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Traditional Birth Attendants and Birth Outcomes in Low-Middle Income Countries: A Review

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Abstract

Traditional birth attendants (TBAs) have provided delivery care throughout the world prior to the development of organized systems of medical care. In 2016, an estimated 22% of pregnant women delivered with a TBA, mostly in rural or remote areas that lack formal health services. Still active in many regions of LMICs, they provide care, including support and advice, to women during pregnancy and childbirth. Even though they generally have no formal training and are not recognized as medical practitioners, TBAs enjoy a high societal standing and many families seek them as health care providers. They are generally older women who have acquired their skills acting as apprentices of other TBAs or are self-taught.

WHO and other international organizations have focused maternal mortality reduction efforts on the availability of skilled birth attendance, which excludes TBAs as providers of care. However, as countries move towards SBA, policy makers need to make the best use of TBAs while simultaneously planning for their replacement with skilled attendants. They often serve as a bridge between the community and the formal health system; once women are inside an institution, TBAs

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could potentially act as doulas, providing company and making women feel more comfortable in an unknown environment. In this paper, we will review who TBAs are, how many births they attend worldwide worldwide, where they provide delivery care, and finally, their relationships with the formal health care system and the communities they serve.

Introduction

For most of recorded history, women gave birth in their homes, often attended by a family member or assisted by a woman residing in the community who had experience assisting with childbirth. These community women, often called traditional birth attendants (TBAs), provided most of the delivery care throughout the world prior to the development of specialized nurses, midwives and physicians, and organized systems of medical care. At present, TBAs generally have no formal training and are not recognized by the medical authorities as medical practitioners. While the rates of women delivering within the formal health care system have increased in recent years, in 2016, an estimated 22% of pregnant women world-wide delivered with a TBA, outside the formal healthcare system. In some regions, more than half of all women still receive prenatal care and deliver with TBAs [1]. In this paper, we will review TBAs, including who they are, how many births they attend worldwide worldwide, where they provide delivery care, and finally, their relationships with the formal health care system and the communities they serve.

Who are TBAs?

A distinction should be made between TBAs and midwives. While both attend deliveries, the latter attend deliveries mainly within health facilities, in both high-income country (HIC) and low-middle income country (LMIC) settings. Unlike TBAs, midwives are considered part of the health care system, are formally trained and associated with professional associations with routine certification processes. Over the last several centuries, first in HIC and then gradually across most regions of the world, the role of midwives has decreased as physicians have assumed a greater and greater role in childbirth. In many HIC, physicians now perform most deliveries.

Still active in many regions of LMICs, TBAs provide care, including support and advice, to women during pregnancy and childbirth. TBAs usually work in rural or remote areas that lack formal health services[2]. They are generally older women who have acquired their skills acting as apprentices of other TBAs or are self-taught. Most lack formal training in health care. There are no specific professional or legal requisites to work as a TBA, although some governments maintain a register of the geographic areas were TBAs work (frequently adjacent to their own homes), and of the deliveries they attend[3]. In terms of the knowledge, training, skill, and practices of TBAs, a survey of more than 1,200 TBAs done in 6 LMICs (India, Pakistan, Guatemala, Democratic Republic of the Congo, Kenya and Zambia) found that they were often illiterate, could not read numbers and had little formal training[4].

TBAs often serve as a bridge between the community and the formal health system[5,6]. In addition to pregnancy and childbirth services, TBAs often carry out other tasks, such as

cooking or caring for other children around childbirth as well as serving as herbalists or traditional healers in the community.

Because TBAs work all over the world, their nature and function vary considerably. In India, their work has been related to being of the lower castes that can be exposed to the "polluting" practice of childbirth [1]. In Guatemala, where the TBAs are known as "comadronas", a women becomes a TBA founded on the belief that her abilities are a gift from God, revealed in a dream or a vision which must be accepted[8]. In the rural south of the Unites States, "Granny midwives", were important providers of care around delivery as far back as 1619[9]. They were a crucial part of health care for enslaved women living on plantations of the south and continued to serve rural communities long after slavery was abolished and well into the twentieth century[9]. In Alabama, USA, when black women were refused entry into many hospitals, even into the 1970s, TBAs provided care at home for many of these women[10,9].

How Many Women are Delivered by TBAs?

While rates of home delivery have decreased in LMICs, about 25% of deliveries world-wide still occur outside a health facility and there are large disparities in these rates with more than half of the women in some regions delivering outside the health system [1]. Even though some of these deliveries are attended by family members or health providers that are linked to formal health care systems, the vast majority are attended by TBAs[3]. TBAs work mostly in LMICs of most regions of the world. Although most of the births they attend occur in rural communities, they still attend births in urban settings, especially among the poor. The proportion of deliveries attended by TBAs in LMIC sites affiliated with the Global Network for Women and Children's Health Research, a multi-site research network which evaluates population-based delivery trends, declined from 40.6% in 2010 to 22.0% in 2017 (Table 1).

In parallel with increasing facility delivery rates, the proportion of deliveries attended by TBAs has been slowly decreasing. The rate of skilled birth attendance (SBA), the process by which a woman is provided with adequate care during labor, delivery and the early postpartum period (Safe Motherhood Interagency Group), has steadily increased from 55% to 65% worldwide between 1990 and 2009[11] to 78% in 2016. However, some countries still have a very large proportion of deliveries attended by TBAs. The SBA rate is lowest (50%) in the least developed countries worldwide, and in sub-Saharan Africa and south Asia [1]. For example, a recent analysis of deliveries in South Asia and sub-Saharan Africa from 2011 to 2015 estimated that 130 to 180 million births - approximately 42 to 48% of all births - were not attended by a SBA[12]. More than 90% of these births without SBA occurred in rural areas, where most births were attended by TBAs.

TBAs and the Health System

There has long been tension between TBAs and the formal health care system. Some countries have created policies to phase out the work of TBAs and replace them with SBAs. In India, various strategies (including conditional cash transfers) have been successfully implemented to promote skilled attendance at birth[13]. Other countries have created policies

to ban the work of TBAs, without the simultaneous provision of SBA for all women [14]. After the Alma Ata Declaration of 1978, the World Health Organization (WHO) and other international organizations actively promoted the training and "legalization" of TBAs[7]. Two decades later, after multiple studies found that TBA training was not effective in reducing maternal mortality[7,15], the WHO has focused maternal mortality reduction efforts on the importance of having skilled birth attendance (which excluded TBAs) for all deliveries[16]. Despite this exclusion, the reality is that TBAs continue to play an important role in the care of women during pregnancy and delivery in many LMICs. This role is largely independent of the official policies in place that regulate or ban their practice.

Most interactions between health services and TBAs have focused on training programs. The initial training programs primarily focused on clean delivery and maternal health outcomes; neonatal health was not considered until later[15,17]. In many countries, these TBA training programs continue to exist, carried out by ministries of health, educational institutions, church groups or other organizations. They usually have little or no regulation and vary in length, methodology and efforts for follow up.

In addition to local efforts, various international educational packages have been adapted for use in the communities, including by TBAs, including the American Academy of Pediatrics' neonatal resuscitation protocol and the WHOs' Essential Newborn Care program[18]. There are many reports on the success of the training programs and their impact. For example, a program carried out in Guatemala found that TBAs could increase their basic obstetric knowledge and were able to identify problems requiring referral. However, follow up in the field also found weaknesses in such areas as hand washing and discussion of planning for emergencies with the family[8]. The main benefits from TBAs training appear to be improved referral and links with the formal health care system, but only where essential obstetric services are available[17,7].

Certain contextual factors may influence the success of any TBA training program including the TBAs' educational and skill level and the number of deliveries they usually attend. In general, the educational level of the TBAs is very low. One survey performed in seven research sites [4](DRC, Zambia, Kenya, Guatemala, Pakistan and India) found that 70% of TBAs were illiterate and the vast majority had no formal schooling. Only 62.9% could tell time and 14.4% could count a heart beat with a stethoscope. In contrast, the Indian auxiliary nurse midwives (ANMs), who are formally part of the system and who were also included in the survey, had an average of 12 years of schooling and 67% had completed a degree. Only 7% of TBAs reported routinely taking blood pressure and 3% reported the ability to repair a vaginal laceration. Although most TBAs reported that they referred bleeding women to a health facility, the recommended practices related to postpartum hemorrhage, such as uterine massage, was variably practiced. In nearly all sites, the TBAs performed 1 to 4 deliveries per month, due mainly to the wide dispersion of communities geographically, which define the relatively small areas where each TBA works. This helps to explain why the skills necessary to manage the occasional emergencies they encounter are often forgotten.

A number of studies have been carried out on the impact of TBA training on pregnancy outcomes. One meta-analysis carried out to assess the effectiveness of strategies

incorporating training and support of TBAs found that perinatal and neonatal deaths were significantly reduced with interventions incorporating the training, linkage and support of TBAS[19]. This same review found no impact of TBAs training on maternal mortality. These findings highlight that the use of TBAs without an appropriate package of training, support, linkage with healthcare institutions and resources is unlikely to be effective.

The Lufwanyama Neonatal Survival Project in Zambia found that TBAs were effective in conducting a clinical evaluation, administering a first dose of antibiotics, and referring[20]. They also found that training in management of common perinatal conditions reduced neonatal mortality, mainly due to reductions in birth asphyxia. They found no impact on deaths due to infections or on stillbirths[21]. The First Breath study, carried out in seven sites of LMIC found a decrease in stillbirths and no decrease in early neonatal deaths, after training of community-based birth attendants, which included both TBAs and SBAs[22].

Few studies have been done to measure the effectiveness of interventions in the transition to SBA[11], but some have shown positive effects on maternal health. These include studies on ways to deploy midwives closer to communities, addressing of financial barriers, subsidies for preventive and maternal care, and incentives to skilled care providers [11]. It is important to highlight that the most effective studies have found the need to go beyond only providing skilled attendance, and ensure that they are addressing the demand side, such as through including cultural preferences and the need for family and communication support for maternal welfare[11]. Sustainability also needs to be addressed, especially of practices evaluated in pilot studies.

A systematic review of births in community settings found that the evidence for providing skilled birth attendance in the community is of low quality, even though they did find reductions in perinatal mortality and intrapartum related neonatal mortality[17]. They added that TBA training may improve linkages with facilities and improve perinatal outcomes.

Thus, the evidence suggests that training of TBAs should be given a lower priority than developing essential obstetric care services and referral systems (Emergency Obstetric and Neonatal Care). Policy makers need to make the best use of TBAs while simultaneously planning for their replacement with skilled attendants. However, there will be associated costs and countries must be ready to make this transition. Training of nurse midwives may be a step in this direction. However, as shown in Indonesia, training of nurse midwives without addressing referral systems and the provision of emergency obstetric care will likely not have a major impact on maternal mortality[23].

Interaction with mothers in the community

In rural settings of LMICs, many women prefer the care provided by TBAs compared to the care provided inside health services by formally trained health personnel. Some of the reasons mentioned for this preference are cultural, in the sense that it is “customary” for women ir communities to deliver babies with the assistance of the TBAs, who enjoy high societal standing within communities and are trusted[3,24.] Mothers report that this care is preferred because TBAs speak the same language, carry out the same practices, such as

using a vertical birthing position, warm ambient temperature and use of mud huts for labor[24,25].

In addition to the positive aspects of being attended by a TBA, women also report financial and a number of other barriers to receiving care at formal health services, including bad roads, and lack of transport and distance[24,26]. Finally, women report poor quality and impersonal care within the formal health services, as well as distrust of staff who seem to be too young or poorly trained[25,27].

Moving forward

As defined in the Millennium Development Goal 5, the global consensus is that all deliveries should occur with a skilled birth attendant. Provision of skilled birth attendance will require personnel (that are adequately trained, equipped and supervised) as well as the 'enabling environment' that encompasses political will, policy and sociocultural influences[28]. As countries move towards provision of SBA for all women, careful consideration should be given to the potential role of TBAs. Although there are limitations in the data because of study design, it appears that TBA training can improve some neonatal outcomes but will likely have no impact on reducing maternal mortality. These study results can be taken into account in the design of strategies for phasing out home and community deliveries.

The significant cultural issues and high social standing that surround TBAs should also be taken into account in this process. Multiple studies in different contexts have found them to be effective in linking communities to health systems. Instead of excluding or "outlawing" TBAs, an appropriate role for them could be to direct pregnant women and infants to health systems. For example, in India the "*Janani Suraksha Yojana (JSY*)" cash transfer programs included Accredited Social Health Activist (ASHA) workers as an effective link between the government and pregnant women, in order to increase institutional delivery. Once women are inside an institution, TBAs could potentially act as doulas, providing company to the women in labor and making her feel more comfortable in an unknown environment. Because of their important role, interventions geared at shifting deliveries from communities to inside formal health services should also recognize the role of fathers and grandmothers as well as TBAs in choosing a place for delivery[29].

Conclusions

In summary, while TBAs' role in providing health care for women is declining overall, it is clear that this cadre of women continues to have an important responsibility, and especially in some rural, under-served regions of the world where health services are deficient. While there is an imperative to improve women's access to skilled health providers in health facilities, especially in rural areas of the world, there remains lack of availability of trained providers. In addition to financial and structural constraints, cultural considerations also play a role in some women's preference to receive care from women residing in their communities. Given the ongoing role of TBAs in many regions, understanding these issues will be important moving forward towards improvements in maternal and neonatal health.

References

1. UNICEF. A Fair Chance for Every Child.; 2015. doi:10.18356/4fb40cfa-en
2. González GIL T Systematic review summary - Traditional birth attendant training for improving health behaviours and pregnancy outcomes. Singapore Nurs J. 2013;40(4):45–46. http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2012351860&site=ehost-live.
3. Lane K, Garrod J. The return of the Traditional Birth Attendant. J Glob Health. 2016;6(2). doi:10.7189/jogh.06.020302
4. Garces A, McClure EM, Chomba E, et al. Home birth attendants in low income countries: who are they and what do they do? BMC Pregnancy Childbirth. 2012;12. doi:10.1186/1471-2393-12-34 [PubMed: 22390254]
5. Isenalumbe AE. Integration of traditional birth attendants into primary health care. World Health Forum. 1990:192–198. http://www.biomedcentral.com/content/pdf/1471-2296-14-60.pdf. [PubMed: 2271097]
6. Jiang H, Tang S, Li J, Chen L, Escobar E, Qian X. Task shifting of traditional birth attendants in rural China: a qualitative study of the implementation of institution-based delivery policy. Lancet. 2015;386:S41. doi:10.1016/S0140-6736(15)00622-4
7. Bergström S, Goodburn E. The Role of Traditional Birth Attendants in the Reduction of Maternal Mortality. Reprod Health. 2007:1–21. http://www.modirisk.be/MODIRISK/GeneralSite/InfServices/Downloads/shsop17.pdf#page=85. [PubMed: 17324289]
8. Hernandez S, Oliveira JB, Shirazian T. How a Training Program Is Transforming the Role of Traditional Birth Attendants from Cultural Practitioners to Unique Health-care Providers: A Community Case Study in Rural Guatemala. Front Public Heal. 2017;5(May):1–8 doi:10.3389/fpubh.2017.00111
9. Bonaparte A The Persecution and Prosecution of Granny Midwives in South Carolina, 1900 - 1940.; 2007.
10. Goldenberg RL, Hale C, Houde J, Humphrey J, Wayne J, Boyd B. Neonatal deaths in Alabama III Out of hospital births 1940 – 1980. Am J Obstet Gynecol. 1983;147(6):687–693. [PubMed: 6638115]
11. Vieira C, Portela A, Miller T, Coast E, Leone T, Marston C. Increasing the Use of Skilled Health Personnel Where Traditional Birth Attendants Were Providers of Childbirth Care: A Systematic Review. PLoS One. 2012;7(10):1–9. doi:10.1371/journal.pone.0047946
12. Crowe S, Utley M, Costello A, Pagel C. How many births in sub - Saharan Africa and South Asia will not be attended by a skilled birth attendant between 2011 and 2015? BMC Pregnancy Childbirth. 2012. doi:10.1186/1471-2393-12-4
13. Goudar SS, Goco N, Somannavar MS, et al. Institutional deliveries and perinatal and neonatal mortality in Southern and Central India. Reprod Health. 2015;12(Suppl 2):S13. doi:10.1186/1742-4755-12-S2-S13 [PubMed: 26063586]
14. Bucher S, Konana O, Liechty E, et al. Self-reported practices among traditional birth attendants surveyed in western Kenya: A descriptive study. BMC Pregnancy Childbirth. 2016;16(1). doi:10.1186/s12884-016-1007-8
15. Sibley LM, Sipe TA, Brown CM, Diallo MM, McNatt K, Habarta N. Traditional birth attendant training for improving health behaviours and pregnancy outcomes. Cochrane Database Syst Rev. 2007;(3). doi:10.1002/14651858.CD005460.pub2
16. WHO, ICM F. Making Pregnancy Safer: The Critical Role of the Skilled Birth Attendant. Vol 76; 2004. doi:10.1016/j.optm.2005.08.001
17. Darmstadt GL, Lee ACC, Cousens S, et al. 60 Million non-facility births: Who can deliver in community settings to reduce intrapartum-related deaths? Int J Gynecol Obstet. 2009;107(SUPPL.). doi:10.1016/j.ijgo.2009.07.010
18. Gill CJ, Guerina NG, Mulenga C, Knapp AB, Phiri-Mazala G, Hamer DH. Training Zambian traditional birth attendants to reduce neonatal mortality in the Lyfwanyama Neonatal Survival Project. Int J Gynecol Obstet. 2012. doi:10.1038/jid.2014.371

19. Wilson A, Gallos ID, Plana N, et al. Effectiveness of strategies incorporating training and support of traditional birth attendants on perinatal and maternal mortality: Meta-analysis. BMJ. 2012;344(7840):1–10. doi:10.1136/bmj.d7102

20. Gill CJ, MacLeod WB, Phiri-Mazala G, et al. Can traditional birth attendants be trained to accurately identify septic infants, initiate antibiotics, and refer in a rural African setting? Glob Heal Sci Pract. 2014;2(3):318–327. doi:10.9745/GHSP-D-14-00045

21. Gill CJ, Phiri-Mazala G, Guerina NG, et al. Effect of training traditional birth attendants on neonatal mortality (Lufwanyama Neonatal Survival Project): Randomised controlled study. Bmj. 2011;342(7793):373. doi:10.1136/bmj.d346

22. Carlo WA, Goudar SS, Jehan I, et al. Newborn-Care Training and Perinatal Mortality in Developing Countries. N Engl J Med. 2010;362(7):614–623. doi:10.1111/1365-2656.12069 [PubMed: 20164485]

23. Press TNA. Reducing Maternal and Neonatal Mortality in Indonesia: Saving Lives, Saving the Future.; 2013. doi:10.17226/18437

24. Why Traditional Birth Attendants are Still First Choices of Delivery Attendants for Pastoralist Communities of Afar , Ethiopia ?

25. Sialubanje C, Massar K, Hamer DH, Ruiter RAC. Reasons for home delivery and use of traditional birth attendants in rural Zambia: A qualitative study. BMC Pregnancy Childbirth. 2015;15(1):1–12. doi:10.1186/s12884-015-0652-7 [PubMed: 25591791]

26. Titaley CR, Hunter CL, Dibley MJ & Heywood P Why do some women still prefer traditional birth attendants and home delivery?: a qualitative study on delivery care services in West Java Province, Indonesia. BMC Pregnancy Childbirth. 2010:10–43. [PubMed: 20184764]

27. Garces A, Garces MC, Aguilar Zil ML. Determinantes del Acceso a Servicios de Salud Reproductiva en el municipio de Santa Apolonia Chimaltenango. Determ del Acceso a Serv Salud Reprod en el Munic St Apolonia Chimaltenango. 2011:1–22. http://www.unfpa.org.gt/sites/default/files/AccesoaserviciosdesaludReproductiva-StaApoloniaChimaltenango.pdf.

28. Adegoke AA, Van Den Broek N. Skilled birth attendance-lessons learnt. BJOG An Int J Obstet Gynaecol. 2009;116(SUPPL. 1):33–40. doi:10.1111/j.1471-0528.2009.02336.x

29. Wehr H, Chary A, Webb MF, Rohloff P. Implications of Gender and Household Roles in Indigenous Maya Communities in Guatemala for Child Nutrition Interventions. Int J Indig Heal. 2016;10(1):100–113.

Table 1.

Proportion of deliveries conducted by Traditional Birth Attendants (%) in Global Network for Women's and Children's Health Research sites, 2010-2017

	2010	2011	2012	2013	2014	2015	2016	2017
DRC	NA	NA	NA	NA	38	34	26	14
Kenya	51	48	43	36	25	17	13	16
Zambia	29	31	25	17	11	8	7	5
India	6	3	1	1	0.5	0.1	0.1	0.1
Pakistan	48	46	42	37	39	40	41	38
Guatemala	69	63	56	42	38	36	38	37