REVIEW ARTICLE

The traditional birth attendants - Can we do without them?

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Abstract

India is facing a formidable task of tackling a very high neonatal mortality which contributes significantly to very high infant and under five mortality rates.[1] This unacceptable rate of newborn mortality can be traced to the absence of appropriate care for women and newborns at the community level. The problem is compounded with poor care seeking behavior, inadequate health care services, and a myriad of harmful traditional practices for maternal and child care.

Traditional birth attendants (TBAs) have traditionally been assisting the women during childbirth for centuries in India. TBAs provide community members with not only delivery services, but with emotional support and practical assistance both before and after the birth. TBAs are valued members of the community and can be more influential than outside medical personnel in encouraging community members to modify and improve existing practices surrounding pregnancy and childbirth.[2]

Currently, UN and government policies exclude TBAs from officially providing maternal or newborn care in the community. But there are several facts which question such a policy. Can we wish away the TBAs? Can we do without them?This communication will attempt to examine a constructive role of TBAs as a community health care provider including newborn care.

Key Words: TBAs, Newborn, Neonatal care

Existing scenario of newborn care at community level in India

Despite recent efforts to expand health care services to a larger segment of the population, the majority of the India's babies are still born without the benefit of modern health care services. A large proportion of these deliveries are performed by TBAs (traditional birth attendants). A study of the trends in the place of delivery in the country in the last 15 years, as depicted in three consequent national family health surveys, shows that still about 60% of deliveries are taking place at home. Although. There has been a small increase of about 13% in the institutional deliveries, 2/3 of this increase has gone to the private health facilities. Table 1 shows the trends in the place of deliveries. This clearly shows that in India a large number of estimated 25 million newborns births annually are still being assisted at home. In states like Rajasthan, Bihar, Madhyapradesh, Uttarpradesh and Chattisgarh; more than 70% deliveries are taking place at home.[1]

The trends in the assistance at delivery reveal that though the percentage of deliveries with skilled assistance has gone up from 34% in NFHS 1 to about 45% in NFHS 3, the quantum of deliveries being assisted by the TBAs has in fact slightly increased. TBAs were assisting about 35.2% deliveries in 1992 (NFHS 1), which has increased to 36.5% in 2005-06 (NFHS 3). This amounts to about 8.8 million births being annually assisted by the TBAs.

Is there a relationship between institutional delivery and neonatal survival?

Presently, there is a thinking that ensuring all the deliveries in the institutions will lead to a decrease in the neonatal mortality. A study of the available data contradicts this. In India, there are states, like Tamilnadu, which has achieved high institutional deliveries, still the neonatal mortality hovers around 30/1000 live births. At the same time there are states

Table 1. Trends in the place of delivery[1,3,4]

Delivery Place	NFHS 1 (%) 1992-93	NFHS 2 (%) 1998-99	NFHS 3 (%) 2005-06
Home	73.5	64.5	61.0
Institution	25.5	33.6	38.2
Public Institution	14.6	16.2	18.0
Pvt. Institution	*10.9*	*16.7*	*20.2*

like Nagaland and Manipur, which have majority of deliveries taking place at home and achieving a neonatal mortality rate about 29/1000 live births.[1] Does it mean that there are factors other than simply ensuring an institutional delivery to avert neonatal deaths?

Why did we abandon TBAs?

In spite of the facts that a large proportion of the births in the country are being assisted by the TBAs particularly in the areas where higher order health care is not accessible and the fact that the TBAs are culturally acceptable, the country health programmes have abandoned them since last many years.

If we look into the history, globally, the role of the TBA started to be taken seriously in the early 1950s when high maternal mortality rates became a concern in many developing countries. A number of studies, surveys and reviews generated international interest in the traditional healthcare provider, and several countries started training TBAs in clean and safe home delivery and some other healthcare-related roles.[5]

For more than 20 years, bilateral and international donor agencies and nongovernmental and local organizations poured resources into TBA training programs, with the expectation that TBAs would contribute to reductions in maternal mortality. But there was hardly any attempt to identify a role in areas other than maternal health care for this vast pool of community health care providers. In many developing countries, training of TBAs started in 1970s, supported by WHO and other agencies. In 1997, priority of the funding agencies and governments shifted towards skilled birth attendants who were defined as – trained midwives, nurses, nurse/midwives or doctors who have completed a set course of study and are registered or legally licensed to practice. Definition of skilled attendants excluded TBAs. This led to a withdrawal of funding for TBA training globally.

Do they fit into our needs?

As the nation struggles to reduce a very high neonatal mortality rate, we need to look for some innovative interventions involving available resources at the community level. India's reproductive and child health – 2 program[6] identifies following requirements for neonatal care:

- Home based newborn care
- Breastfeeding
- Care seeking for sick neonate
- Birth registration
- Improved facility based care of neonate

The RCH-2 National Program Implementation Plan states that "In view of the varying feasibility of the newborn health interventions and the health system capacity, it is proposed that a scenario-based approach may be taken at the state/ district level in prioritizing newborn health strategies. States with a high neonatal mortality rate (NMR), for example over 50 per 1000 births, are more likely to have deliveries at homes, often by TBAs and would have a high post-neonatal mortality due to poor conduct of the simple child survival interventions. These states may work with TBAs for improving home practices in newborn care, eliminating tetanus neonatorum, and promoting clean deliveries along with exclusive breastfeeding and birth spacing. In states with a NMR of 25-50 per 1000 live births the emphasis should be on home-based newborn care with the help of TBAs, AWWs and link volunteers."

In the year 1996, World Health Organization[7] defined following key interventions for essential newborn care. TBAs can contribute positively for each one of these interventions.

- Cleanliness: clean delivery and clean cord care for the prevention of newborn infections (tetanus and sepsis)
- Thermal protection: prevention and/or management of neonatal hypothermia and hyperthermia
- Early and exclusive breastfeeding
- Initiation of breathing, resuscitation
- Eye care: prevention and management of ophthalmia neonatorum
- Immunization
- Recognition of illness: at risk newborn– referral or management.
- Care of the preterm and/or low birth weight newborn: Additional warmth, cleanliness, nutrition, early recognition and management of diseases

Even for the skill intensive interventions like neonatal resuscitation, TBAs can be trained for evaluating the respiration, heart rate and color and they may also be taught actions like initial steps, and positive pressure ventilation. This will help majority of newborns who require active resuscitation.

TBAs as newborn care providers in the community

Between the 1970s and 1990s, the World Health Organization promoted traditional birth attendant (TBA) training as one strategy to reduce maternal and neonatal mortality. A number of studies during this period and afterwards revealed a positive impact of TBA training on neonatal survival and newborn care practices.

The role of TBAs in the community neonatal care has been recognized since long in our country by various expert committees, government agencies and the professional organizations. Some recommendations in this regard are as follows:

- Task Force on Minimal Perinatal Care (1982) recommended that Level I neonatal care will be imparted through the trained TBAs and female health workers in the community.[8] In the years that followed, several members of the NNF worked with community-based projects on newborn care to train traditional birth attendants, health workers, and nurses, developing small hospital newborn care models, utilizing workers of the Integrated Child Development services for newborn care, and simplifying the technology of newborn care to suit low-resource settings.[9]
- National Neonatology Forum of India (1991) recommended that TBA as link worker should help in ensuring registration of pregnancy, tetanus immunization, antenatal checkups, use of delivery kits and registration of births at sub centers. The forum further recommended that TBA as a trained care provider should have adequate skills for using delivery kit, bag and mask and spring balance; keep temperature record; ensure breastfeeding and infection control.[10]
- National Neonatology Forum of India (1998) drafted and provided guidelines on primary newborn care in which the training requirements for neonatal care in domiciliary deliveries were clearly defined.[11]

The Cochrane review 2007 titled "Traditional birth attendant training for improving health behaviours and pregnancy outcomes" included four studies, involving over 2000 TBAs and nearly 27,000 women. The authors found "The potential of TBA training to reduce peri-neonatal mortality is promising when combined with improved health services".[12]

Another meta-analysis including sixty studies spanning 1971-1999 from 24 countries and three regions found that TBA training was associated with significant increases in attributes such as TBA 'knowledge' (90%), 'attitude' (74%), 'behaviour' (63%) and 'advice' (90%) over the untrained TBA baseline. The review further established that TBA training was also associated with small but significant decreases in peri-neonatal mortality (8%) and birth asphyxia mortality (11%).[13]

There have been specific successful examples of utilizing services of TBAs in India to impart neonatal care at community level.

The rural neonatal care project, started by the government of Maharashtra in the Ganjad primary health centre, Dahanu block in Maharashtra, had the TBA as the sheet anchor for delivery of neonatal care. Maintenance of "warm chain" and resuscitation of an asphyxiated baby were recognized as the most important interventions besides detection of a very low birth weight/preterm baby and safe transportation of such a baby. Foot length measurement from foot print was used as a surrogate to birth weight as an indicator for referral. Neonatal and perinatal mortality rates dropped appreciably over 3 years and the antenatal registration went up by 30%. The cost of this programme is affordable and the programme itself was acceptable to the community and the TBAs because of its simplicity.[14]

Bang et al[15] undertook a randomized controlled trial in the rural settings of Gadhchiroli district. The project trained 86 TBAs in diagnosis and management of under-5 children with pneumonia ($n = 2568$ attacks). They were initially trained in visual judgment of fast breathing or difficult breathing; later in the project, 10 TBAs were trained in the use of simple breath counters. Training in safe and hygienic delivery and newborn care was also given. Community acceptance of case management by different workers was assessed. Surveys were conducted every 6 mo and causes of death in children were determined by verbal autopsy. A significant decline in neonatal mortality due to pneumonia (44%) was noted. The proportion of error-free case management by TBA increased continuously as the program progressed from 56.7% in the first year, to 68.6% in the second year, and 83.4% in the third year ($P < .0001$). The proportion of correct diagnoses by 10 TBAs increased from 60% to 82% when the breath counter was used.

Kumar[16] created a community-based surveillance system in the rural setting for the tracking of births and neonatal deaths in 54 villages. Over a period of 18 months trained field workers interviewed the family member who was present at the time of childbirth in 2041 deliveries within 2 wk after the birth. The interviews documented birth history, use of resuscitation, and the training status of the TBA, including advanced training. The results showed that the birth asphyxia prevalence was 0.9% among babies delivered by TBAs with advanced training, in comparison to 2.4% in babies delivered by conventionally trained TBAs ($P < .05$). The mortality rate specific to birth asphyxia was 70% less among babies delivered by TBAs with advanced training, in comparison to conventionally trained TBAs ($P < .05$). The fatality rate of asphyxia cases was 20% lower and the PMR was 19% lower (49.4/1000 vs 61.0/1000)

among newborns delivered by TBAs trained in use of resuscitation equipment compared to those delivered by TBAs trained for mouth-to-mouth breathing. However, given the small study size the difference did not reach statistical significance ($P > .05$).

A cluster randomized controlled trial from a rural district of Pakistan, in which of the estimated number of eligible women in the seven talukas, 10,114 (84.3 percent) were recruited in the three intervention talukas, and 9443 (78.7 percent) in the four control talukas. Follow-up to 42 days post partum was achieved for 10,093 women (99.8 percent) in the intervention group and 9432 women (99.9 percent) in the control group. There was a significant reduction in perinatal mortality of about 30 percent in the intervention group of this large trial. The odds ratio for various study indicators are given in the table 2.[17]

Refocusing the role of TBAs – Expanding the horizon

There is need to refocus on the role of this vast group of traditional health care providers in the community. They may contribute in providing essential newborn care; community education and mobilization to improve care seeking; health education on maternal and infant nutrition and family planning; ensuring supplements to pregnant women; supplying contraceptives and ORS.[18]

TBAs as community health workers

Some initiatives to achieve above said activities have already begun. In the Gujarat state of India, TBAs (Dais) are being reinstated as community Health Worker and rechristened as swasthya sathi. 400 TBAs of Ahmedabad district are now successfully working in their own villages as a community health worker, barefoot counselor, promoter of traditional medicines and an insurance promoter. The health program has now been expanded to the urban areas in Ahmedabad, Surat and Vadodara cities as well. A team of 46 Swasthya Sathis, 12 Sevikas and 3 Supervisor are working in this initiative. They are part of the health services developed for self-employed women workers and their families in more than 100 slum.[19]

Another land mark activity has been formation of a Statewide registered network of organizations (The Dai Sangathan) working with TBAs in Gujarat state. The founding partners for this network are Chetna, Deepak Foundation, SAARTHI, SEWA, SEWA-Rural and SWATI and others. To formally launch the network, a Dai Sammelan was held in partnership with the H and FW Department of the Government of Gujarat on 11th of April 2005. The Government of Gujarat formally recognized the Dai Sangathan. The main objective of the network is to improve public health services in the state with a focus on women and children's health. Also, Through its strong network of dais, the Sangathan holds district, state and national level meetings to raise issues related to dais.[20]

TBAs for protection, promotion and support of breastfeeding

An innovative intervention in the Lalitpur district of Uttarpradesh in India to improve infant feeding practices in the community has found that TBAs along with the anganwadi workers and ASHA could play a useful role in forming a mother support group to help the families.The 3 member team of AWWs, ASHA and Dai, Link mothers from each village trained to promote and support optimal infant and young child feeding. The initiative could establish 600 Mother Support Groups in 6 blocks of Lalitpur district.[21]

In another innovative initiative undertaken by India Rural Reconstruction and Disaster Response Service (PREPARE) and WABA among Rural Women in Andhra Pradesh, South India, a training in lactation management was conducted for 146 Traditional Birth Attendants (TBA) who were working on three project areas. These trained TBAs provided support to women with information on the benefits of breastfeeding, trained mothers in lactation management, and set up village level vigilance committees to counter sale and

Table 2. Odds Ratios for Primary and Secondary Outcomes (modified from ref no. 17)

Indicator	Intervention Group N = 10,093	Control Group N = 9432	Adjusted OR (95% CI)	p Value
Perinatal Death	823 (8.47)	1077 (11.9)	0.70 (0.59 – 0.82)	< 0.001
Still Births	483 (4.97)	638 (7.10)	0.69 (0.57 – 0.83)	<0.001
Neonatal Deaths	340 (3.5)	439 (4.88)	0.71 (0.62 – 0.83)	< 0.001
Maternal hemorrhage	174 (1.72)	259 (2.75)	0.61 (0.47 – 0.79)	<0.001
Puerperal Sepsis	78 (0.77)	400 (4.24)	0.17 (0.13 – 0.23)	< 0.001
Referral to EOC	1008 (9.99)	654 (6.93)	1.50 (1.19 – 1.91)	< 0.001

promotion of commercial milk.[22]

TBAs and prevention of perinatal transmission of HIV

Worldwide, more than one million women infected with HIV are estimated to deliver babies without professional help each year. To extend the benefits of recent advances in perinatal HIV research to women in rural communities is a tremendous challenge. As global efforts to prevent perinatal transmission of HIV traditional birth attendants could play a key role in implementing effective interventions in poor rural settings. It may be possible to train traditional birth attendants to perform confidential HIV counselling and testing. With appropriate training, supervision, and support, traditional birth attendants could offer HIV prevention services and help with antiretroviral prophylaxis at delivery.[23]

Tasks for birth attendants to help prevent perinatal transmission of HIV[23]

- Disseminate information about how HIV can be transmitted between mother and child and explain effective strategies to prevent such transmission
- Identify pregnant women in their communities and facilitate the use of available antenatal and maternity care
- Make sure that pregnant women and their partners are routinely offered HIV counselling and testing and that their uptake of this is facilitated
- Reinforce health messages, including the importance of improved nutrition during pregnancy
- Supervise directly observed treatment of mother and infant with nevirapine
- Offer advice on reducing the risk of HIV transmission to women and their partners.

A recent report from Zimbabwe has found that participation of traditional birth attendants in prevention of mother-to-child transmission of HIV services culturally acceptable and beneficial. The study further concluded that "TBAs are willing to expand their scope of work regarding activities related to PMTCT. There is a need to reinforce their knowledge on MTCT prevention measures and better integrate them into the health system".[24]

Conclusion

This will be prudent to say that TBAs may prove a valuable partner to improve New born survival in our country. To achieve their maximum participation, the country needs:

- To have a reappraisal of our current child health program to give a suitable place to TBAs in the health care delivery system
- To Integrate TBAs in newborn health programs
- To utilize the expertise and experience of TBAs in other community based health delivery programs
- To evolve an effective TBA training program
- To improve capacity for evaluation and research of the TBA training program
- To ensure that health centers and hospitals accepts referrals from TBAs

At the same time, the training programs for TBAs must be properly designed in the local dialect with easy to understand methodology having more pictorials.[25] If TBAs are to be trained, it is imperative that their training be adequately evaluated in order to develop the strong evidence base that is lacking to-date and that is necessary for sound policy and programming.

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Newborn Week 2010

15th – 21st November 2010

Theme**: Improving care of LBW babies**

This is to request all state branches to observe this year's Newborn Week with commitment towards reducing morbidity and mortality related to Low birth weight. Please organize activities with the theme **"Improving care of LBW babies"**. Each branch and its members are requested to conduct workshops related to care of low birth weight babies for all categories of health personnel including birth attendants, midwives, nursing personnel, medical students and serving as well as practicing physicians. All the state and city branches of NNF are requested to compile the work and activities done during Newborn week for poster presentation to be put up during the Annual convention at Chennai in 2011.