor that they cannot bear the cost of transportation, including from friends or family members, for the delivery even if they have access to road and transportation."* (DO-01)

*"Women from backward castes and marginalized groups don't go to health facilities as they are too poor to bear the cost [additional indirect costs]."* (HC-04)

#### *Gender norms and perceived need*

Because of social norms, low awareness of the potential risks related to delivery, and the poor status of women in Nepal's patriarchal society, there is low utilisation of professional help or institutional delivery. Many rural women are fearful and shy of seeking obstetric advice. Some women depend on the decisions of fathers-in-law or mothers-in-law to seek help because their husbands are away from home for employment. Post-partum women are discharged soon from the facility, and there are cultural practices that demand that post-partum women remain in their homes.

*"Traditional customs are also a leading cause of delay ... They [women] wait until the complication starts, such as prolonged labor, bleeding, breech presentation, or any other problems, then they proceed to a health facility. That is a main leading cause of maternal death."* (DO-02)

*"... They think all is well with delivery ... Some still believe in superstitions."* (HC-03)

*"Women hesitate to come to the health facilities due to fear, shyness, and dependency on in-laws."* (HMC-05)

*"Here, in the Muslim community, women are not expected to go outside ... Somebody should be*

*with her either husband or any family member ... They feel shy speaking in front of a male doctor."* (HMC- 04)

#### *Persistent unsafe abortion and stigma*

There are various reasons for abortion, including son preference, not using contraceptives, and early marriage. After the legalisation of abortion and the provision of abortion services, the number of legal and safe abortions has increased. However, there are still clandestine and unsafe abortions taking place because many do not know the safe abortion services are available or want them to be done in secret by private practitioners.

*"DHS [Demographic and Health Survey] data shows only 41% of women knew about the free abortion services ... It means they are also going toward unsafe abortion that may contribute to maternal mortality."* (MHE-02)

*"There is still unsafe abortion ... low skilled health workers are doing such abortions."* (DO-01)

#### **Priority interventions and actions**

Participants gave various suggestions and identified ways to reduce maternal mortality and increase maternity service utilisation. They suggested a diverse range of interventions that have worked and need to be scaled up. The interventions suggested are mainly on the supply side, such as strengthening existing programmes (family planning, free delivery services with incentives, post-partum care) and strengthening health systems (with strategic location of hospitals and maternity waiting homes, human resource management, service readiness, enhancing local capacity, and maternal death reviews). Participants identified one important demand-side intervention, namely birth preparedness. Besides these suggestions, participants frequently raised the weak and ineffective implementation of programmes and policies, mainly due to a lack of accountability and effective monitoring. This suggests a further important area for action.

#### *Family planning*

Most of the participants emphasised that unwanted pregnancy, multiple pregnancies, and short birth spacing all had a link with the risk of delivery complications and maternal death. They suggested the promotion of contraceptives and

permanent methods, especially among the poor, rural and adolescent groups.

*“...unwanted pregnancy is still high in this country ... we have still not provided adequate contraceptives and advice ... we need to continue to focus on the family planning program.”* (MHE-03)

#### *Free services with incentives*

The participants appreciated the free delivery programme (*Aama*) of the government and agreed that it had helped women seek services. The cash incentives and free delivery services had attracted women to institutional delivery. The *Aama* programme needed to be continued, involving more private facilities and focusing on poor and hard-to-reach people. The participants suggested that the cash incentives be supplemented by in-kind support such as soap, salt, or oil to create more demand for antenatal and delivery services. However, a few participants emphasised that awareness and health education must be the first priority rather than the incentives.

*“The Aama program is free with cash incentives and has motivated women to visit health facilities ... It should be targeted more to people in need and in hard-to-reach areas.”* (MHE-07)

*“We have initiated in-kind support or gift of salt, soap, or oil for those coming for antenatal check-up and delivery. This provision has attracted more clients in health facilities and reduced home deliveries.”* (HC-01)

*“We should also bring in the private sector for maternity services ... already, a few are involved in the Aama program ... private hospitals have higher cesarean section rates compared to public hospitals.”* (DO-02)

*“The main thing is awareness and health education ... it is better than the incentives.”* (HMC-06)

#### *Post-partum care*

Participants pointed out the need to focus on post-partum care. Post-partum women are quickly discharged from health facilities, with the assumption that everything is fine. However, they could develop complications. After being discharged following delivery, women have difficulties returning to the health facility in case of health problems. So, post-partum women need to be followed in their houses.

*“It is difficult for the post-partum mother to come to health facilities. In some communities, social norms also prevent women from going to the health post for a post-partum check-up. We have to go their houses.”* (DO-03)

#### *The strategic location of hospitals and maternity waiting homes*

The Government of Nepal has established Basic Emergency Obstetric and Newborn Care sites (Birthing Centres) in many health posts and primary health care centres, and Comprehensive Emergency Obstetric and Newborn Care (CEmONC) sites in many district hospitals. These sites have increased institutional delivery coverage but may not have contributed to better management of complications during birth, especially at the birthing centre level, due to the limited staffing capacity, supplies and equipment.

*“Establishing birthing centers is effective ... rural people can go there ... more than 70 percent women have institutional delivery in our province No. 5.”* (MSDP-02)

*“We have established and increased the birthing centers rampantly. Are all the birthing centers really necessary? And are the births taking place in all birthing centers? I came to know that there are less than 20 deliveries in a year in 50% of birthing centers.”* (MSDP-01)

Instead of establishing so many birthing sites, respondents recommended the establishment of well-resourced and competent comprehensive and emergency sites at strategic locations that might help to manage complications and prevent maternal deaths. Further, the establishment of maternity waiting homes can facilitate the accessibility of CEmONC services in time. The participants said that maternity waiting homes had been tried in Nepal, and that in some places, they had been well utilised. Such homes are very relevant in the hilly geography of Nepal, helping to address the second delay.

*“We have suggested establishing CEmONC sites in strategic locations rather than establishing birthing centers.”* (DO-02)

*“I don't mean that maternity waiting homes are necessary for all places, but they are very important in certain contexts and areas to encourage women to come well in time for the institutional delivery. They can come one week earlier than their expected*

*date with their family members and also can rest for a few days and go home.”* (DO-02)

#### *Human resource management*

Participants spoke of the importance of skilled human resources and highlighted the inadequate number of anaesthetists, gynaecologists, and general physicians. The importance of replacing SBA training with midwifery education, rational allocation, retention, and motivation to work in rural areas was raised. Mentoring and monitoring need to be strengthened.

*“Maternal mortality would be reduced only if the midwifery program is strengthened.”* (DO-04)

More nurses are needed at the local levels and local-level authorities. Health coordinators need orientation on health issues and management because health service provision at the local level is under their leadership.

*“Service delivery provision has gone to local levels ... There are many more local levels now than before ... so local levels need more trained nurses and health coordinators.”* (MHE-02)

#### *Service readiness*

Participants stated that designated delivery sites, whether basic or comprehensive, need to provide services promptly as per available guidelines. These sites need to have a constant supply of medicines and nurses and should be open 24 hours. The services need to provide respectful care without lengthy administrative procedures in times of emergency. Participants also raised the importance of rural ultrasound and standby ambulances in lower-level health facilities for timely referral.

*“Equip BEmONC and CEmONC sites ... if there are two standby ambulances, adequate skilled health workers, blood transfusion service available, free delivery services in these sites, the flow of patient would definitely increase.”* (MHE-02)

#### *Enhancing local capacity*

Health service provision is now the responsibility of local municipalities (local governments) in the new federal structure of Nepal. That means health coordinators at the local level need to be capable and monitored. Further, coordination between federal, provincial, and local bodies is equally important.

*“Local representatives need to be reoriented more on health issues because often they are more focused on physical infrastructure.”* (DO-01)

*“Now is the time to empower and resource local bodies and to coordinate with upper bodies.”* (MHE-03)

#### *Birth preparedness*

Birth preparedness activities, including awareness-raising, need to be continued in Nepal. Participants expressed that such activities should involve family members (husbands, mothers- and fathers-in-law) and mobilise female community health volunteers and local leaders. Mainly, participants expressed that quality antenatal services be provided with proper counselling. If women and family members are convinced of the need for professional help, they are more likely to prepare for the birth and seek delivery services.

*“If women know the importance of ANC, delivery, PNC visits, then they will definitely utilize the services. We should take care of focussed antenatal care visits.”* (MHE-05)

*“We should create demand in the community ... mothers’ groups and female community health volunteers are important to mobilize women and increase awareness in the communities.”* (HC-4)

*“We just counsel woman in the antenatal check-up; we never think that information should also be given to her husband and her family members since it matters to the whole family.”* (DO-05)

#### *Implementation and accountability*

The study participants identified several ways to enhance the implementation and accountability of health programmes and policies relevant to maternal health: show-casing role models, maternal death reviews, social audits, delineating responsibilities at the local level, community participation, and monitoring. Participants expressed that first of all, upper-level authority and leaders need to be accountable and serve as role models for others.

Transparency and information sharing are important to show accountability, which is fulfilled by social audit meetings and maternal death reviews. Participants stated that the review of causes of maternal deaths initiated in the hospitals of Nepal needed to be implemented more effectively. In addition, they emphasised the



importance of verbal and social autopsy to explore non-medical social causes of death.

*“We have maternal death review and surveillance program in hospitals. But, verbal and social autopsy searches the reasons of maternal deaths in the community which also can bring additional reasons.”* (MHE-01)

Participants said that the health authorities at local levels needed to be more active and take responsibility for the provision of health services, and the division of responsibilities among them needed to be clearly spelled out.

*“Provincial government can make their own policy regarding maternal survival now ... not just waiting for direction from the federal ministry ... Similarly, going down, it is the responsibility of local municipalities which should act more proactively.”* (MHE-01)

It was also said that it is essential to improve the capacity of the Health Facility Operation and Management Committees (HFOMC) and to enhance the representation of community members or groups such as female community health volunteers and mothers' groups in the HFOMCs. Monitoring and supervision needed to be regular. On-site coaching and monitoring of health workers are important to enable health workers to utilise the additional skills acquired through periodic training more effectively.

*“All do commit, but commitment is not seen in the intervention or work; even if someone conducts monitoring, then none make a further plan of action.”* (MSDP-03)

## Discussion

In this study, we collected information from the key informants on policies and interventions, the reasons for stagnation in maternal deaths, and on priority interventions and actions needed to accelerate the decline in Nepal's maternal mortality ratio. The participants agreed that policies, plans, and strategies for maternal health in Nepal are adequate, the government has given priority to maternal health programmes, and that new policies or strategies are not required.

### Policies, implementation, and local adaptations

The contributions of the Safe Motherhood Policy, Skilled Birth Attendant Policy, and Safe Abortion

Policy, as noted by our participants, are evident in the literature. The contribution of the Safe Motherhood Policy in launching safe motherhood activities in Nepal has been well documented. Building on this policy, National Safe Motherhood, and Neonatal Health Long Term Plans have been made.<sup>10</sup> The reduction in maternal mortality after legalising abortion and providing safe abortion services through designated sites has been documented.<sup>1,11</sup> However, unsafe and clandestine abortion services are still common and mainly performed by untrained providers in Nepal, with a heavy toll on women.<sup>12</sup> There are challenges to safe abortion implementation in Nepal including gaps in access, equity, and quality;<sup>13,14</sup> effective and ongoing sector-wide monitoring and evaluation of safe abortion services and their providers is needed to ensure adherence to Safe Abortion Policy.<sup>15</sup>

Concern was raised only in the adaptation of strategies or policies according to local context and the necessary revisions of plans and guidelines. Nepal has a diverse geography, ethnicity, and unequal human development index. For example, the referral mechanism is very important in the provision of delivery services because the lower birth centres need to be connected to higher tertiary comprehensive obstetric care hospitals.<sup>16</sup> An operational and context-specific guideline is therefore needed.

Further, in the new federal structure, the local bodies are empowered to have their own work plan and activities, so the national strategies need to be worked out in a local context. Such context-specific strategies have been suggested while implementing national-level policies.<sup>17,18</sup> The local bodies are learning to coordinate and govern health issues within their coverage areas.

### Quality of maternity service

The primary reason for stagnation in reducing maternal deaths as perceived by participants is the poor quality of maternity services. Various aspects of quality were illustrated in the results above. Low-income countries need quality maternal services if they are to reduce maternal deaths significantly. Persistent poor quality has been documented in many low-income countries.<sup>19</sup> There were concerted efforts to develop locally appropriate quality of care approaches, with a model of providing emergency obstetric care along with quality of essential obstetric care monitoring tools in Nepal during

1997–2000.<sup>20</sup> However, there has not been a corresponding improvement in readiness and coverage of quality maternal health services due to constraints in supply side factors including human resources, equipment and drugs, and poor support and supervision of peripheral health care workers in Nepal.<sup>21</sup> Overall perceived poor quality and poor attitude and behaviour of health workers are reflected in client satisfaction surveys.<sup>22,23</sup>

Evidence shows that strategies to reduce maternal mortality are effective only if providers are skilled in treating obstetric disorders, preferably through the professionalisation of midwifery.<sup>24,25</sup> In Nepal, the lack of competent skilled birth attendants is an important limitation. The SBA policy was formulated in 2006 with short, medium, and long-term strategies.<sup>26</sup> The SBA training in Nepal provided auxiliary nurse midwives to work in rural health facilities,<sup>27</sup> but these SBAs, on average, have not received either effective training or performed sufficient deliveries to stay clinically competent. They need to have follow-up training, on-site mentoring, and more practice.<sup>28</sup> Further, deployment of SBAs alone, in remote health facilities, without essential components of an enabling environment such as ongoing professional support, adequate infrastructure, equipment and drugs, and timely referral pathways, cannot lead to effective management of obstetric complications.<sup>29</sup> The long-term strategy to introduce midwives has still not materialised, and there is no legislation authorising midwifery as an autonomous profession. The country needs professionalisation of midwifery with training and deployment of advanced level midwives to provide quality maternity care. There is a need to support a midwifery workforce through legislation and regulation, training and education; deployment and utilisation; and professional associations.

### Other priorities

The priority interventions and actions identified by participants to accelerate the decline in maternal mortality are supported by the maternal health literature from Nepal and elsewhere. The priority interventions the participants valued included family planning, birth preparedness, free services with financial incentives, management of human resources, the strategic location of delivery sites, functioning delivery sites, maternity waiting homes, maternal death review, post-

partum care, and enhancing local capacity. These interventions and practices are iterations of existing ones and have been previously reported by reviews.<sup>30–32</sup> The free delivery programme in Nepal helped to increase the utilisation of maternity services.<sup>33,34</sup> Participants also pointed out innovative incentives by means of provisions of in-kind support such as a package of salt, oil, or soap, which are used by women for household purposes. The unwanted pregnancy rate in Nepal is still high, especially among disadvantaged and vulnerable women. The use of community-based interventions focusing on poor communities and family planning are identified strategies for a sustainable reduction in maternal mortality.<sup>35</sup> There are barriers to contraception and sexual and reproductive health information post-abortion in Nepal, including supply limitation, lack of comprehensive education and counselling, lack of skilled post-abortion care providers, and abortion stigma.<sup>36</sup>

Studies from various countries, including Nepal, indicate the positive impact of participatory interventions and birth preparedness packages in the use of maternity services.<sup>37,38</sup> In a study of a facilitator-led participatory intervention with women's groups, women in the intervention cluster were more likely to have antenatal care and institutional delivery.<sup>39</sup> Birth preparedness programmes with active community mobilisation are needed, for disadvantaged and vulnerable women, especially from the lower caste, religious minorities, and backward communities in Nepal.<sup>40</sup> Further, women from marginalised communities are least likely to have a perceived need for institutional delivery, which is an important catalyst for seeking services.<sup>41</sup> The mobilisation of community volunteers for health promotion messages is an innovative community-based strategy.<sup>42</sup> Birth preparedness packages should involve family members, especially husbands and mothers-in-law. Financial incentives implemented in several countries showed a positive impact.<sup>43</sup>

Nepal has established birthing centres in villages, which helped to increase the rate of institutional delivery. But these rural birth centres lack the capacity for timely diagnosis, management, or referral for obstetric complications.<sup>44,45</sup> As a consequence, pregnant women bypass the lower health facilities and seek services from district or regional urban hospitals wherever possible.<sup>46</sup> Functioning comprehensive emergency

obstetric sites or mid-level hospitals might make a difference, as stressed by participants in this study. A similar conclusion was reached by another study that analysed delivery locations and maternal survival in several countries.<sup>47</sup>

It is not feasible to establish and run such mid-level hospitals in every rural area of Nepal. So, such mid-level hospitals should be established or upgraded from existing health facilities at strategic locations in districts and regions of Nepal. They should be well connected to villages and birthing centres for quick transportation. Even then, it is often difficult for low-income pregnant women to access mid- or upper-level referral facilities, especially from the hills and mountains of Nepal, because of poor road conditions and the unavailability of reliable public vehicles. This deters pregnant women and their families from accessing delivery services from these hospitals unless compelled to by complications. They arrive late at referral facilities or sometimes need to be helicopter-rescued.

The concept of waiting homes or hostels near the referral hospitals seems a plausible strategy in Nepal. Though there is insufficient evidence to determine the effectiveness of maternity waiting homes in reducing maternal deaths,<sup>48</sup> some countries have a positive experience of increased access to obstetric care along with increased facility delivery with such homes.<sup>49–52</sup> Evidence on waiting homes in Nepal is mixed, suggesting that both non-utilisation,<sup>53</sup> and utilisation with increased access to obstetric care,<sup>54</sup> are occurring. Built spaces, facilities, maintenance, and lack of knowledge can affect utilisation and satisfaction.<sup>55,56</sup> The establishment of maternity waiting homes in hilly and mountainous regions of Nepal should be considered for timely access to intrapartum services for poor and remote pregnant women. As has been suggested by other studies, it is also a more sustainable option than a helicopter rescue.<sup>57,58</sup>

### Social accountability

Even though Nepal has sufficient policies and strategies for maternal health, several studies have documented implementation challenges in terms of people and organisational factors.<sup>59,60</sup> The key to understanding challenges in the implementation of the Safe Motherhood Program lies in the reflexive, complex, and dynamic responses of health workers and community members to policies and programmes.<sup>17</sup>

Implementation is affected by ethnic minority groups' access to services; availability of respectful, person-centred care and culturally appropriate services with an enabling environment of social, economic, and political factors.<sup>61,62</sup> Social accountability for maternal health services has been practised in the form of social audits, community health scoreboards and Health Facility Operation and Management Committees but with poor participation, particularly by women. There is limited capacity, resources, and absence of mandates to carry out social accountability roles in Nepal.<sup>63</sup> Health services are now provided under the leadership of municipalities in the federal structure of Nepal, but the capacity of these municipalities needs to be strengthened and monitored. On-site clinical mentoring of nurses coupled with health facility management mentoring can improve nurses' clinical competencies in the performance of maternity care.<sup>64</sup> The provision of selected, trained, and supported community health workers and innovative training and supervision of health workers are identified strategies that can work in difficult to access, rural, mountainous locations.<sup>31</sup>

### Limitations

The study has some limitations. Though different categories of people were interviewed in the study, these did not include service users, whose viewpoints may have given other insights. The analysis was informed by the supply- and demand-side framework, and we used a positivist framework approach with pre-determined codes and themes, which can be restrictive, although we felt that most of the data elicited were well represented. Further qualitative research is suggested to understand local governance, local adaptation of policies, and implementation failures.

### Conclusions

The main reason for the stagnation in reducing maternal deaths in Nepal is the continuing challenge in delivering quality maternity services, characterised by inadequate and unskilled human resources, poor infrastructure and equipment, and inaccessible health facilities, especially in hills and mountain districts. Existing programmes, including family planning, birth preparedness, financial incentives, free delivery services, abortion care, and community post-

partum care, need to be strengthened with a special focus on marginalised and vulnerable communities to slow down maternal deaths. Upgrading and establishing “functioning” comprehensive emergency obstetric sites or mid-level hospitals in convenient places, connected with quick transportation, is necessary for timely access of intrapartum care. In hills and mountains, this type of accessibility can be offered by establishing maternity waiting homes.

Nepal has in place adequate policies, plans, and programmes targeted for safe motherhood, but their implementation is weak and not sufficiently monitored. Social accountability needs to be strengthened by means of social audits, role models, and empowering health facility operation and management committees. In the light of the recent health federalism, the plans and strategies need to be adapted to context, with the enhancement of the capacity of local municipalities to coordinate and monitor local maternal health activities.

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### ORCID

Rajendra Karkee  <http://orcid.org/0000-0003-1510-5457>

Alison Morgan  <http://orcid.org/0000-0001-5380-1619>

Dharma S. Manandhar  <http://orcid.org/0000-0001-8699-6774>

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## Résumé

Jusqu'en 2015, le Népal a remporté des succès remarquables dans la réduction de la mortalité maternelle. Depuis, les progrès ont stagné, coïncidant avec la transition du pays vers une fédération et une importante décentralisation de la gestion de la santé. Dans ce contexte, nous avons mené des entretiens avec des informateurs clés pour connaître leurs avis sur les politiques responsables de la réduction de la mortalité maternelle, les raisons de la stagnation du taux et les interventions requises pour accélérer la baisse de la mortalité maternelle. Nous avons réalisé 36 entretiens avec des informateurs clés et analysé les transcriptions à l'aide de méthodes standard d'analyse des cadres. Les informateurs clés ont identifié les trois principales politiques pour la réduction de la mortalité maternelle au Népal: la politique sur la maternité sûre, la politique sur les accoucheuses qualifiées et la politique sur l'avortement sans risque. Ils ont estimé que les politiques étaient appropriées, mais que leur application était faible et inefficace, et que les stratégies devaient être adaptées au contexte local. Les informateurs clés ont identifié plusieurs facteurs relevant du système de santé, notamment la médiocre qualité des soins, qui expliquent la stagnation du taux de mortalité maternelle au Népal, ainsi que quelques caractéristiques du côté de la demande. D'après eux, pour réduire encore le nombre de décès maternels, le Népal doit veiller à ce que les programmes actuels de planification familiale, de préparation à l'accouchement, d'incitations financières, de services d'accouchement gratuits, de soins en cas d'avortement et de soins communautaires du post-partum desservent les communautés marginalisées et vulnérables. Les centres offrant des soins obstétricaux d'urgence complets doivent être accessibles et, dans les zones montagneuses et accidentées, l'accès pourrait être facilité en créant des foyers d'hébergement des futures parturientes. La redevabilité sociale peut être renforcée par des audits sociaux, des modèles de rôle et la capacitation des comités de santé et de gestion.

## Resumen

Nepal logró un progreso impresionante para reducir la mortalidad materna hasta el año 2015. Desde entonces, el progreso se ha estancado, lo cual coincide con la transición de Nepal hacia una federación con significativa descentralización de la gestión sanitaria. En este contexto, realizamos entrevistas con informantes clave (EIC) para solicitar perspectivas sobre políticas responsables de la reducción de la mortalidad materna, razones por las cuales se ha estancado la razón de mortalidad materna e intervenciones necesarias para acelerar la disminución de la mortalidad materna. Realizamos 36 EIC y analizamos transcripciones utilizando métodos normalizados de análisis de marco. Los informantes clave identificaron tres políticas como las más importantes para la reducción de la mortalidad materna en Nepal: Política de Maternidad sin Riesgos, Política de Asistentes de Parto Calificados y Política de Aborto Seguro. Opinaron que las políticas eran adecuadas, pero que su aplicación era deficiente e ineficaz y que era necesario adaptar las estrategias al contexto local. Los informantes clave identificaron una variedad de factores del sistema de salud, incluida la mala calidad de la atención, como factores subyacentes en el estancamiento de la razón de mortalidad materna en Nepal, así como algunos aspectos desde la perspectiva de la demanda. Según los informantes clave, para reducir aun más las muertes maternas, Nepal debe asegurarse de que los programas actuales de planificación familiar, preparación para el parto, incentivos financieros, servicios de parto gratuitos, servicios de aborto y cuidados posparto comunitarios lleguen a las comunidades marginadas y vulnerables. Los establecimientos de salud que ofrecen cuidados obstétricos de emergencia integrales deben ser accesibles, y en zonas de colinas y montañas, el acceso podría apoyarse estableciendo hogares maternos. La responsabilidad social puede fortalecerse por medio de auditorías sociales, modelos a seguir y empoderamiento de comités de salud y gestión.