View Point

Missing Midwifery: Relevance for Contemporary Challenges in Maternal Health

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ABSTRACT

Midwifery is rooted in public health, and most of its history has been community oriented. In India, midwifery evolved during the British rule; but over the years with changes in political and program priorities, the role and the capacity of midwives has changed substantially. The verticalization of national health programs has obscured the midwives' community focus and inhibited its contribution to the wider public health. There is a global acceptance and recognition of the midwifery model of care and skilled delivery for ensuring effective maternal health outcomes. The approaches are in line with local needs and have proved its effectiveness in resource-constrained settings. It is important to recognize the substantial contribution they make to public health, working to promote the long-term well-being of women, their babies and families, by offering information and advice on nutrition, supplementation, breastfeeding, and immunization. There is considerable scope for developing the midwifery model through enhancing the extent of their involvement in assessing health needs of local populations, designing, managing and evaluating maternal and health services, making timely and effective referrals and developing family-centered care.

Keywords: Auxiliary nurse midwives, midwifery model of care, skilled birth, midwifery regulation and practices

Introduction

It is the right of every mother to survive pregnancy and childbirth and have a safe delivery. Families, communities, local and national governments have the responsibility to prevent their deaths. Maternal death is an important indicator to evaluate the reach of effective public health services to the poor; and is regarded, as one of the composite measure to assess the state of development and transformation of a country. Preventing deaths associated with pregnancy and childbirth is one of the greatest challenges before the nation in the 21st century.[1] About 90% of the maternal deaths are in developing countries. An overwhelming majority of these deaths occur in low-income countries and among women who are usually poor and marginalized and have no access to functioning health facilities or to qualified/trained health professionals. Globally every year approximately 350,000 women die while pregnancy or during childbirth.[2]

India has progressed rapidly on several socio-economic' indices since independence, but improvement in maternal health indicators have been relatively slow. The maternal mortality ratio (MMR), though on the decline is currently 212 per 100,000 live births with a lifetime risk of 0.6%.[3] As per the recently released report of the Sample Registration System (SRS); more than 60 percent of the deliveries occur at home without skilled assistance at birth. Newer estimates are available from the Annual Health Survey (AHS) 2010-11, a special survey was done in 10 high focus states. SRS 2007-9 estimated MMR for Bihar and Jharkhand at 261 per 100,000 live births; SRS 2011 estimated Jharkhand's MMR at 278 per 100,000 live births and Bihar's at 305. Madhya Pradesh's MMR is estimated at 310 per 100,000 live births and Chattisgarh's at 275; the earlier combined figure was 269. Assuming the newer estimates are more sensitive, these state's indicators are worse than previously thought. Uttarakhand's MMR is 188 per 100,000 live births much

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lower than Uttar Pradesh's (with which estimates were clubbed earlier) 345. India's maternal death accounts for 25% of the total global maternal deaths[4] and the highest number of deaths occurs on the first day after delivery, mainly due to preventable causes such as hemorrhage, puerperal sepsis (infections after delivery), complications of abortion, obstructed labor, and hypertensive disorders associated with pregnancy.

Prevention, detection, and timely management of these complications are a primary health care need of any country. Reviews elicit that acceptance and recognition of midwifery model of care and delivery by skilled birth attendant, significantly has direct implication on the maternal mortality ratio. Evidence from Sri Lanka and Malaysia in the 20th century showed that the attendance at delivery by well-trained public health midwives with the back-up of emergency obstetric care (EmOC) services helped in reduction of maternal mortality, even in resource-poor settings.[5]

As with the other developing countries, India also faces a dearth of skilled birth attendants (SBA). In the rural healthcare system, the auxiliary nurse midwife (ANM) is the frontline (female) health worker and is the central focus of all reproductive and child health programs. With changes in program priorities, the role and the capacity of ANM have changed substantially over the years. The role of ANM has transformed to a multipurpose worker (MPW) who is mostly involved in implementing national health programs in contrast to the ANMs of 1960s who were providing delivery and basic curative services. The transformation of this role had direct implications for maternal health and provisioning of maternal health services in India. Even the quality of nursing and midwifery education has also deteriorated over a period of time, which has partly contributed to the shortage of SBA at health facilities.[6]

The joint statement of the World Health Organization, the International Confederation of Midwives and the International Federation of Gynecology and Obstetrics defines a skilled birth attendant as ''an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth, and the immediate postnatal period, and in the identification, management, and referral of complications in women and newborns.''[4] Evidence shows that maternal deaths can be averted by the presence of a SBA at the time of childbirth. Despite the global evidence of effectiveness of well-trained midwives and SBAs in reducing maternal mortality, the Government of India has chosen to provide a short (2 to 3 weeks) refresher course to female multipurpose-workers. Historically, these workers were trained for 18 months as ANMs and conducted deliveries. However, since 1970s, their role has changed; few of them conduct deliveries on a regular basis in the community and sub-centers, and most of them focus on family planning and immunization. As a result, most have lost their skills for conducting births.[7]

Historical Perspective of Nursing and Midwifery Regulation and Practice in India

Nursing and midwifery started developing during the British rule, but there was no regulatory body or legislative act to control and certify the quality and duration of the course. The British government established the Central Board of Nursing and Midwifery in India in 1902 to provide quality services by well-trained midwives. Similar laws were enacted in Madras, Calcutta, and other areas. The Trained Nurses Association in India (TNAI) was formed in 1908 to bring all nursing and midwifery personnel together to address their professional and organizational needs.[8]

The Bhore Committee recommended the creation of an All-India Nursing and Midwifery Council to co-ordinate activities of various provincial nursing and midwifery councils, in order to lay down a minimum educational standard. After the Independence in 1947, the newly formed Government of India promulgated an act to create a regulatory body for the control and regulation of training of nurses and midwives. This initiated the process of unification of the professions of nursing and midwifery, which had previously existed as separate and independent professions with independent registrations as registered nurses and registered midwives. This led to the formation of the Indian Nursing Council in 1947. In 1950, the Indian Nursing Council made an important decision in terms of training of nurses and midwives; at that time only two courses were recognized: (a) General Nursing and Midwifery (GNM) course of 3 years followed by 9 months of midwifery; and (b) ANM course of 2 years with 9 months of midwifery.[9] The Indian Nursing Council did not recognize the 1 year midwifery diploma course that was awarded by various state nursing councils formed under British rule.

In 1957, the syllabus for the Auxiliary Nurse Midwives Course was prescribed by the Indian Nursing and Midwifery Council replacing the course in Midwifery and was accepted for introduction in training schools. Subsequently, midwifery training merged with general nursing and midwifery courses.[4] The ANM course increasingly shifted from hands-on training in the field toward theoretical training with emphasis on preventive care services. During 1972, the midwifery component of the ANM training curriculum was reduced from 9 months to 6. All these resulted in dilution of the role of

midwives in India, and the separate midwifery training schools gradually began to close down.[4]

Evolution and Shifts in Midwifery Practices

In the post-independence era, the Government gave more emphasis to national health programs while more medical colleges and nursing/midwifery colleges and schools were established. Until early 1960s, many medical colleges and nursing/midwifery schools were built but during the 2nd Five Year Plan (FYP) period disparity was observed in financing for these schools and colleges. Two billion rupees were allocated for establishment of medical colleges while only 60 million rupees was sanctioned for establishment of midwifery/nursing schools.[4]

During this period, primary health centers (PHC) were established staffed by a doctor, a nurse midwife, a health visitor, a sanitary inspector, and a female attendant (*Aya*) to strengthen rural health services. Trained nurse midwives were posted in PHCs to conduct deliveries. Under PHCs, sub centers were established to provide basic medical care and delivery care at the village level. To place trained personnel at the health sub centers, health workers with basic education were trained for shorter time and were placed at sub-centers (SC) and were named as "Auxiliary Nurse Midwife." The Bhore and Mudaliar Committees latter suggested continuing with the auxiliary cadre to provide basic health care at field level and since then, ANMs became permanent staff in the public health system. ANMs were posted in SCs mainly for providing maternal and child health services that focused on providing ANC and delivery care to all pregnant women besides treatment of common illnesses.[10]

In 1966, the Mukerjee Committee suggested the target system to achieve family planning goals; during the 4th-5th FYP period it was decided to integrate family planning with the MCH program to meet family planning targets. The integration of family planning initiatives with MCH services led to the dilution of maternal health care services provision by ANMs. Until early 1970s, ANMs were providing comprehensive maternal health care including birth care in rural areas. But the integration of family planning services with MCH services led to the decision by the Kartar Singh Committee in 1974 of designating the ANMs as MPW (F) to provide care for multiple national programs along with MCH services.[11] This also led to the reduction of ANMs' training from 24 months to 18 months with a reduction in the midwifery component. This further devalued and deskilled the ANM. To orient the ANM to function as MPW (F), short-term training modules were carried out during 5th- 6th FYP period. The changes in political and program priorities led to the shrinking role of ANM from birth care/MCH service provider to implementers of vertical national health programs.[12] Today, the ANM is far less a nurse and midwife; but a "multi-purpose worker" providing family planning, immunization, sanitation, infectious disease prevention/care and antenatal, and post-natal care. The targets set for family planning and immunization led to improved accountability of the ANMs for these activities and neglect of emergency services such as delivery.

The WHO and other international agencies have re-discovered the importance of midwifery, SBA, and EmOC over the last decade. In India, instead of strengthening midwifery training, cadre and services, the Government of India, under the RCH program and the National Rural Health Mission (NRHM) developed a policy of promoting ''institutional childbirth'' by providing cash incentives to mothers (and facilitators) through the Janani Suraksha Yojana (JSY). Instead of strengthening midwifery the NRHM is supporting large-scale development of village level volunteer called ASHA (Accredited Social Health Activist) as an incentivized (institutional delivery providing the highest incentive) link worker to facilitate institutional delivery. This reflects that the government policy initiative has again neglected frontline professional services for birthing care.[4]

Midwifery Model of Care and its Importance in Resource-poor Settings

The midwifery philosophy treats pregnancy and childbirth as normal, natural events in a woman's life and addresses both her physical and emotional concerns. Midwives take a fundamentally different approach to prenatal care and labor from the more common medical model usually practiced by doctors. They create a partnership of care with the pregnant woman, providing information and recommendations, fostering respect and trust, minimizing interventions, and referring women to obstetrical care when needed. When asked what kind of a birth they want, many women will say they want to have one "as naturally as possible."

Globally, three midwifery models of care have been recognized for the care of pregnant women namely-

1. Home-based care by traditional birth attendants and relatives,
2. Institution based care by midwives, nurses and Obstetricians, and
3. Home and institution based care, primarily by a trained midwife backed up by obstetrician.

The home and institution based care has been considered as midwifery based model of care which not only includes

professional care but also humanized care.[4] Midwifery based model of care not only reduces maternal mortality but also supports in limiting over-medicalization of childbirths.[13] Worldwide, the acceptance of midwifery model of care has proved its effectiveness in reducing maternal morbidity and mortality, birth injury, trauma, and cesarean section in many countries with poor resources.

Examples of Village based Midwifery Model of Care: Review of South East Asian Region Countries Experience

Malaysia

Malaysia experienced decline in maternal mortality (275 per 100,000 live births in 1947 to 41 per 100,000 live births by the year 2000)[14] through a dramatic rise in skilled birth attendance from 1949-1995. Midwifery care in Malaysia developed in three phases. In the initial phase (1945-56) legislation was passed to professionalize midwifery, train midwives to obtain certification, and register them under the Midwives Act. The professionalization of midwifery occurred alongside the development of a large network of urban Maternal and Child Health (MCH) clinics, and ensuring employment for trained midwives.

The second phase (1957-75) was characterized by the rapid establishment of rural health services: 1,280 new midwifery clinics were built, and supported by a network of 256 small health sub centers and 65 main health centers. While delivery at midwifery clinics was encouraged, midwives also attended the majority of rural home births. In order to facilitate community partnerships and promote the use of midwives' services in rural areas, home deliveries, and antenatal care provided by government midwives were free of charge. In addition, midwives provided 10 days of free postnatal care in the client's home.

The third phase (1976-89) comprised of certifying nurse-midwives and public health nurses. During this phase, skilled attendant coverage increased to 90% with a considerable proportion of women in rural areas giving birth in public sector hospitals. By 1988, all rural midwifery practices were standardized, recorded, and distributed in a manual of clinical procedures and protocols.

In Malaysia, there is no direct entry program in midwifery studies; the path to graduate studies as a midwife begins with 11 years of general education, in addition to 3 years of nursing school.

The certified nurse-midwives and public health nurses are deployed in the public sector and have become the backbone of primary care services in rural Malaysia; they conduct all antenatal and child health clinics, provide basic health education to communities, and conduct all normal deliveries. While nurse-midwives are facility-based, they may also attend home-births; in the event of a complication during a home-birth, the SBA conducting the delivery is supported *via* telephone by her peers stationed at a clinic. One of the other main responsibilities of midwives working within communities is to mobilize local leaders and educate them about the potential dangers of pregnancy and childbirth, such that they may urge women to deliver in local clinics or hospitals.

Until 1960, untrained traditional birth attendants handled almost 60% of births in rural Malaysia. With the presence of trained midwives threatening the livelihood of these traditional birth attendants, the Malaysian government facilitated a partnership between them. Traditional practices of birth attendants were extensively studied and classified as being (1) harmful and to be discouraged, (2) beneficial and to be encouraged, and (3) neutral and to be left undisturbed. The traditional birth attendants (TBAs) were subsequently trained to avoid harmful practices and persuaded to provide child-birth related services while a nurse-midwife oversaw the entire birthing process. Cash compensations were also provided for every delivery that a TBA assisted and did not conduct herself. By the 1990s, the responsibility of conducting deliveries within rural communities completely shifted from TBAs to trained midwives.

Sri Lanka

Much like Malaysia, Sri Lanka integrated midwives into its healthcare system from the earliest stages of its development; this early focus upon skilled attendance is credited with reducing the maternal mortality from 600 per 100,000 live births in 1950 to 60 per 100,000 live births in 2000. The foundation of Sri Lankan health services is an extensive network of Health Units that are evenly dispersed throughout the country. The Health Unit comprises a population of about 60,000 and is subdivided into smaller wards known as Public Health Midwife (PHM) areas. Each PHM area is served by multiple field health centers staffed by Public Health Nurse-Midwives and Public Health Midwives. All activities of the Health Unit are overseen by a community physician known as the Medical Officer of Health Unit; this individual supervises the Public Health Nurse-Midwives working in each PHM area, and each Public Health Nurse-Midwife supervises the Public Health Midwives with whom she works. The Medical Officer of Health Unit also conducts a monthly staff conference, the goal of which is to assess health outcomes and the quality of all health services, to discuss any relevant health issues in the community, and to provide periodic refresher trainings for the staff. Overall, the Health Unit model in

Sri Lanka has established a built-in institutional network that confers access to healthcare across the country, opportunities for continual education, and guidance for all healthcare providers, as well as an opportunity for referral of patients whenever necessary.

Decades before Health Units were established in Sri Lanka, legislation was enacted in 1897 to require individuals who practiced midwifery to register and undergo training in accordance with a curriculum prescribed by the Sri Lankan Medical Council. Currently, there are two pathways to entry into midwifery training: direct, which yields Public Health Midwives, and indirect, which yields Public Health Nurse-Midwives. To qualify for either course of study, an individual must complete 13 years of schooling. The direct-entry midwifery program entails 18 months of training. The first 12 months involve pre-clinical training at a school of nursing, followed by 6 months of clinical training at a field-training site. In order to qualify for the final examination, Public Health Midwives-in-training must observe 10 normal deliveries, conduct 20 normal deliveries under supervision, assist 5 abnormal deliveries, and oversee care of 25 healthy infants and 10 ill infants. In order to become a Public Health Nurse-Midwife, 3 years of training as a nurse, followed by 6 months of additional clinical midwifery training is needed.

Once midwives have completed their training, they are deployed to a Health Unit, and are responsible for overseeing maternal healthcare within designated PHM areas that each serves a population of 3,000 to 5,000. While Public Health Nurse-Midwives are responsible for supervising the activities of Public Health Midwives, the division of labor between them is not made clear in the literature. Midwives are responsible for visiting the homes of pregnant women in the community, registering them for care, and persuading them to attend field health centers for antenatal care and delivery. They oversee deliveries at home and in the field health center, and work alongside physicians in the field health center to provide basic maternal and child healthcare. Many midwives live in the villages that they serve, which fosters essential community partnerships. As a result, these SBA not only ensure that care is provided at the community level, but they also ensure access to the next tier of care - the field health center.

Indonesia

The Mother Friendly Movement (MFM) in Indonesia gave importance to women's empowerment and formulated two program strategies: (i) mother friendly sub centers and (ii) mother friendly hospitals. Every delivery was sought to be assisted by well-trained providers, every obstetric, and neonatal complication to get adequate treatment and every woman in the reproductive age to have access toward prevention of unexpected pregnancy and treatment of abortion complication. It also aimed at addressing the low coverage of delivery by health personnel (caused by geographical gap, socio cultural gap, information gap, and economic gap). To address these gaps the concept of village maternity home came in. Availability of a village maternity home, which was manned by a midwife, helped in decreasing such gaps. Posting a midwife to the village helped decreasing the geographical gap. In every activity, as a member of community, the midwife communicated, educated, and gave information to the people about health (especially mother and child health). This activity resulted in decreasing the information gap. The partnership between midwife and traditional birth attendants decreased the socio-cultural gap. The partnership impacted positively to health outcomes. There was a significant decline in MMR, from 307 in 2002 to 262 in 2005.[15]

Conclusion

The analysis of maternal health services and outcomes focuses on the need for quality services; for which, availability of adequate and appropriate human resources is a critical pre-requisite. Diverse viewpoints have been accepted, appreciated, and experimented to meet these. The acceptance of TBAs in the health system and the current promotion of institutional delivery represent polar positions of sorts. While JSY has been able to increase the rate of institutional delivery, with monetary incentives (both for beneficiaries and service providers) playing a pivotal role, critical in most of the high-focus states of India, the rate of institutional delivery is low among rural and marginalized populations and MMR is double the national average [to illustrate, Shadol Division (with high proportion of tribal populations): 435 and Faizabad Division (with high proportion of minority populations): 451 over 100,000 live births]. The health system still lacks services and infrastructure to meet the increasing load in the health centers. Reviews of JSY have revealed the absence of corresponding inputs for human resources, additional labor rooms, and post-natal beds, drugs and other supplies in most institutions.[16] Our reach and effectiveness of rural health services are still not optimum and continue to be deficient in quality. With two-thirds of the population residing in rural areas, it is not possible that all normal births be attended by doctors and gynecologists given the shortage and the unwillingness to be placed in rural institutions.

The regulation, training, and practice of midwifery in India have a long history. Changing program priorities (and a target orientation) has led to the dilution in the midwifery role ANMs and consequent de-skilling; indeed she is increasing playing a managerial role *vis-à-vis* ASHAs and Anganwadi workers.

International evidences relate to the presence of midwives in resource constraint setting having significant and direct implication on MMR. The review of midwifery model of care practiced in Malaysia, Sri Lanka, and Indonesia reflects the effectiveness of midwifery model of care in resource poor settings. The strengths of the Malaysian and Sri Lankan systems are evident when compared to the Indonesian midwifery model; while the Indonesian village-based midwifery program made a concerted effort to scale up skilled attendance through a national policy of one midwife per village, it lacked the financial and infrastructural support to which the Malaysian and Sri Lankan programs' successes are attributed.

MMR, as envisaged in Millennium Development Goal (MDG) 5, can be achieved by targeted investment in maternal health, particularly in the training of SBA. The training needs to be made more relevant and responsive to the needs of women and prevailing health system.

The perspective drawn in this paper centers around providing quality (level of care is neither necessary nor a sufficient determinant) and timely care to all pregnant women during childbirth and postpartum care. It is essential for the country to focus on the revival of high quality, professionally trained midwives to form the backbone of maternal health services. There is a need to reorganize the field set up and enable midwives to work in teams with medical officers and obstetricians for adequately meeting the technical, referral, and managerial support within the health system.

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