REVIEW ARTICLE

TRADITIONAL BIRTH ATTENDANTS AND REPRODUCTIVE HEALTH SERVICES IN THE CONTEXT OF COVID-19: A SCOPING REVIEW

[1]Gadanya MA, [2]Adamu KA, [3]Ibrahim UM

[1] Department of Public Health, Bayero University/Aminu Kano Teaching Hospital, Kano. Nigeria.
[2] Federal Medical Centre Birnin Kudu, Jigawa State, Nigeria.
[3]Department of Public Health, Jigawa State Ministry of Health Dutse, Jigawa State.

Correspondence and reprint request to: Dr MA Gadanya, Department of Public Health, Bayero University/Aminu Kano Teaching Hospital, Kano. Nigeria.
Email: magadanya.cmed@buk.edu.ng
Phone: +234-8035880932,

ABSTRACT

Background: In developing countries, the lack of accessible, affordable and acceptable orthodox care makes a significant proportion of the populace patronize the nearby available and cheap traditional birth attendants (TBAs) that share similar local custom and tradition. Although there are widely diverging shreds of evidence regarding their effectiveness as health care providers, they may have a limited role as a workforce during the ongoing COVID-19 pandemic where the more community-based distribution of commodities is increasingly considered due to movement restrictions. However, it is still doubtful if their integration into the formal health system may substantially contribute to basic health care delivery especially in the rural often hard to reach areas. **Objectives:** To explore the various roles of TBAs in reproductive health service delivery with implication for redefining their roles especially with the advent of the COVID-19 pandemic. **Methodology**: We searched and reviewed relevant literature on TBAs in PubMed, Africa Journals Online (AJOL) and Google scholar and relevant institutional websites for the role of TBAs pre and during the pandemic. The databases searched yielded 92 articles of potential significance to this review. After title/abstract review, 65 articles were moved to full document review. Nineteen articles explicitly and strictly focusing on TBAs concerning reproductive health were included in this review. **Results:** TBAs are providers of a wide range of reproductive health services and training to expand their roles and makes them safer is necessary for any consideration of their engagement; this implies the fight against COVID-19. TBAs should only be engaged if the gap in the resources for health must be filled by leveraging on their existing traditional roles and acceptance in the community. **Conclusion:** TBAs are widely utilised providers of care to their communities especially in the area of maternal care. With increasing emphasis on community-based services in healthcare delivery and the emergence of COVID-19, their roles must be reviewed and updated regularly to redefine their role in the health care delivery system especially because of the myriad personal and technical limitations associated with them. Any engagement with them should be with caution and as a stop-gap measur.

Key words: Community Health, Health System, Maternal Health, Traditional Birth Attendants

INTRODUCTION

Qualified human resource is regarded as a key component for a successful health system.[1] According to the world health organization (WHO), there is a shortage of health workers worldwide and a great number of countries lack the necessary human resources for health (HRH)to perform and deliver the basic primary health care services.[2] In response to these challenges, the WHO

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states that increasing capacity building for informal health workers can respond to the widespread problem of HRH. This should focus on the use of community-based health workers in developing countries where formal health workers are inadequate to deliver health care services specifically to the poorest and most vulnerable communities in remote rural areas. The initial concept has been in use for several decades to render certain basic health care services to the underserved population.[2]

Traditional birth attendants (TBA) are widely known as respected community or family members (normally a female in old age groups) who are products of tradition in assisting mothers during home delivery. [2,3] United Nations (UN) therefore defined TBA as a person who assists mothers during childbirth and initially acquired her skills by delivering babies herself or through apprenticeship to other TBAs.[2]

TBAs are important providers of maternity care in developing countries. Many women in low- and middle-income countries deliver at home, assisted by family members or TBAs who lack formal training and their skills are initially acquired by delivering babies and apprenticeships with other TBAs. Governments and other organisations have conducted training programmes to improve their skills and to link TBAs to health services. There is disagreement about whether these training programmes are effective.

This review identified the roles of TBAs and the possible consequences of their roles in reproductive health care services in the current challenging times posed by the COVID-19 pandemic. It also provides the foundation upon which to incorporate future studies on the effect of training TBAs for improved reproductive health outcomes in general.

MATERIALS AND METHOD

We conducted scoping review of the literature to identify the following:

1. The roles of TBAs in healthcare delivery
2. Training TBAs in healthcare delivery
3. The effectiveness of trained TBAs in Healthcare Delivery
4. The impact of COVID-19 on Sexual and Reproductive Health Services and the roles of TBAs

Both qualitative and quantitative studies irrespective of the study designs and guidelines that worked on the roles of TBAs in healthcare delivery, training of TBAs in healthcare delivery, the effectiveness of trained TBAs in healthcare delivery and the impact of COVID-19 on sexual and reproductive health were considered for review. The context was the role of TBAs at community levels in the delivery of healthcare services in the era of the COVID 19 pandemic.

We searched the following databases and websites www.ncbi.nlmi.nih.gov/pubmed and www.ajol.info and www.scholar.google.com and other relevant websites like www.who.int and www.ncdc.gov.ng followed by an analysis of text words contained in the titles and abstracts, and of the index terms index used to describe the article. We conducted the second search using all identified keywords and index terms across the included databases, for articles on TBA, dates between 2013 to 2019 and up to (as of 30th June 2020 for information on the COVID-19 pandemic and the resulting impacts on the sexual and reproductive health services.) for the WHO website, using search terms which include; "Traditional birth attendant," "TBA," "Traditional midwife/midwives," "Lay midwife/midwives," "Traditional family birth attendant," "Traditional home birth attendant," "Family birth attendant." We use "role/role of" "train/teach/educate," "evaluate/compare and "impact/outcome" on the aforementioned search terms. Similarly, we searched the Cochrane library for related literature including an updated Cochrane review up to 2019. We also conducted a grey literature search including contacting relevant researchers and state ministries of health (SMoHs) on the related worksThe reference list of the identified reports and articles were searched for additional studies. All the studies in English or French were reviewed because; most of the databases had the published studies in the two languages

RESULTS

The databases searched yielded 92 articles of potential significance to this review. After title/abstract review, 65 articles were moved to full document review. Nineteen articles explicitly and strictly focusing on TBAs concerning reproductive health were included in this review.

TBAs provide general healthcare and support to

Table 1: Characteristics of articles used in this review (*note that only articles published from 2013 to 2019 were included*) (*Source: primary search by Gadanya MA, 2019*)

S/N	Author	Year	Country	Type of study	Summary of findings
1	Gurara et al.	2019	Ethiopia	Qualitative	TBAs actively assist home birth and women prefer them due to their friendliness. Poor access to health facilities, health workers' attitude and absent partnership between TBAs and the formal health system increase women preferences for TBA services.
2	Adatara et al	2019	Ghana	Qualitative	The respondents lack confidence in skilled birth attendants as they disrespect their traditional beliefs, local culture and norms. There is also poor interaction between skilled birth attendants in the formal health system and traditional birth attendants.
3	Downe et al	2019	Many countries	Systematic review	Women use antenatal care if it is a positive experience that fits with their beliefs and values, accessible, affordable, and treats them well, a kind of care that helps them to feel they and their baby are safe which is provided by culturally sensitive, and respectful staff that have time to give them support and reassurance. The healthcare staffs want to be able to offer this kind of care in antenatal services that are properly funded, give them proper support, pay, training and education.
4	Mohammed et al	2018	Ethiopia	Qualitative	Women preferred to deliver at home due to lack of awareness about the benefits of maternity health facilities, their nomadic lifestyle, lack of confidence and trust in health workers and their easy access to cheap traditional birth attendants.
5	Miller et al	2017	Many countries	Review article	Barriers to implementation of transition strategies from traditional to skilled delivery included resistance to change in more traditional communities, negative attitudes of TBAs towards skilled attendants and concerns about the financial implications of assuming new roles. Identified factors that facilitate skilled birth delivery included stakeholder involvement in devising and implementing interventions, knowledge sharing between TBAs and skilled birth attendants, and formalised roles, responsibilities and remuneration for TBAs.
6	Ndoua et al	2017	Cameroun	Qualitative	Traditional birth attendants are an essential component in reducing maternal and neo-natal in low-income countries, they need to be empowered in recognizing danger signs of pregnancies and the prevention of infections.
7	Pantoja et al	2017	Many countries	Systematic review	Strategies for implementing evidence-based interventions in low-income countries using sound systematic review methods targeting different levels in the health systems must address a range of outcomes. The currently available evidence is focused on strategies targeted at healthcare workers and recipients, and assessment of process of care outcomes.
8	Chukwuma et al	2017	Nigeria	Qualitative	Differences in TBA referral before, during, and after delivery appear to reflect the TBAs understanding of the added value of skilled care for the client and the TBA, as well as the TBA's perception of the implications of referral for her credibility as a maternal care provider among her clients. There are also opportunities to engage TBAs in routine postnatal care referrals to facilities in Nigeria by using incentives and promoting a cordial relationship between TBAs and skilled health workers.
9	Ogunlaja et al	2017	Nigeria	Case report	Advocacy and legislation should be strengthened to ensure improved education. Policies may be put in place to encourage TBAs who refer patients to the hospital especially before the onset of complications. Collaboration between TBAs in the community and health care workers in the facility should be encouraged.
10	Turinawe et al	2016	Uganda	Qualitative	Men also actively seek for TBA services for their wives' healthcare within the community. TBAs in turn sensitize men using both cultural and biomedical health knowledge, and become allies with women in influencing men to provide resources needed for maternity care.
11	Anderson et al	2016	Nigeria	Cross sectional	Majority of the respondents in the study area used orthodox healthcare facilities because of experienced staff and neat environment, while some used traditional healthcare facilities due to better staff attitude. Attitudinal change in the orthodox facilities and training for traditional healthcare personnel are recommended for improved women access to maternity care.
12	Magdalena et al	2016	Nigeria	Qualitative	Inexpensive, culturally sensitive, and compassionate care were the attributes that differentiate traditional birth attendants' services from hospital-based maternity care. TBAs demonstrate evidence of expertise in sustaining normal birth, safe practice including hygiene, identifying deviation from the normal, willingness to refer women to hospital when required, and appropriate use of both traditional and western medicines.
13	Christian et al	2015	Nigeria	Review article	TBAs prove to be an important and sustainable tool for HIV Prevention as they help bridge the gap between the clinical setting and the realities of culture and the economies of women in Africa. The role of trained traditional birth attendants should be integrated into PMTCT services.
14	Sarmento et al	2014	Timor Leste	Non-systematic literature review	TBAs perform outreach, case findings, health education and referrals. TBA training significantly increases knowledge and behaviour for ANC and better pregnancy outcome.
15	Pyoni et al	2014	Somaliland	Descriptive	TBAs attitude changes towards early referral of pregnant women before onset of complication.
16	Ferdinand et al	2014	Nigeria	Cross sectional	TBAs are the major health resources in the rural and some parts of the urban areas in developing countries. There is need to train them in primary health care services in their area.
17	S Wanya	2014	Kenya	Cross sectional	TBAs can play a significant role in the policy discouraging home births; there is need for collaboration between skilled birth attendants and TBAs for effective implementation of the policy.
18	Koyombo	2013	Tanzania	Review article	Trained TBAs can have positive effect on maternal and newborn mortalities and can help break barriers to various reproductive health programmes.
19	Vyagusa	2013	Tanzania	Qualitative	People in the underserved areas frequently consulted TBAs in Tanzania. Their poor knowledge on emergency obstetrics care raised concerns about their ability to perform competent maternal services hence the need for their training.

For the period January to April 2019, a total of 4,370 providers were trained in 89 distinct trainings (with 27 of those training for LARCs), and involving 21 states. There was a massive decline for the corresponding period this year, with only 303 healthcare workers trained in 16 distinct trainings (with 8 of those training been for LARCs), and involving only nine states.[43] (Table 2)

Table 2: Decline in the number and geographical spread of training for FP in Nigeria

Time period	No. of providers trained	No. of FP trainings	No. of LARCs trainings	Geographical spread
Jan- April 2019	4370	89	27	Abia, Akwa Ibom, Anambra, Borno, Delta, Ebonyi, Enugu, FCT, Kaduna, Kano, Katsina, Kogi, Kwara, Lagos, Niger, Ogun, Ondo, Oyo, Plateau, Rivers, Yobe.
Jan-April 2020	303	16	8	Abia, Akwa Ibom, Cross River, Ebonyi, Enugu, Lagos, Niger, Rivers, Sokoto.

In the current challenges posed by the COVID-19, (as shown in Table 3), and its containment measures, TBAs may be instrumental in mitigating challenges of family planning and other emerging reproductive health issues in the COVID-19 pandemic. The TBAs can be utilized as vehicles for advocacy visits to the community gatekeepers on-demand generation for FP commodities; they can also serve as home delivery of FP refills agents and during community outreach services thereby bridging the supply chain management disruptions.

Table 3: Possible/existing challenges, emerging issues relating to FP and COVID-19 and suggested mitigations using TBAs

S/N	Thematic area	Possible challenges/emerging issues	Suggested mitigations involving TBAs
1.	Demand Generation	a. COVID-19 messaging over-shadowing all other forms of messaging in planning, implementation and reach.	i. TBAs to support one-on-one messaging with community members at appropriate fora cognizant of physical distancing
		b. Community gate-keepers and champions diverting all energies to COVID-19	ii. TBAs to participate in advocacy to gate keepers
2.	Service Delivery	a. Movement difficulties and delays for service providers, even when they have pass.	i. TBAs bring services closer to the communities in community-based distribution and as out-reaches
		b. Difficulties for clients to access services due to movement restrictions	ii. Home delivery system of refills can be explored in collaboration with private sector and TBAs iii. Outreaches that take services to the women in their community and closer to their homes are important where and when facility access is disrupted. TBAs has important role in this. iv. Strengthen community-based family planning program to ensure that FP clients receive services and commodities within their immediate communities. TBAs have a prominent role in this.
3.	Supply Chain Management	a. management at all stages	i. Utilize community-based distribution services, involving TBAs.

their communities within the span of reproductive health and often beyond.[4] Besides attending to women and/ or their babies during the antenatal, delivery and postnatal periods, they are often the first point of call for other community members during ill-health regardless of its relation to pregnancy or not and prescribe treatment usually in the form of leaves, ointments, or herbal remedies; where cases are too complicated; they often refer them to the next available health facility.[4]

In addition to the treatment of individuals in the communities, TBAs can be trained to provide a diverse range of health services to their communities such as promotion of environmental hygiene, nutrition, sanitation, health education such as on malaria prevention, preparation and use of oral rehydration salts, promoting bed-net use, immunization programmes, facilitating health research, etc.[4-6]

TBAs are found in most communities of the world with a considerable variation like services they provide and have been involved in national and international health programmes especially in the 1970s and 1980s, though the enthusiasm declined in the 1990s following a debate on their cost-effectiveness and the missing impact of their training in reducing maternal mortality. [7,8]

Table 1 provides details of the individual articles included in this review. Training, including for Long-Acting Reversible Contraceptives (LARCs), declined in numbers and geographical spread over the period, with an effect on the quality of services and coordination.[42]Similarly, training of healthcare workers for both LARCS and other methods went down drastically compared to the same period last year, with fewer training and lesser geographical spread as a result of COVID-19 disruptions (Table 1).

DISCUSSION

In ancient time, the '*dais*' (maids or TBAs) who belong to the lower caste in the community were mostly responsible for conducting deliveries in India.[8] The overall practice of maternal and child health services was totally in their hands and the majority of the deliveries in rural India were conducted by them. These indigenous '*dais*' in India do not only help during childbirth but also act as experts for any condition of the mother related to birth.[8]

In sub-Saharan Africa, TBAs assumed great importance in the provision of maternity care as most women in these countries delivers at home in the hands of family members or TBAs majority of whom lacks formal training. They attend to and conduct deliveries, bath and massage women and provide them with social support and care in the later postpartum period. They actively care for the newborn through cutting the umbilical cord, cleaning and keeping the baby warm in the immediate postpartum and occasionally circumcision. TBAs were credited for their uninterrupted availability, accessibility and social distance.[8,9] They also carry out outreach and case finding, health and patient education, referrals, home visits and care, help connect health care services with local communities when given appropriate training. Most TBAs attracts their clients by reputation and they can attend to births as many as possible depending on the availability of orthodox health services, local custom and beliefs in the community. Their service is usually paid both in cash and kind.[2,10,11] Despite their relative limitation in reproductive health services, TBAs may be an important reproductive health workforce during the current movement restrictions owing to their uninterrupted availability and closeness to their immediate community. They can therefore provide the necessary reproductive health services at their doorstep in a COVID-19 compliant manner without violating the lockdown imposed by the relevant authorities.

In Nigeria, following the adoption of primary healthcare in 1979, governments at various levels recognize the need to train and integrate the TBAs to serve at various aspects of health care delivery at the level of community. With the inadequate number of skilled health workers for service delivery, trained TBAs will be vital contributors in ensuring the provision of basic maternal and child health care services in the rural areas. [5,12]

Despite the availability of health facilities and other laudable free maternal and child health programs in some communities in Nigeria, many pregnant women prefer the use of TBAs and home delivery.[8] The reason being TBAs charges are cheap, affordable and often flexible allowing instalment payments with no added costs of transport to health facility and fixed hospital charges in addition to avoiding the inconvenience of leaving the house with no one to care of other children. Some women in the more remote areas lack enough education to help them seek the most appropriate care making it difficult for them to access much free maternity and other health care service where available. Many of these women believed that childbirth is a normal event that does not require any medical attention,

thus leading to delays in the recognition and treatment of life-threatening complications that lead to maternal death. [8] Socio cultural belief also plays role in the patronage of TBAs because being respected members of the community speaks the local language and shares the same cultural norms and much closer in the community makes them win the confidence of most women in the community. Older family members often encourage the younger ones to seek for TBAs services as a long-time tradition in the community because delivery is regarded as a natural rite of passage for women that can be handled by TBAs; therefore, home delivery is preferred except when complications occur. Other reasons include poor access to health care services due to the physical distance of the facility, bad roads and cost of transportation. Availability, attitude and social distance of the health care providers tend to derive most women away from health facilities to the hands of TBAs.[8]

A case study from southeastern Nigeria on women's perception of TBAs practice refute that lack of alternatives to TBAs in some areas and their low-cost service are some other factors that encourage women to patronize them; in the study, out of the 420 women in the reproductive age group interviewed, 96.4% of them said the services of TBAs are not expensive and about 58.3% patronizes them due to lack of other alternatives. Although the majority of their services were regarded as unhygienic as only 4% of them were using some protective equipment in the course of their duties.[9] This may negatively affect ongoing efforts to curb the spread of COVID-19, however; training them may bring attitudinal changes that may help avoid this drawback.

Similarly, a qualitative exploration on the low level of skilled birth attendance in the Afar region of Ethiopia, participants in the focused group discussions identified lack of available and near health facility, poverty, their pastoralist way of life, lack of equipment and unwelcoming health workers' attitude when they managed to reach the available health facility.[13] This left them with no option than to turn to the nearby available and cheap TBA that share local custom and tradition with them.

While studying the involvement of TBAs in the provision of emergency obstetrics care in Tanzania, the results show that of the 157 TBAs interviewed, 94.7% had good knowledge of the danger signs during pregnancy, 92.5% knows various methods of HIV/AIDS transmission and more importantly, 98% of them were referring complicated cases to the formal health system.[14]

Given their various roles in the provision of maternity care, it is argued that their involvement and integration into the formal health system will go a long way in reducing maternal and neonatal deaths from preventable causes especially in the rural and often remote areas in the developing countries.

Training TBAs in healthcare delivery

Despite the various contributions of the TBAs in the provision of health care in the community, there has been considerable debate in their usefulness in healthcare delivery, advocates felt there is a need for sustained partnership with TBAs as a strategy to improve access to at least basic maternity care especially in the rural communities while opponents said TBAs have frustrated commendable efforts of governments in sub-Saharan Africa in reducing maternal and child mortalities; some studies have shown that they often do more harm to their clients than good.[5,15-17] For this reason, the WHO, International Confederation of Midwives, and International Federation of Gynaecology and Obstetrics released a joint statement in 2004 recommending that the role of TBAs informal health care systems be restricted to advocacy for and referrals to skilled maternal health care services. This will bridge the gap created by the lack of access to timely and competent care for severe bleeding, hypertensive disorders and infections which are the leading cause of maternal death within 48 hours of delivery.[17] Also, with the current COVID-19 pandemic, this may help identify pregnant women in the community with early symptoms of the disease for prompt treatment.

The WHO recommends that health providers retain mothers in health facilities after delivery for " regular assessment of vaginal bleeding, uterine contraction, fundal height, blood pressure, temperature, and pulse routinely" to facilitate early diagnosis, testing, treatment, and appropriate referral in the event of complications.[17] Contrary to this, qualitative study of perspectives on postnatal

care referrals by TBAs in Ebonyi state, Nigeria noted that "the TBAs left immediately after delivering baby and placenta when there is no apparent complication during delivery and majority of them perceived postnatal care as unnecessary."[18]

However, where the TBA felt the need to refer a woman in labour, such referrals were very late as such mothers mostly develop long term complications and often hardly survive to make it to the hospital.[19] A review of the intrapartum referrals by TBAs to a mission hospital in southeast Nigeria shows that 60% of the cases of mortality recorded in the hospital were from such referrals.[20]

Another reportable harmful traditional practice in preparing young girls for pregnancy and childbirth is female genital cutting which is mostly performed by the TBAs without any form of anaesthesia or analgesia using non-sterile instruments with its short- and long-term consequences and even death. There are no known medical benefits, and it can be potentially dangerous for the health and psychological well-being of the women and girls who are subjected to the practice.[20]

Reports of sustained high maternal and infant mortality rates in Africa has called for collective efforts that should take the cultural value of reproductive health and child delivery components on board. Reproductive health experts warned that the situation of maternal and child health in sub-Saharan Africa could get worse if no immediate remedial actions are taken; most lives could be saved using relatively easy and cheap methods partly by training TBAs who take on board the social-cultural practices related to childbirth and caring the infants and are always omnipresent in villages.[21]Thus training TBAs now is a necessity and can make a difference on infant and maternal deaths as well as morbidity of the mother after delivery in sub-Saharan Africa and other developing countries if well implemented and systematically followed as a monitoring process after training.

Shortage of medical personnel, medicines, equipment other medical supplies and health facilities is still a major problem in most developing countries, especially in the rural areas. [21,22] In Tanzania for example, medicines are available in the health facilities for only two weeks; some of the rural health facilities are manned by auxiliary nurses who are ill-trained on the provision of health services. Thus, it is difficult to effectively address the current situation of maternal and other health care services without the involvement of the TBAs who are available and accessible in every village. These TBAs should be trained on safe delivery methods and refer the patients at risk immediately to a health facility.[22] Most TBAs had wrong traditional beliefs as to the cause of sickness among newborns and therefore only training which emphasize the needs for dialogue, trustworthiness, respect, transparency, willingness to learn and sharing knowledge through problem-solving techniques would lead them to change their beliefs.

Effectiveness of trained TBAs in Healthcare Delivery

World Health Organization (WHO) and other agencies of the United Nations promoted the training of TBAs as a global public health strategy to reduce maternal and neonatal mortality. Likewise, in response to the Safe Motherhood Program, many developing countries in sub-Saharan Africa make an effort to train TBAs in the provision of maternal and child health by focusing on increased safety in TBAs practice thorough hand washing, use of clean or sterile cord-cutting materials; non-interference during labour; care of mothers before, during and after delivery; identification and referrals of mother at risk; and avoiding harmful traditional practices and leaving alone or supporting those that contribute to psychosocial support.[6] However, a review of the impact of TBA training on maternal and neonatal morbidity and mortality shows mixed results.

Substantial evidence from a review of 82 randomized trials in the evidence of the effectiveness of various training programs for lay health workers including TBAs has the potential to effectively deliver key maternal and child health interventions in primary and community healthcare, with promising results in the reduction of childhood morbidity and mortality.[23]

Findings in a systematic review of traditional birth attendant training for improving health behaviours and pregnancy outcomes shows that mortality (stillbirth, maternal, perinatal and neonatal deaths) and morbidity (obstructed labour, obstetrics haemorrhage and puerperal sepsis) were significantly lower among women that received

care from trained TBAs compared to women that received care from untrained TBAs. However, no statistically significant difference was reported in their ability to refer complicated deliveries.[24]

Similarly, in the study of the effects of TBAs training on obstetrics complications in Guatemala, women attended by a trained TBA were found to have decreased postpartum complications; the decrease in complications was significant with postpartum haemorrhage. The rate of detection of these complications and their subsequent referral to health facility appear to have increased in the study group attended by trained TBAs. Given that postpartum haemorrhage may be the most frequent cause of maternal death in Guatemala, this result bodes well for decreasing levels of maternal mortality.[25] In a similar study on the outcome of trained TBAs in clean delivery on postpartum infection in Bangladesh, trained TBAs were more than twice as likely to perform clean delivery than untrained TBAs; however, there was no demonstrable relationship between clean delivery and symptoms suggestive of maternal infection after delivery. Unlike a pre-existing infection, long hours of labour, insertion of the hand into the vagina and maternal micronutrient deficiencies, logistic regression models shows that TBA training and hygienic delivery had an independent effect on postpartum outcome concerning maternal infection.[26]

In sub-Saharan Africa, TBAs were shown to have poor knowledge of HIV with the associated risk of occupationally acquiring and transmitting HIV hygiene.[27,28] Evaluation of their training programs on HIV/AIDS and safe delivery has proved very successful and has revolutionized their role as healthcare workers who are involved in various aspects of health provision.[27] In Plateau state of Nigeria, the use of trained TBA in HIV/AIDS program has resulted in about 48% increase in the number of women on antiretroviral therapy and co-trimoxazole prophylaxis, especially in rural areas. Many trained TBAs are currently providing voluntary counselling and testing (VCT) services in the state. Additionally, offering VCT to their clients and referral of HIV-positive women provided another means whereby women living in remote areas will be introduced to the wider healthcare network to access HIV care; and at the time of delivery opportunities are provided to access additional broad health care benefits, this will help bridge the gap between the clinical setting and the realities of culture and economics of women in Africa.[27]

In Sokoto state, north-western Nigeria, it was shown that trained TBAs were also providing antenatal care services, advice women on postnatal care, family planning and immunization of newborns in addition to delivery services, none of the untrained TBAs were providing such services. Also, regarding umbilical cord care among the two groups, 50% of the trained TBAs are using new razor blades and 18% uses scissors sterilized by boiling while up to 62% of the untrained TBAs still uses old razor blades for cord care.[28] The study concludes that the training programme did not seem to have significantly improved the practice of the TBA in the community.[30]

Impact of COVID-19 on Sexual and Reproductive Health Services and the roles of TBAs

Coronavirus Disease 2019 (COVID-19) caused by the highly contagious *Severe Acute Respiratory Syndrome CoronaVirus-2* (SARS-CoV-2) which was first identified in December 2019 in China's Wuhan district and has led to the ongoing pandemic.[31-33] As of May 2021, more than 150 million cases have been reported across 188 countries and territories resulting in more than 3 million deaths.[34] As success in the COVID-19 vaccine development and rollout and administration improves, over one billion doses of vaccines have been administered worldwide. In Nigeria, the index case of COVID-19 was reported on February 27th, 2020 with rising figures of reported cases across all the 36 states and Abuja.[35]

With the challenges of responding to COVID-19 and attendant disruption of health systems, the provision of many services, including Family Planning (FP), became very difficult. Lessons from the Ebola epidemic response in Sierra Leone, for example, showed that many individuals exited from the lockdown with a wide range of reproductive health difficulties including unintended pregnancies, sexual and reproductive rights violations etc.[36-37]

The current COVID-19 pandemic has exposed the fragility of the supply chain, with manufacturing, shipping logistics slowed or stopped altogether. It

is estimated that about 47 million clients may lose access to modern contraception if the current situation continues for 6 months and could result in nearly 7 million unintended pregnancies.[38]It is also estimated that at the current rate of service and program disruptions, there will be an estimated 10% reduction in the use of both short- and long-acting reversible contraceptives; about 50 million additional women with an unmet need for modern contraceptives; and can result in over 15 million additional unintended pregnancies.[39]

In Nigeria, National COVID-19 guidelines exist across sectors and are only beginning to be intimately cognizant of reproductive health and rights. Governments implemented lockdown and movement restrictions to control the spread of the virus that led to logistics challenges that impacted SRH commodity distribution and availability. Equally, safety concerns were ripe amongst health providers because of rising infection and fatality among their colleagues.[40]

The first scheduled National distribution of contraceptive commodities to the 36 States and the FCT was delayed, with observed non-prioritization of FP Commodities' Last Mile Distribution (LMD) to Service Delivery Points (SDPs) in some States as a result of the focus on COVID-19 interventions. This was also confounded by the unavailability of PPEs at service delivery points (SDPs) which posed an increased risk of contracting COVID-19 by HCWs and FP clients.

The decline in contraceptive methods use was most pronounced for injectable contraceptives, declining from over 270,000 users per month in January 2020 to only about 190,000 users in April 2020. There was also a decline in the use of implants from 115, 929 clients in January 2020 to 93,720 in April 2020. The use of IUCDs declined over the same period from 21,702 to 18,657.[41]

However, some TBAs are untrained and poorly supervised making them exceeds their limits regardless of the consequences on their clients. Many trained TBAs still maintain their traditional way of practice contrary to the contents of their training. These make TBAs unreliable actors in the provision of effective reproductive health services during the current COVID-19 pandemic.[44]

In conclusion, rural settings in the developing world vary in terms of the role of TBAs, the proportion of TBA-attended births, cultural norms and values regarding childbirth and childcare practices, general health of young girls and women, local causes of maternal and perinatal mortality and morbidity, and the social standing, functional status and resources of the health services. The relationships among poverty, women's health status and access to quality health care are especially important. Each is relevant to any discussion and practical decision regarding the feasibility and potential of TBAs to contribute to improved pregnancy outcomes in a given setting. Thus, in settings where there are insufficient numbers of skilled birth attendants or limited access to health facilities and women prefer TBAs, TBAs training may be the only means to optimise the use of community-level health workers for maternal and newborn health. Where skilled birth attendants and health facilities exist and are accessible, and women prefer TBAs, TBAs training under strict supervision, coupled with strategies to effectively engage them with the health system may be considered.

Author Contributions

Conceptualization: Gadanya MA[?], Adamu KA, Ibrahim MA

Data curation: Gadanya MA[?], Adamu KA

Formal analysis: Gadanya MA[?], Adamu KA

Funding acquisition: None

Methodology: Gadanya MA[?], Adamu KA, Ibrahim MA

Original draft: Gadanya MA[?] Adamu KA

Writing, review& editing: Gadanya MA [?]Adamu KA, Ibrahim MA

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