ORIGINAL PAPER

The Process of Producing the Modified Ministry of Health (MOH) TBA Training Curriculum

[1]D.O. Chanda, [2]S. Siziya and [2]K.S. Baboo

[1]*Department of Nursing Sciences, School of Medicine, University of Zambia*
[2]*Department of Community Medicine, University of Zambia*

ABSTRACT

Background: The MOH TBA Training Curriculum has been in Draft form since its documentation in 1996. This curriculum does not state when it was reviewed last or when it needs to be reviewed again in-order to incorporate new trends and concepts in infection prevention practices. The purpose of the modification is to facilitate task–shifting (a component of knowledge management) from the health professionals to non-professionals in the health care systems.

Methods: We conducted a desk review, training needs assessment, focus group discussion and, analysing baseline data on maternal and infant morbidity and mortality rates.

Results: The Desk review showed non-uniform TBA training curricula being used, infection prevention omissions, inadequate integration of positive socio-cultural and traditional beliefs in the curriculum, training needs assessment showed poor knowledge and practice among existing TBAs, focus group discussions showed inadequate resource and support supervision of the TBAs while the baseline data showed high maternal and infant morbidity and mortality rates in Chongwe District.

Conclusion: Policy implications advocates that Low-income resource countries may need to formulate Primary Health Care (PHC) oriented Reproductive Health Policy that supports the training of TBAs through task-shifting anchored on evidence-based modified curriculum in the interim period until there are sufficient skilled birth attendants to service the hardest-to reach rural settings.

Corresponding Author
Dorothy O. Chanda
Department of Nursing Sciences,
School of Medicine,
University of Zambia.

INTRODUCTION

Currently, the maternal morbidity rate at Chongwe stands at 200/100,000.WHO, (1999) puts maternal deaths due to infections at 21% globally. This is out of 80% of all causes of maternal deaths. Mugala, and Nwiinga, (2006) put sepsis and pneumonia as the highest causes of newborn deaths globally followed by tetanus and diarrhea. CBoH, (2002) described an increased percentage of deliveries conducted by Traditional Birth Attendants from 2000-2002.

The study sites were chosen because the maternal mortality rate stood at 200/100,000 compared to the national figure of 729/100,000 for the year 2000. There was a 6% increase in magnitude in the number of deliveries conducted by TBAs between 2002 and 2004.

There are hardest –to - reach rural communities in the district- e.g. Shikabeta area is located 118 Kms from Mupanshya Mission Hospital while Shipeketi is about 22 kilometers from the Lukwipa Health center hence the two convenient communities of Chongwe and Mupanshya were chosen for the study.

In Zambia, a study by Hazemba (2003) which focused on 'the utilization of maternity care services by TBAs in Chongwe District, identified the occurrence of fever among women delivered by TBAs which may be a sign of puerperal infections. Yet another study by Maimboluwa, (1998), which evaluated the practice of TBAs in six districts of Chongwe, Kalomo, Katete, Masaiti, Serenje and Senanga in Zambia, stressed the fact that 'the tTBAs had limited knowledge on the sterilization of instruments used for delivery and had no equipment in which to boil the instruments.'Hazemba, (2003) confirmed that the tTBAs have inadequate

knowledge on certain important concepts in HIV/AIDS infection prevention and the basic art of practicing safe and clean deliveries.

Chanda,(2001) observed that TBAs in most disadvantaged rural settings conduct deliveries with little or no observation of infection prevention practices. This was confirmed by the infection prevention gaps and omissions noted during the desk review of existing TBA training curricula. Hence the study was undertaken to review the MoH TBA training curriculum.

The TBA programme has existed since 1973 in Zambia. The TBA has and continues to play a very important role in Zambia's health care system (MOH, USAID, CDC, JHIPIEGO, 2005) [4], (Hazemba, 2003)[5] and (Maimbolwa, 1998)[6] all have stated that TBAs conduct majority (>50%) of the deliveries in Zambia.

A previous study, entitled 'Bridging the Practice Gap between Community–Based Agents and Health Care institutions in Lusaka Urban', identified Infection Prevention to be deficient among the Community Based Agents (CBAs) especially the Traditional Birth Attendants (Chanda, 2001)[7].

The objective of the study is to document the process of developing a Modified Traditional Birth Attendants (TBAs) .MoH Training Curriculum on the Infection Prevention Knowledge, Practice and Attitude of TBAs in Chongwe District' of Zambia

The basic impetus of the curriculum review is, therefore, to produce a curriculum which can be used to train the TBA, who in the rural area, has become a focal point person in delivering women in her setting. The best that the health care system can do is to equip her with the infection and disease prevention knowledge and skill to carry out her broad-based roles as well as conduct safe and clean deliveries when need be due to shortage of midwives. Her practice and the environment have become unsafe due to traditional, cultural practices, childhood diseases, and unacceptable health-seeking behavior of her clientele and the emergence of the HIV/AIDS pandemic in-order to address concerns in the TBA programme.

The TBA programme objectives state that at the end of the programme, the TBA should act as a link between her community and the health center and apply infection prevention knowledge and practice of new concepts and current trends in integrated reproductive health in her practice. The curriculum content should help her to counsel her clients on maintenance of personal hygiene practices and environmental sanitation so as to conduct safe and clean deliveries whiledemonstrating good interpersonal relationships and attitudes to her clients at the end of the programme.

METHODS

The methodologies used to come up with the scientific evidence to modify the curriculum are providing a baseline data on infant and maternal morbidity and mortality rates through record review. Training needs assessment /gap analysis by using a pre-course questionnaire and conducting a focus group discussion.

Record Review to obtain base line data

We gathered and analyzed the data from the District records in-order to obtain the base line data on maternal and infant morbidity and mortality rates due to infections on deliveries conducted by both trained and untrained TBAs.

Desk Review

A desk review was conducted on all the available TBA training curricula between 2006 and early 2007.

The review was done on four TBA Training Curricula used to train TBAs by Zambia Health Integrated Programme, (ZHIP)[9] World Vision International, (WVI)[10] Nangoma Mission Hospital [11] and Central Board of Health (CBOH) [12]

The Review covered the following areas: Infection prevention content in the various curricula, the environment of training, incentives, supervision of TBAs, and the duration of the TBA training.

Training Needs Assessment/ Gap Analysis

A training needs assessment gap-analysis/ was conducted by using a Pre-course structured questionnaire among existing TBAs in Mpanshya and Chongwe.

Focus Group Discussion

We also conducted a focus group discussion with community leaders in both Mupanshya and Chongwe

Presentation of Findings

The statistical methods used to present the study findings were in the form of tables, graphs and pie charts in-order to give clear and vivid illustrations of the study findings. The cross tabulations were made using Pearson's chi square tests while Fischer's Exact Tests were used in-order to obtain the correct P values when necessary. The cross tabulations brought out the associations and the statistical significance (P Value) between the study variables.

RESULTS

The findings from the analysis of the baseline data, desk review and training needs assessment gap-analysis using the pre course questionnaire provided scientific bases for the modification of the MOH TBA training curriculum.

Record Review

The maternal morbidity was measured by recording the number of mothers delivered by both trained and untrained TBAs and who reported and were treated for the following conditions- foul-smelling vaginal discharge, persistent lower abdominal pain, and fever at the health center within six weeks after delivery. The number of these women were converted into percentage to get the morbidity rates.

The infant morbidity was measured by recording the number of infants of mothers delivered by both trained and untrained TBAs and who brought and reported of their infants ailments and were treated for the following conditions- ophthalmia neonatorum, umbilical sepsis,and fever at the health center within six weeks after delivery. The number of these infants were converted into percentage to get the morbidity rates.

The base line data showed that the infant morbidity stands at 27% in both Chongwe and Mpanshya. The maternal morbidity stands at 20% in Chongwe and 21% in Mpanshya. The Chongwe DHMT staff consented to the training of the TBAs in the district based on the base line analysis.

Table 1: Practice of TBAs by Site at Baseline

Pre -course			
Factor	**Site1**	**Site2**	**P-value**
Practice Category	**Mpanshya n (%)**	**Chongwe n (%)**	
Excellent Practice	0 (0)	0 (0)	0.017
Good Practice	0 (0)	0 (0)	
Satisfactory Practice	8 (6.7)	1 (0.8)	
Unsatisfactory/Poor Practice	111 (93.3)	118 (99.2)	
Total	119 (100)	119 (100)	

Table 1 shows that at baseline there was a significant difference (P=0.017) between the two groups in terms of practice (93.3%, 99.2%) as the participants in both locations had unsatisfactory/ poor practices. The majority (99.2) of TBAs in Chongwe had Unsatisfactory/Poor Practice compared to TBAs

The Desk Review

The desk review showed the following omissions

Omissions from the existing TBA Training curricula

- The TBA training period was not standardized among all the stakeholders
- The Supervisory visits, which are supposed to be done on quarterly basis, are irregular due to inadequate resources.
- Environment of training varied.
- Inadequate coverage of Infection prevention and control practices during pregnancy, labour, delivery, post partum period, and health care waste management
- Inadequate coverage of the Prevention of communicable diseases.
- Omission on male circumcision.
- There are omissions on the current concepts on the care of the under-five child as shown in Integrated Management of Childhood Illnesses (IMCI),
- The prevention of mother-to child transmission of HIV/AIDS (PMTCT).
- Inadequate handling of the caring for the carers and post exposure prophylaxis.
- The process of record keeping by the TBA in the community.

SUMMARY

Table 1 shows that there was inadequate coverage of Infection prevention and control practices during pregnancy, labour, delivery, post partum period, and health care waste management

Training Needs Assessment/ Gap Analysis

The analysis revealed knowledge and practice gaps between the two groups.

Figure 1: Knowledge of TBAs by Site

There was a significant association observed between knowledge and site (P<0.001). Most (72.0%) of the respondents in Chongwe compared to 95% of the respondents in Mpanshya had poor knowledge of infection prevention practices.

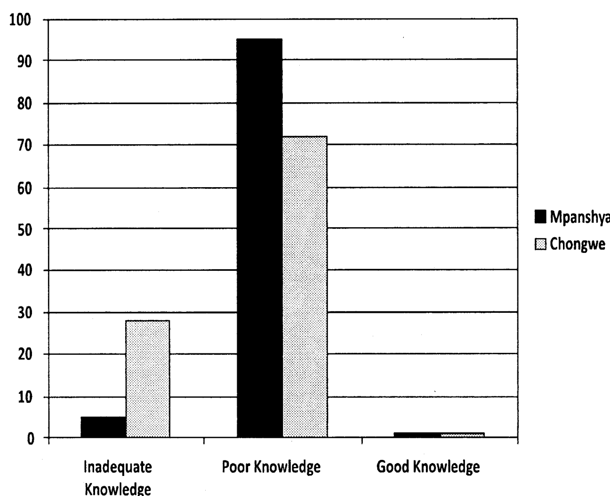

Figure 1 shows that there was a significant association observed between knowledge and site (P<0.001). Most (72.0%) of the respondents in Chongwe compared to 95% of the respondents in Mpanshya had poor knowledge of infection prevention practices as depicted in figure 1.

Practice

Training needs assessment showed poor infection prevention practices between the two groups not to be statistically significant (p=0.17). (93.3% for Mupanshya, and 99.2% for Chongwe).

Attitude

There was no significant association between the attitudes of the TBAs and sites (P= 0.081).

Table 2: Attitude of TBAs at baseline

Attitude	Mpanshya n (%)	Chongwe n (%)	P Value
Good Attitude	119 (100)	119 (100)	-
Total	119 (100)	119 (100)	

Table 2 shows that there was no significant association between the attitudes of the TBAs and sites. The results indicate that the TBAs show true commitment, good interpersonal relationships and a true desire to be of service to their communities and dedication as they perform their varied roles in improving the infant, youth and maternal health in rural settings.

Focus Group Discussions with community leaders

The main themes that emerged were the concerns on the effects of socio-cultural and traditional beliefs on their infection prevention practices as they conduct deliveries, inadequate training and resources, remuneration and supportive visits from the Health centre staff, promoting the health of the community, poor referral and communication system coupled with poor feed backs from the health center staff.

Highlights of the content of the modified Curriculum

The study derived the contents of the modified MOH TBA training curriculum from the gaps identified in the baseline–line data analysis, desk review, the training needs assessment, and the Focus Group Discussions.

Table 3: Emerging Themes from the focus Group Discussions

The common broad theme was on the roles of the TBAs. Which centered on counseling the different groups in the communities. Team work and unity enhance the roles of the TBAs as they work together to promote the health of the community. The FGD also showed the integration of the modern infection prevention practices with the traditional and cultural beliefs and practices.
The participants in the FGDs also brought out their challenges which focused on inadequate training and resources, remuneration and supportive visits from the Health centre staff
Poor referral and communication system coupled with poor feed back in an era of modern mobile communication technology in the form of cell phones.
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The curriculum consists of topics ranging from one to twenty–six, each of which has subheadings used for the training of the Traditional Birth Attendants (TBAs).The topics have been arranged logically and sequentially following the academic principles of curriculum modification in-order to facilitate adult learning in conducive learning environments. Each lecture ends with the TBAs expected competencies.

The contents focus on infection prevention practices before, during pregnancy, labour, post partum and puerperal periods. Emphasis are laid on the expected roles of TBAs regarding health education on current trends on Safe Motherhood Initiatives, the four prongs in the Prevention of Mother to Child Transmission of HIV virus, male circumcision to reduce the transmission of HIV/ AIDS virus and for the prevention of cervical cancer, health education on Breast self examination for early detection of breast cancers and referrals of clients with danger signs and Vesico-vaginal fistulae all of which have infection potentials. The curriculum also includes health education to women in the community on Family Planning methods as well as the availability of emergency contraceptive pills at the family Planning clinics as this would help reduce the incidences of unwanted and unplanned pregnancies which lead to illegal abortions, gender-based violence and youth reproductive health services all of . The curriculum also includes areas that need referrals.

The major role of the TBAs will be to make timely referrals of women to health facilities, give health education on promotive and preventive interventions to women, families and communities on selected aspects of safe mother hood in-order to promote their health–seeking behavior. In case of an emergency where a TBA is called when a woman is fully dilated, they will be required to conduct a clean and safe delivery.

This curriculum, provides information for trainers of TBAs who can provide quality safe motherhood services as prescribed in the essential basic health care package at community level. It is hoped the knowledge, skills and practices acquired will ultimately contribute towards the current efforts aimed at reducing the prevailing maternal morbidity and mortality' (CBoH, 1996)[8] and Campaign for Accelerated Reduction in Maternal mortality (MoH 2010)[20]

DISCUSSION OF FINDINGS.

Introduction

The study aimed at modifying the MoH TBA training curriculum. The discussion focuses on the themes that emerged from the findings of the baseline data, desk review, discussion of variables from the pre-course questionnaire used for the training needs assessment/gap analysis and the focus group discussion. The themes were discussed in relation to their policy implications. These themes include the inclusion of infection prevention in the TBAs training curriculum in-order to prevent the transmission of the HIV virus in TBA's practice, the prevention of mother to child transmission of the HIV virus and other blood-borne pathogens, integration of socio-cultural and traditional beliefs in the TBA curriculum and promoting supportive supervisory visits after the training.

Findings from the baseline data, desk review, and the focus group discussion

The baseline data showed that the infant morbidity stands at 27% in both Chongwe and Mpanshya while the maternal morbidity stands at 20% in Chongwe and 21% in Mpanshya. UNICEF and MoH[20] support the reduction of maternal and infant morbidity and mortality rates in the newly launched Campaign for Accelerated Reduction in Maternal Mortality in Africa CARMA (2010). Maternal and infant morbidity and mortality form critical sources of public health concern for the Ministry of Health. Hence it joined in this campaign in conjunction with United Nations International Children's Educational Fund. UNICEF and MoH[20] state that the theme of the campaign which is 'Zambia Cares: no woman should die while giving life' is building on the Maputo Plan of Action for the implementation of the Continental Policy Framework on Sexual and Reproductive Health and Rights. This policy was adopted by the African union in 2006. The Zambian Government is determined and is working towards the achievement of the 5th and 6th Targets of the 4th and 5th Millennium Development Goals by working relentlessly on the main causes of maternal morbidity and mortality in Zambia which includes sepsis. The MoH has set up the National Infection Prevention Working Group which is working on producing the national Infection Prevention Policy. This Policy ensures that TBAs are taught how to health educate their clientele on how to observe

personal hygiene daily and maintain proper environmental sanitation.

The curriculum also includes the integration of positive socio- cultural norms of the community so the community can work hand in hand with the public health sector. So it is necessary that infection prevention be included in the TBAs' training curriculum.

Knowledge

Mayor et al[14] defines knowledge as what one understands theoretically from the sum total of what one knows on a particular subject. A well informed and knowledgeable TBA should have a good knowledge-base of new concepts and current trends in safe motherhood since her broad-based role emphasizes on health education and referrals. The tTBA should know how to put on gloves and maintain hand hygiene during the birthing process, prepare the environment of delivery, decontaminate, clean and boil their equipment before and after use, know the effect of some socio-cultural and traditional practices and beliefs during pregnancy, labour, delivery, the post partum and puerperal period, infections that she could pass on to the mother and baby, care of the umbilical cord, the prevention of puerperal sepsis, and the prongs in the prevention of mother to child transmission of the HIV virus. She should know how to health educate her clients on the relationship of male circumcision and cervical cancer, maintenance of personal hygiene and environmental sanitation, and care of the child suffering from diarrhea. All these topics are well laid out in the modified curriculum.

The study determined the knowledge levels of the TBAs. This variable helped the study to gain an insight of the respondents' level of knowledge on infection prevention before the modified curriculum was used for the training of both the control and intervention groups in Mpanshya and Chongwe. The study showed a significant association between knowledge and site. Most (72.0%) of the respondents in Chongwe compared to 95% of the respondents in Mpanshya had poor knowledge. This indicated that the study should modify the curriculum which would be used in the training of the intervention group in Chongwe while the old curriculum was used to train the control group in Mpanshya. Sibley et al[15] showed that using a relevant training curriculum is effective in transferring knowledge from professionals to non-professionals.

JHPIEGO[16] supports task shifting by emphasizing that trainers should ensure that the knowledge and skill acquired during a learning intervention are applied on the job. It is envisaged that the task–shifting process used during the training under knowledge management will ensure this as well.

Bloch [17] states that KM is effected by injecting relevant new body of knowledge gained through Research into practice to make it evidence-based. He went on to say that KM has 'become a broadly recognized concept, by quoting WHO[17] defines KM as “covering a set of principles, tools and practices that enable people to create knowledge, and to share, translate and apply what they know to create value and improve effectiveness”. He continues that KM is closely linked with research dissemination and Getting Research into Policy and Practice (GRIPP). (http:/www.who.int/km4ph/en/)[17]. The trained skilled birth attendants at the district should identify task-shifting areas for the TBAs. Thus task shifting from proficient qualified midwives to the traditional birth attendants is the only way to promote health in rural settings if we have to achieve the millennium development goals.

Practice

The TBAs' quality practice is the ability to conduct clean and safe deliveries according to set minimum standards of performance that are safe, acceptable and affordable to the community being served and which reduce the maternal and infant morbidity and mortality levels.

Training needs assessment showed poor infection prevention practices among the TBAs. At baseline there was no significant difference (p=0.017) between the two groups in terms of practice (93.3% for Mupanshya, and 99.2% for Chongwe).

In this study, practice was measured by asking them questions on infection prevention practices during the birthing process, immediate care of mother and baby post delivery, what they do if the blade in use falls down, care of the breasts after delivery, the use of socio-cultural and traditional beliefs in their practice. All these have been addressed in the modified curriculum.

The poor practice was confirmed by the baseline data analysis.

The result has shown that the knowledge level of the study respondents influences their practice. It is

obvious that one can only practice what they know. So it was an unsurprising find and one which the curriculum modification addresses by increasing their theoretical knowledge. It is hoped that increasing their knowledge will also impact positively on their infection prevention practices. Like Ofili and Sogbeson[18] who introduced infection prevention course in the nurse-training curriculum in Nigeria when they noted poor infection prevention practices among student nurses, this study also did the same in the modified curriculum.

Promoting Health in Rural Settings.

Promoting Health in Rural Settings depends on the proper organization of the health services by upgrading the transportation systems to improve referrals, building maternity clinics rather than health posts within communities for use during Outreach sessions only, introducing infection prevention policy guidelines, and improving the literacy levels of mothers and setting up of Safe Motherhood Action Group (SMAG) in selected areas. This has been dealt with in the curriculum modification. The Districts can achieve this by linking services to communities through community partnerships. It also requires integrating positive traditional practices into our modern health service provision. It is hoped that improved knowledge and practice will lower the infant and maternal morbidity and mortality rates.

ATTITUDE

Attitude expresses the way TBAs think in accordance to the influence of socialization, traditions and norms of the society. Responses to questions on attitudes show that there was no significant association between the attitudes of the TBAs and sites. The results indicate that the tTBAs show true commitment, good interpersonal relationships and a true desire to be of service to their communities and dedication as they perform their varied roles in improving the infant, youth and maternal health in rural settings.

CONCLUSIONS

New trends and concepts in infection prevention practices based on the omissions noted were included in the modified curriculum.

This modified MoH TBA training curriculum has integrated the positive socio-economic, cultural traditional norms, physiological, psychological and physical contexts of communities into the formal health care system for maximum results.

Low-income resource countries may need to formulate Primary Health Care-oriented Reproductive Health Policy which supports the training of TBAs with evidence-based modified curriculum in the interim period. The success of any Health Care System depends on successfully linking services to communities and providing the necessary resources for referrals[19]. This necessitates incorporating infection prevention practices in existing training curricula. Hopefully, the monitoring and evaluation will reveal lowered morbidity and mortality rates due to improved tTBAs infection prevention knowledge, practices and attitudes in Chongwe district.

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