KNOWLEDGE AND PRACTICES OF TRADITIONAL BIRTH ATTENDANTS ON PREGNANCY RELATED OBSTETRIC COMPLICATIONS AND CHILDBIRTH: A CASE STUDY OF CHILUMBA AREA OF KAPIRI MPOSHI DISTRICT

BY
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DECLARATION

I Samson Banda hereby declare that this dissertation: represents my work, has not previously been submitted for a degree at this or any other university and does not incorporate any published work or material from another dissertation.

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Date

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APPROVAL

This dissertation of Samson Banda is approved as fulfilling part of the requirements for the award of the degree of Master of Arts in Population Studies by the University of Zambia

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ABSTRACT

The objectives of this study were (a) to ascertain the knowledge of Traditional Birth Attendants on pregnancy related obstetric complication. (b) To identify the sources of knowledge for the Traditional Birth Attendants on the obstetric complications and (c) to identify the Practices done by Traditional Birth Attendants when obstetric complications are identified and examine the knowledge of consequences if obstetric complications are not treated.

The sampling unit included all the Traditional Birth Attendants in the area at the time of the study and a total of 56 Traditional Birth Attendants were interviewed in the survey.The study design was purely anon experimental design which employed an exploratory investigation. This was for a simple reason that it was conducted in uncontrolled and natural setting. There was no control group in the research.The study collected data using the structured questionnaires with both open and close ended questions. SPSS was used in analyzing close ended questions and themes on open ended questions.

Findings showed that the majority (75%) of the Traditional Birth Attendants were aware of pregnancy related obstetric complications that occur during pregnancy, during labour, post labour for the mother and the baby. The majority of the Traditional Birth Attendants indicated having heard and come across the obstetric complications during pregnancy 42(75%) and 38(68%), during delivery 48(85%) and 42(75%). The source of knowledge did include ADRA, PMCT, CHAZ, Clinic and practices when obstetric complications are observed did range from referring to clinic and giving traditional medicines.

It is concluded that Traditional Birth Attendants can help in reducing the numbers of maternal death through constant supervision and can be used as the medium of change. There is need to provide the Traditional Birth Attendants with adequate information on pregnancy related obstetric complications.

DEDICATION

I dedicate this document to Myfather and mother

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To my wife Annie Kabwe, my daughter Felistus Banda, Sons Daniel Banda and Samson Banda Jr thank you very much for your patience during my period of absence.

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ACRONYMS

ADRA…….. ADVENTIST RELIEF AGENCY

CHAZ……..CHURCHES HEALTH ASSOCIATION OF ZAMBIA

CSO……..CENTRAL STATISTICAL OFFICE

MMR…….MATERNAL MORTALITY RATE

M N H ……. MATERNAL AND NEONATAL HEALTH

MOE……..MINISTRY OF EDUCATION

PMTCT…… PREVENTION FROM MOTHER TO CHILD TRANSMISSION

SPSS…….. STATISTICAL PACKAGE FOR SOCIAL SCIENCES

TBA……TRADITIONAL BIRTH ATTENDANT

UNZA……. UNIVERSITY OF ZAMBIA

CHAPTER ONE

INTRODUCTION

Global attention to maternal health and safe motherhood has grown significantly in the past decade. About 600 000 women aged 15-49 years die annually as a result of complications arising from pregnancy and childbirth. (United Nations 2000).Around 99% of these deaths occur in developing countries with over half these ,taking place in sub-Saharan Africa.(Post M 1996).Further, for every woman who die, at least 20 more suffer injury, infection or disability from maternal causes.

Available data show that maternal mortality in Zambia is unacceptably high estimated at 591/100 000 live births (CSO 2007) as compared to 13/100 000 for developed countries. (UNICEF 1998).The government of Zambia is committed to improving maternal health situation in the country. Majority of maternal mortality and morbidity are avoidable through timely access to basic maternity care supported by adequate emergency care for early recognition of the problem at the family level. The proportional of deliveries that are assisted by Skilled Birth Attendants in Zambia is 46.5% (CSO 2007) while 53.5% of the deliveries are done by Traditional Birth Attendants and relatives. Traditional Birth Attendants arepeople, who leave within the community, are usually relatives of the woman they assist during childbirth.

There is a cluster of socio cultural, economic, technical and administrative barriers delaying timely access to appropriate care leading to death(Thaddeus S 1994).In this context three levels of delays in seeking emergency obstetric care are identified, delay in making decision making by relative and TBAs, delay in reaching an appropriate health care facility and the delay in receiving appropriate care at the health facility(Jaffrey S N 1993).The delays coupled with serious shortage of human resources to provide health care services in developing countries , inequitable distribution of providers by rural verses urban, level of health institution and coverage of services have contributed to high rate of maternal mortality.

The obstetric complications occur at different levels these include during pregnancy, during delivery (labour) after delivery (post labour) in mothers and in new born babies. Complications relating to pregnancy and child birth are the leading cause of maternal mortality.(Jafarey S N 1993).Note: Traditional Birth Attendants are supposed to be

aware of all or most of these obstetric complications and immediately refer cases where these are observed to the nearest health center.

Every year more than 8 million infants die. Around 50% (4million) of these occur during the neonatal period.ie before the baby is one month old (within 28 days).The perinatal and neonatal deaths are largely as a result of the same factors that cause death and disabilities among mothers. Healthy consequences on infants include low birth weight, asphyxia still birth, and neonatal sepsis, retardation birth trauma, handicap, mortality (death), child abuse and increased risk of morbidity.(WHO 2007)

Safe motherhood initiative is an international initiative aimed at ensuring that women have safe pregnancies, deliveries and health infants .safe motherhood is one of the strategies ministries of health and their partners have adopted with the aim of promoting safe motherhood since 1980 is training unskilled traditional birth attendants. (WorldBank 2003). Mother-baby package involves early detection and management of complications (danger signs) that affect the mother and new born babies. In short, early detection of complications is cardinal in reducing deaths and ill health associated with pregnancy and its outcome. The potential impact of successful implementation of the mother-baby package would reduce the causes of maternal mortality by between 20-75 percent and neonatal mortality by between 40-80percent. (WHO 2007).

Deaths from all of these causes could be substantially reduced by better home care or prompt referral to hospital. An interim alternative is to improve the care provided by Traditional Birth Attendants who deliver 80% of home delivery. In principle Traditional Birth Attendants can be trained to improve their knowledge and practices but internationally attempts to do so have met mixed results. (Jokhio A K 2005) In developing countries like Zambia where midwifery system does not cover the whole country their training will make a difference.

Unless vigorous scientifically informed action is taken, more women may die from causes related to pregnancy and childbirth. The present study sought to assess Traditional Birth Attendants knowledge and practice on pregnancy related obstetric complication and childbirth.

Statement of the Problem

In the recent past studies have shown that trained Traditional Birth Attendants can significantly reduce maternal and neonatal deaths unlike the untrained. In addition to a place of birth, assistance during child birth is an important variable that influences the birth outcome and the health of the mother and the infant. Poor hygiene measures and the late referral of complicated cases have been indicated as the major causes of maternal and neonatal deaths. This is where the knowledge and practices of Traditional Birth Attendants becomes relevant even today especially in areas where public and private health facilities are nonexistent or insufficient.

Literature has shown that Zambia is experiencing high maternal and neonatal mortality levels due to complications which occur during pregnancy, during delivery, after delivery and in new born babies. The complications manifest themselves into obstetric complications like bleeding, bad smelling vaginal discharge, convulsions, fever, baby not moving and baby in a wrong position just to mention a few.

Only 46.5% of the births in Zambia are delivered by skilled provider (CSO 2007) and this means that approximately 53.5% are delivered by other people, most of whom are Traditional Birth Attendants and relatives. The percentage of the skilled Birth Attendants was supposed to be larger it being the safest hence the need to carry out the research on Traditional Birth Attendants' who happen to be part of the larger percentage so as to come up with evidence based and scientifically derived information to form policy and interventions aimed at reducing maternal and neonatal deaths among women aged between 15-49 years. Currently there is little evidence on the study having been done on knowledge and practices of Traditional Birth Attendants on obstetric complications. This was the gap the study did intend to fill.

1.2: RESEARCH OBJECTIVES

1.2.1: General objective

The general objective of the study was to investigate Traditional Birth Attendants' knowledge and practices on pregnancy related obstetric complications.

1.2.2 Specific objectives

In order to address this general objective, the study specifically examined among other things:

1. Knowledge of Traditional Birth Attendants on pregnancy related obstetric complications

2. Knowledge of the consequences if obstetric complications are untreated.

3. Sources of knowledge about obstetric complications among the Traditional BirthAttendants

4. Practices of Traditional Birth Attendants when obstetric complications are observed.

MAIN RESEARCH QUESTION

How knowledgeable and informed are the Traditional Birth Attendants on pregnancy related obstetric complications.

1.2.4 SPECIFIC QUESTIONS

1. What knowledge do the Traditional Birth Attendants have on pregnancy related obstetric complications that occur during pregnancy, during delivery, after delivery and in new born babies?

2. What are the sources of knowledge for the Traditional Birth Attendants on pregnancy related obstetric complications?

3. How knowledgeable are Traditional Birth Attendants about the negative consequences of not treating the obstetric complications?

4. What are the practices of Traditional Birth Attendants when the obstetric complications are observed?

Rationale of the Study

The findings of this study may be used by the Ministry of Health and other partners in health services delivery to come up with interventions to improve effective participation of Traditional Birth Attendants in the management of pregnancy related complications. This will ultimately lead to the reduction in maternal and neonatal mortality.

It is hoped that the research findings on the subject would be useful to the government of Zambia and other partners in their quest to come up with effective policies, programs, interventions and strategies that will effectively stem the current unacceptable levels of maternal and neonatal deaths. Knowledge of pregnancy related obstetric complications and good practices are cardinal among the Traditional Birth Attendants; this will help them make informed decision on whether to refer the patient to the nearest health center.

The findings will also add value to the existing body of knowledge on the problem of maternal and child health. The findings may also provoke or stimulate further research on the subject matter.

Conceptual Framework

Social Acceptance Theory

Arising out of the socio-psychological tradition, Social Acceptance Theory is a theory that focuses on the internal processes of an individual's judgment or decision making with relation to a communicated message. Social Acceptance Theory was intended to be an explanatory method designed to detail when persuasive messages are most likely to succeed. Attitude change is the fundamental objective of persuasive communication. Social Acceptance Theory seeks to specify the conditions under which this change takes place and predict the direction and extent of the attitude change. In sum, the researchers strove to develop a theory that addressed the following: a person's likelihood to change his position based on the information he has received, the likely direction of his attitude change, a person's tolerance of other positions, and the level of commitment to his own position (Sherif, &Nebergall, 1965). The Social acceptance theory researchers claim that expectations regarding attitude change could be based on the message individuals have received and the value (credibility) of the source of that message. This theory is appropriate in explaining knowledge and practices of Traditional Birth Attendants on pregnancy related obstetric complications and childbirth.

DEFINITION OF TERMS

Child mortality The probability of child dying between the first and fifth birthday.

Complication-is a medical problem that occur as a result of another illness or disease.

Health center- A building where several doctors work and where people can go for medical treatment.

Knowledge- Understanding that which is known or familiarity with information about something.

Maternal mortality- Is the death of a woman while pregnant or within 42 days after termination of pregnancy regardless of site or duration of the pregnancy from any cause related to pregnancy management.

Neonatal mortality-The probability of a new born dying between birth and the first 28 days of life.

Practices- They are those acts or actions that are done in relation to a particular issue.

(WHO 2008) WHO states the Traditional Birth Attendants trained or untrained are excluded from the category skilled health workers. In this context, the term refers to traditional independent (of the health system) none formally trained and community-based providers of care during pregnancy, child birth and the postnatal period.

CHAPTER TWO

2.0 LITERATURE REVIEW.

This chapter discusses the literature publications on Traditional Birth Attendants especially with regard to their knowledge and practices on danger signs. In order to systematically review the topic of discussion, the literature review was divided into subsections. Section one covers highlights of literature on knowledge and practices of Traditional Birth Attendants. Section two focuses on case studies on Traditional Birth Attendants done outside Zambia. Section three looks at reproductive health issues affecting women and section four focuses on attitudes towards services of Traditional Birth Attendants.

2.1 KNOWLEDGE AND PRACTICE OF TRADITIONAL BIRTH ATTENDANTS

The presence of skilled birth attendants at birth and availability of emergency obstetric have been shown to greatly reduce maternal death due to obstetric complications. (Graham W 2008).The above mentioned success however depends on functional referral system from rural areas to health centers. Health centers with skilled attendants and functional emergency obstetric care services .In developing countries they are located in urban areas while the majority of the population live in rural areas.

The practice of traditional birth attendants has a lot of impact on the health of the mother and child. Despite the introduction of modern health facilities, available statistics show that the majority of children are delivered by Traditional Birth Attendants (TBAs) especially in rural areas. There is a serious shortage of human resources to provide health care services in developing countries. This shortage is exacerbated by an inequitable distribution of providers by geographic area(rural versus urban),skill mix(nurses/midwives versus specialist),level of health institution (primary versus tertiary),gender(male versus female) and coverage of services(Chol P.T 2006).As a result informal health care providers predominantly Traditional Birth Attendants have taken up the gap.

Traditional Birth Attendants are nonprofessionals who assist women during pregnancy and deliveries and in some cases advocate for some form of family planning. Traditional Birth Attendants(TBAs) deliver approximately (60-80%) of the babies in developing countries and since they are the most accessible source of assistance in child birth for the

majority of women in rural areas they will continue to respond to the demand for them whether their actions are deemed illegal or not(Alakija W 2000)

Although some people in society feel the activities of Traditional Birth Attendants are insignificant a very good example are the Medical Doctors who believe that the Traditional Birth Attendants are not trained , skilled or knowledgeable about the delivery of babies while the Traditional Birth Attendants on the other hand hold on to the qualitative knowledge as they are the ones that deliver majority of children in rural areas where there are no public and private modern hospitals and health facilities and even people who are too poor to pay the fees in hospitals.

The knowledge and practice of Traditional Birth Attendants needs to be addressed by policy makers and planners to make positive effort through research based on a firm understanding of what Traditional Birth Attendants can and cannot do (WHO, 2000).It is important to know the strength and limitations of Traditional Birth Attendants practice especially as they affect maternal mortality rate (MMR) which is currently at 591 per 100,000. (CSO2007).

2.2 CASE STUDIES ON TRADITIONAL BIRTH ATTENDANT DONE OUTSIDE ZAMBIA

It is being increasingly recognized that Traditional Birth Attendants may have a role to play in improving health outcomes in developing countries because of their access to communities and the relationship they share with women in local communities especially if women are unable to access skilled care.

A similar study was carried out in Tanzania and Southern Nepal where Traditional Birth Attendants were randomly selected and interviewed to gain a more thorough understanding of their knowledge and practice regarding maternal and new born care.

A cross –section study was carried out in Mkruanga District of Tanzania with the aim of comparing the ability of trained and untrained TBAs in identifying the danger signs for developing complications during pregnancy and child birth as well as their referral practices. Study findings revealed that the majority of the Traditional Birth Attendants (86.5%) had not received any training. The trained Traditional Birth Attendants were

more knowledgeable on danger signs during pregnancy and child birth and where more likely to refer women with complications to health facilities.(Mpembeni R 1999)

Another case study was done by Eritrean Medical Association 2005 on the knowledge and practice of Traditional Birth Attendants in Eritrea. A cross sectional survey was undertaken using structured interviews with Traditional Birth Attendants that was conducted to collect data on their knowledge and practice. It was done to access the knowledge and practice of Traditional Birth Attendants in Eritrea. This was done in order to stimulate discussions and decision on the role of Traditional Birth Attendants and the way forward. Findings of the study revealed that majority (73%) of the TBAs never use herbs, 68% attended their last delivery within the month prior to the study and 83% within 6 months.

A case study was done by Bajunirwe and Muzoora in Uganda on the knowledge and practice of Traditional Birth Attendants. The government of Uganda thought of banning the activities of Traditional Birth Attendants but most people were not for the idea as a ban on Traditional Birth Attendants would be meaningless to women in rural communities and counterproductive, unless measures are taken to improve health care services and access to them. If these issues are not addressed many women in rural communities will no doubt continue to use Traditional Birth Attendants and possibly suffer as a result, whether their services are banned or not. Previous studies of Traditional Birth Attendants practices, knowledge and beliefs showed high rate of dangerous vaginal cutting. The study used qualitative focus groups with Uganda Traditional Birth Attendants to research current beliefs, knowledge and practices of Traditional Birth Attendants and their pregnant patients.

The participants listed several problems that they common identified among their patients and these included vomiting, pain in private parts, anemia, malaria, blood pressure, fever, vaginal itching and vaginal bleeding.

Other case studies have been carried out in Zimbabwe on the knowledge and practices of Traditional Birth Attendants The findings did establish that training of Traditional Birth Attendants resulted in32% reduction maternal death in rural areas and 28% in urban areas.(Post M 1997).In Gambia researchers have established that there was an increase in timely referral of pregnant cases following training of Traditional Birth Attendants.

Studies outside Africa have come up with similar findings on Traditional Birth Attendants. For example in Pakistan there was an increase in referral.

2.3 REPRODUCTIVE HEALTH ISSUES AFFECTING WOMEN

The need for Traditional Birth Attendants in relation to women reproductive healthcomes at a crucial stage with Zambia's population now standing at 13 million (CSO 2010).The Traditional Birth Attendants and community health workers have the potential for reaching therural population in remote areas because of dealing with a complex matter like women reproductive health. The Traditional Birth Attendants can play a very important role in the communities that are far from functional health facilities they deal successfully with normal birth every day, but it is with complicated birth and pregnancy that they face challenges.

2.4 ATTITUDES TOWARDS SERVICES OF TRADITIONAL BIRTH ATTENDANTS

Themajorcauses of maternal death are related to obstetric complication includingpostpartum hemorrhage infection eclampsia and prolonged or obstructed labour. As much as we could think the Traditional Birth Attendants are partly to blame on maternal death we may be giving them a case which they do not deserve, the blame can also go to the expectant mothers who only tell the Traditional Birth Attendants when things are not moving their way.

The fact that Traditional Birth Attendantsare usually if not mostly women has not also helped mothers as most decision makers are men hence the perception of safe delivery is not understood in the wide scope of women who are in western medical sense are doctors and male nurses with the conventional medical wisdom and knowledge.

The literature review is from a number of different scholars from United NationsWorld Bank related studies on health systems in Zambia, Uganda, Eritrea, Tanzania and Nigeria. It is clear that Traditional Birth Attendants are very necessary to help supplement health care delivery but acceptance of their valuable services will take time to sink in, because of wrong perceptions as the current differences are also faced by herbal practitioners with conventional medical associations.

CHAPTER THREE
METHODOLOGY

Study design

The adopted study design was purely anon-experimental design which employed an exploratory investigation. This was for a simple reason that it was conducted in uncontrolled and natural setting. There was no control group in the research. A survey approach was employed to solicit information from Traditional Birth Attendants pertaining to their knowledge and practices on pregnancy related obstetric complications.

STUDY SITE

The study was conducted in Chilumba area of KapiriMposhi District. Chilumba is an area about 25km west of Kabwe town and it is a remote area in terms of access to secondary and tertiary health care services. The majority of the population in Chilumba depends on subsistence agriculture for their livelihood. Recruiting and retaining female medical staff is difficult in rural areas, so the quality of primary maternal services is in general poor. The area has only one health center and a Traditional health care system that consists of Traditional Birth Attendants and herbal practitioners. The area was chosen because of easy accessibility and availability of the activities of the traditional birth attendants.

3.2Study population

The study population of 56 Traditional Birth Attendants was drawn from all the Traditional Birth Attendants in Chilumba area of KapiriMposhi district. The sampling unit included all the Traditional Birth Attendants in the area at the time of the survey. Since there was no sampling frame from which to choose, the research did depend on key informants like the village headmen and fellow TBAs. The area was selected based on considerations that Traditional Birth Attendants' activities were present in the area and the area was easily accessible to the researcher.

Data Collection Instruments

The study collected both qualitative and quantitative data using a questionnaire which contained both open and close ended questions. The questionnaire was pre-tested in another area similar to the study area. The main objective of the pre-testing was to examine the suitability and effectiveness of questions in eliciting adequate responses. The pre-testing also helped to determine the approximate time required to complete a questionnaire.

The interviews were conducted in homes of Traditional Birth Attendants. Due to low educational levels among the Traditional Birth Attendants, the questionnaire was administered by the researcher; this was done to help them understand since the questionnaire was not translated into local language.

Data Processing and Analysis

The data collected were checked for uniformity, consistency and accuracy. The questionnaires were coded. The data was then entered into computer using Excel and SPSS version 16.0. The Statistical Package for Social Sciences (SPSS) was used for analyzing quantitative data from close ended questions. The results were presented in the form of frequency distributions and cross tabulations. Bivariate analysis was performed on certain variables to determine any relationship between selected variables. Qualitative data from open-ended questions were mainly used to gain insight into the type treatment administered by traditional birth attendants to those cases that were not referred to a modern health facility. Inevitably such data was analyzed manually.

Ethical Consideration

All information collected remained in privacy. The main objective of the study was explained to all the Traditional Birth Attendants who took part in the study. No names of respondents were required to be disclosed. Consent from the local authority and the respondents before administering the questionnaire was also obtained.

Study Limitations

Since the study was conducted only in Chilumba area out of the entire KapiriMposhi district, the sample selected may not big enough to represent the entire population of the district, province or indeed that of Zambia. For this reason, the temptation to generalize the findings of this study beyond the study area should be exercised with utmost caution.

CHAPTER FOUR

FINDINGS

This chapter presents the research findings and is divided into the following sections. Section one discusses characteristics of respondents, section two discusses Traditional Birth Attendants' awareness of obstetric complications, section three presents findings on knowledge of consequences of obstetric complications. Section four presents' findings on practices of TBAs in relation to most common danger signs identified. The last section, section five, briefly looks at sources of knowledge about obstetric danger signs.

4.1 Characteristic of Respondents

The characteristics of the traditional birth attendants who participated in the study are presented in Table 4.1

Table 4.1: Selected characteristics of the respondents

Characteristic	Percentage (N=56)
AGE(Inyears**)**	
20-29	5.2
30-40	12.3
41-50	38.6
51+	43.9
EDUCATION	
None	12.3
Primary	56.1
Secondary	28.1
Tertiary	3.5
LENGTH OF PRACTICE(In years)	
1-5	7.3
6-15	49.7
16-21	16.4
22-35	18.2
36+	9.1

A total number of 56 traditional Birth Attendants were interviewed for the study out of these about 44 percent (43.9%) were aged 51 years and above, followed by those aged between 41 and

50 years old who made up approximately 39 percent (38.6%) of the sample. Those aged between 30 and 40 years made up 12.3 percent of the total sample while those aged between 20 and 29 years were the least represented in the sample.

In terms of highest level of education completed, majority (56.1%) indicated completed primary level of education followed by those who had completed secondary education (28.1%). Only 3.5% claimed to have completed tertiary education. Slightly more than 12% reported never havingbeen to school. Reported length of practice as traditional birth attendant ranged from five years and below to between 6 and 15 years for almost half of the respondents.

4.2 Awareness of danger signs

Information on awareness of danger signs in the study area was collected by asking the respondents to indicate whether or not they had ever heard of and encountered selected obstetric complications that occur during pregnancy, during delivery, after delivery for the mother and in new born babies.

4.2.1 During pregnancy

Table 4.2 shows percent distribution of respondents who were able to identify selected pregnancy-related danger signs as well as corresponding percent who claimed to have encountered them or coming across the danger sign.

Table 4.2 Awareness of obstetric complication during pregnancy by background characteristics.

Percent distribution of TBAs awareness of danger signs, education attained, age and length of practice.

Back ground Character	Severe Headache	Vaginal Bleeding	Swelling Feet	Body Hotness	Abdonomi Pain	Feeling Cold	Baby not Moving	Vaginal Dicharge	Sores on Private Parts	Tiring Easily	Looking Pale	Fits Convulsion
AWARNESS OF DANGER SIGNS												
Ever head	87.5	66.1	92.9	64.3	89.3	55.4	76.8	55.4	73.2	77.2	89.7	35.7
Come across	71.4	53.6	89.3	51.8	78.6	45.5	60.7	45.3	45.5	69.6	83.6	16.4
AGE IN YEAR												
20-29	4.1	5.4	5.8	5.6	6	6.5	6.5	10.3	7.3	4.5	6	5.3
30-40	12.2	10.8	11.5	11.1	12	6.5	10.9	6.9	14.6	13.6	12	10.5
41-50	34.7	32.4	40.4	25	34	35.5	34.8	31	41.5	40.9	38	36.8
50+	49	51.4	42.3	58.3	48	51.6	47.8	51.7	36.6	40.9	44	47.4
Total	100	100	100	100	100	100	100	100	100	100	100	100
EDUCATION												
None	10.2	10.8	11.5	11.1	14	9.7	13	20.7	14.6	9.1	14	21.1
Primary	61.2	59.5	59.8	61.1	60	64.5	56.4	51.7	53.7	56.8	56	57.9
Secondary	24.5	24.3	28.8	22.2	22	19.4	26.1	20.7	26.8	29.5	26	21.1
Tertiary	4.1	5.4	3.8	5.6	4	6.5	4.3	6.9	4.9	4.5	4	0
Total	100	100	100	100	100	100	100	100	100	100	100	100
LENGTH OF PRACTICE												
01-05.	8.5	5.7	8	2.9	8.3	3.4	9.1	3.7	7.7	9.5	8.3	5.9
06 -15.	44.7	34.3	48	35.3	41.7	31	40.9	29.6	46.2	52.4	45.8	52.9
16 - 21	14.9	20	16	20.5	18.8	20.7	20.5	22.2	15.4	11.9	18.8	13.6
22 - 25	21.3	28.4	20	26.5	20.8	34.5	22.7	29.6	23.1	19	18.8	11.8
36+	10.6	11.4	8	14.7	10.4	10.3	6.8	14.8	7.7	7.1	8.3	11.8
Total	100	100	100	100	100	100	100	100	100	100	100	100

From Table 4.2, it is evident that a large number of TBAs were aware of the most common pregnancy-related complications. For example, more than eight out of ten were able to identify swelling of feet (92.9%), abdominal pain (89.3%), looking very pale (87.7%) and severe headache (87.5%) as pregnancy-related danger signs or complications. Other pregnancy-related danger signs were identified by between 55.4% and 73.2% of the respondents. Surprisingly, only about 36 percent (35.7%) were able to identify fits/convulsions as danger signs related to pregnancy. From Table 4.2 it is also clear that not only had traditional birth attendants heard about pregnancy-related danger signs but also that a large number of them (between 45.5% and 89.3%) had encountered these pregnancy-related danger signs with the exception of fits/convulsions which only about 16 percent reported to have encountered in their experience.

An examination of the relationship between level of education of the respondent and awareness of pregnancy-related danger signs shows an inverse relationship (Table 4.2)The findings show that there was high awareness among those with primary level of education as compared to those with secondary and tertiary level of education

Except for those with no education, those with primary education were more likely to report having heard about pregnancy-related danger signs compared to their counterparts with secondary or tertiary education. The range is between approximately 52% and 61.2% among those with primary education between 19.4% and 29.5%, forthose with secondary education and between 0% and 6.5% for those with tertiary education.

The relationship between age of the respondent and awareness of pregnancy-related danger signs (Table 4.2) shows that awareness increased with age from 4.1% among those aged 20-29 years to 12.2% among those aged 30-40 years to 34.7% and 49% among those aged 41-50 and over 51 years, respectively.

There was no clear pattern with regard to the relationship between length of practice as TBA and awareness of pregnancy-related danger signs. This is evident from Table 4.2

Table 4.2 Awareness of Obstetric Complications during Pregnancy by Length of Practice was high among the Traditional Birth Attendants with 6-15 years which ranged from 29.5% to 52.9% followed by 22-35 years of practice.

4.3 Awareness of Obstetric Complications during Delivery

Awareness of delivery-related complications was equally high among the study population. This is evident from the results presented in Table 4.3 which show the number and percent distribution of traditional birth attendants who reported having heard of selected delivery-related danger signs and those who reported having encountered them.

Table 4.3 Awareness of obstetric complication after delivery by backgroundcharacteristics.

percent distribution of TBAs awareness of danger signs, education attained, age and length of practice.

Table 4.3 Awareness of obstetric complication after delivery by background characteristics.
percent distribution of TBAs awareness of danger signs, education attained, age and length of practice.

	Labour more than 12 hour	Retained Placenta	Heavy Bleeding
AWARNESS OF DANGER SIGNS			
Ever head	100	100	94.7
Come across	8.9	94.6	84.2
AGE IN YEAR			
20-29	5.4	5.4	5.6
30-40	12.3	12.5	11.1
41-50	37.5	39.3	37
50+	44.6	42.9	46.3
Total	100	100	100
EDUCATION			
None	12.5	12.5	13
Primary	57.1	57.1	55.6
Secondary	26.8	26.8	27.8
Tertiary	3.6	3.6	3.7
Total	100	100	100
LENGTH OF PRACTICE			
01-05.	7.3	7.4	5.8
06 -15.	49.1	50	48.1
16 - 21	16.4	16.7	17.3
22 - 25	18.2	16.7	19.2
36+	9.1	9.3	9.6
Total	100	100	100

Table 4.3 shows the proportion of respondents who were able to identify that labour lasting more than 12 hours, placenta not delivered within 30 minutes and heavy bleeding as danger signs that may occur during delivery were mentioned by between 94.7% and 100% of the traditional birth attendants interviewed. The proportions who reported having come across these delivery-related danger signs are equally high (between 84.2% and 94.6%).

Awareness of obstetric complication was high among Traditional Birth Attendants primary of education than their counter parts in secondary and tertiary level of education. Similarly there was high awareness among Traditional Birth Attendants aged 50+ years and length of practice between 6-15 years.

4.4.1 Awareness of obstetric complications after delivery (in mothers)

Responses to the question on awareness of the obstetric complications that occur after delivery in mothers are represented in Table 4.4 and show that most traditional birth attendants had not only heard about them but they had also encountered them. The same pattern of awareness characterized the findings in obstetric complications that occur after delivery in mothers.

Table 4.4 Awareness of obstetric complication after delivery in mothers by background characteristics percent distribution of TBAs awareness of danger signs, education attained, age and length of practice.

Back ground Character	Severe Headache	Vaginal Bleeding	Swelling Feet	Body Hotness	Abdonomi Pain	Feeling Cold	Baby not Moving	Vaginal Discharge	Sores on Private Parts	Diarrhoe	Looking Pale	Fits Convulsion
AWARNESS OF DANGER SIGNS												
Ever head	78.9	38.6	80.9	76.8	78.7	74.5	51.1	42.6	31.9	72.3	61.4	35.7
Come across	72.7	35.2	68.3	89.1	72.3	68.1	43.5	33.3	20.5	63.8	47.3	20.5
AGE IN YEAR												
20-29	2.2	0	2.2	4.5	8.1	5.7	4.2	15	13.3	8.8	5.7	0
30-40	15.6	9.1	13	9.1	10.8	8.6	8.3	5	0	11.8	11.4	10
41-50	35.6	22.7	39.1	40.9	32.4	37.1	25	30	20	35.3	28.6	40
50+	46.7	68.2	45.7	45.5	48.6	48.6	62.5	50	66.7	44.1	54.3	50
Total	100	100	100	100	100	100	100	100	100	100	100	100
EDUCATION												
None	11.1	22.7	6.5	11.4	10.8	8.6	12.5	10	6.7	5.9	17.1	15
Primary	53.3	50	56.5	61.4	62.2	60	62.5	50	46.7	61.8	60	55
Secondary	31.1	18.2	32.6	22.7	21.6	25.7	16.7	30	33.3	26.5	17.1	30
Tertiary	4.4	9.1	4.3	4.5	5.4	5.7	8.3	10	13.3	5.9	5.7	0
Total	100	100	100	100	100	100	100	100	100	100	100	100
LENGTH OF PRACTICE												
01-05.	9.3	0	9.1	4.7	5.6	5.9	4.3	5.3	7.1	3	3	5.6
06 -15.	46.5	25	47.7	48.8	50	44.1	30.4	42.1	21.4	48.5	33.3	61.1
16 - 21	18.6	30	18.2	11.6	5.6	14.7	13	5.3	14.3	6.1	21.2	16.7
22 - 25	18.6	25	18.2	23.3	27.8	23.5	34.8	36.8	50	30.3	30.3	5.6
36+	7	20	6.8	11.6	11.1	11.8	17.4	10.5	7.1	12.1	12.1	11.1
Total	100	100	100	100	100	100	100	100	100	100	100	100

Obstetric complications most respondents indicated having heard about were feeling very cold (80.9%), severe headache (78.9%), abdominal pain (78.7%), pain in private parts (76.8%), and, swelling feet (72.3%). However, convulsion/fits (35.7%), redness of breast (31.9%) and body hotness (38.6%) were identified by less than four out of ten respondents. Awareness of obstetric complication was high among Traditional Birth Attendants with primary level of education than their counter parts in secondary and tertiary level of education. There was high awareness among Traditional Birth Attendants with 50+ years which ranged from 44.6% to 68.9% and length of practice was high among thosebetween 6-15 years of practice.

4.5 Awareness of obstetric complications after delivery (in babies)

Awareness among Traditional Birth Attendants of the obstetric complications which may occur in babies post-delivery was also high as seen in (Table 4.5)

Table 4.5 Awareness of obstetric complication after delivery in a child by background characteristics percent distribution of TBAs awareness of danger signs, education attained, age and length of practice.

BACK GROUND CHARACTERICS	Difficult Breathing	Not Breathing	Fits	Yellow Skin	Constipatic	Fever/ Chill	Poor Sucking	Baby No active	Baby Vomiting	Diarrhoe	puss from Umbilical	Red Umbilical
AWARNESS OF DANGER SIGNS												
Ever head	93	86	56	78.6	61.4	71.9	96.5	91.2	66.7	64.9	54.4	36.8
Come across	80.4	75	47.1	53.6	53.6	61.4	80.7	73.7	58.9	60.7	34.5	22.0
AGE IN YEAR												
	5.7	6.1	3.1	4.5	5.7	4.9	5.5	5.8	2.6	5.4	9.7	4.8
30-40	13.2	14.4	12.5	13.6	11.4	12.2	12.7	11.5	18.4	16.2	9.7	4.8
41-50	37.7	36.7	46.9	36.4	28.6	34.1	38.2	40.4	31.6	35.1	32.3	42.9
50+	43.4	42.9	37.5	45.5	54.3	48.8	43.6	42.3	47.4	43.3	48.4	47.6
Total	100	100	100	100	100	100	100	100	100	100	100	100
EDUCATION												
None	9.4	12.2	12.5	6.8	11.4	9.8	10.9	11.5	7.9	10.8	16.1	9.5
Primary	58.5	53.1	56.2	59.1	57.1	56.1	56.4	53.8	63.2	56.8	58.1	61.9
Secondary	28.3	30.6	31.2	31.8	25.7	24.3	29.1	30.8	23.9	27	19.4	19
Tertiary	3.8	4.1	0	2.3	5.7	4.9	3.6	3.8	5.3	5.4	6.5	9.5
Total	100	100	100	100	100	100	100	100	100	100	100	100
LENGTH OF PRACTICE												
01-05.	7.8	8.5	10	9.5	6.1	7.7	7.5	8	8.3	8.6	3.4	10
06 -15.	47.1	46.8	60	47.6	39.4	41	49.1	48	38.9	45.7	41.4	45
16 - 21	15.7	17	16.7	14.3	18.2	20.5	15.1	16	13.9	14.3	17.2	5
22 - 25	19.6	19.1	6.7	16.7	24.2	20.5	18.9	20	25	22.9	27.6	25
36+	9.8	8.5	6.7	11.9	12.1	10.3	9.4	8	13.9	8.6	10.3	15
Total	100	100	100	100	100	100	100	100	100	100	100	100

The findings presented in **Table 4.5** show that approximately nine out of ten traditional birth attendants interviewed reported that they had heard that poor sucking at the breast (96.5%), difficulty in breathing (93%) and the baby not being active (91.2%) were danger signs for infants. Other danger signs were reportedly heard of by between 54% and 78% of the respondents. Surprisingly, only about 37% reported having heard of a red umbilical cord as a danger sign and only 22% had come across this danger sign in their practice as traditional birth attendants.

The relationship between age, education and length of practice on one hand, and awareness of danger signs that may occur during delivery and after delivery for both mother and baby follow the same pattern where awareness tended to increase with age while it decreased with level of education and remained inconsistent with regard to length of practice. This is evident from the tables A to G below.

Knowledge of Consequences of Obstetric complications

Information on knowledge of consequences of untreated danger signs during pregnancy, during delivery and after delivery was elicited through open-ended questions.

During Pregnancy

Some obstetric complications if not treated may lead to death and/or permanent disability to the woman. Others may lead to other diseases. For example, convulsions may lead to epilepsy, while vaginal bleeding may lead to anemia. Other obstetric complications may lead to poor health for the woman and later the woman would die

Table4.6 Responses on consequences of obstetric complications if not treated during Pregnancy

obstetric complications	Perceived consequences if not treated
Severe headache	Convulsions
Vaginal bleeding	Anemia
Swelling of feet	Discomfort, fits
Body hotness	Anemia, death
Severe abdominal pain	Death
Feeling very cold	Weakness, poor health
Baby not moving	Distress to the mother
Less movement by baby	Anxiety
Vaginal discharge	Discomfort
Sores on private parts	Discomfort
Tiring easily	Weakness, death
Looking very pale	Weakness, poor health
Fits	Poor oxygen supply to the brain leading to death
Convulsions	Epilepsy, low oxygen leading to death

Table 4.6 shows that the respondents were aware of the consequences if the obstetric complications were not treated.

During delivery

Some obstetric complications during delivery, if not treated, may lead to permanent problem for the woman. For example labour lasting for more than 12 hours may lead to ruptured uterus or death for the woman and heavy bleeding may lead to anemia or death of the woman. Bad smelling vaginal discharge may lead to infertility if not treated.

Table 4:7 shows what traditional birth attendants knew to be the most likely consequences of untreated danger signs during delivery?

Table 4.7 Responses on the consequences of obstetric complications if not treated during delivery

Complication	Perceived consequences if not treated
Labour lasting more than 12 hours	Ruptured uterus ,fetal death
Placenta not delivered within 30minutes	Maternal exhortation, anxiety and abdominal discomfort
Heavy bleeding	Anemia, death

Table 4.7 shows that the respondents were aware of the major consequences of untreated the obstetric complications during delivery.

A**fter delivery in mothers**

Some obstetric complications that occur in mothers after delivery, like convulsions/fits if not treated may lead to death while others like pain in private parts may lead to infertility. Cracked nipples may lead to breast cancer. Heavy bleeding may lead to anemia and death of the woman.

Table 4.8 shows the most common responses given by TBAS on the most common likely consequences of untreated danger signs after delivery in mothers.

Table 4.8 Perceived likely consequences of untreated danger signs after delivery

obstetric complications	Consequences if not treated
Severe headache	Eclampsia (fits)
Body hotness	Anemia leading to death
Feeling very cold	
Severe increasing abdominal pain	Fever, anemia, death
Pain in private parts	Poor health, secondary infertility
Heavy bleeding	Anemia leading to death
Breast sores	Breast engorgement
Cracked nipples	Breast cancer, breast engorgement
Redness of breast	Abscess, fever, discomfort
Swelling breasts	Abscess, fever, discomfort
Bad smelling vaginal discharge	Fever
Fits	Death
Convulsions	Death

Responses in **Table 4.8**clearly show traditional birth attendants were able to mention most of the likely consequences of untreated danger signs after the mother has delivered.

After delivery in a child

After delivery, some obstetric complications like red swollen eyes, if not treated may lead to blindness, while poor sucking and baby inactivity may lead to retarded growth and low thinking capacity in children. Other obstetric complications like diarrhea and constipation may lead to malnutrition and later death for the infant.

Traditional birth attendants' common responses on consequences of untreated obstetric complications in new born babies are summarized in **Table 4.9** and clearly show that, generally, TBAs are knowledgeable about untreated danger signs in babies.

Table 4.9: Perceived consequences of untreated danger signs in new born babies

complications	Perceived consequences if not treated
Fits	Low thinking capacity, epilepsy
Yellow skin	Brain damage, retarded growth
Fever/chills	Anemia
Poor sucking	Low growth rate
Baby inactive	Low growth rate
Baby vomiting	Dehydration
Diarrhea	Malnutrition
Constipation	Malnutrition
Red swollen eyes	Blindness
Not breathing	Death
Red umbilical stump	Fever
Difficult breathing	Pneumonia
Pus from umbilical stump	Fever

4.4 Sources of information aboutobstetric complications

Table 4.10 presents data on the main sources of information about danger signs as provided by the respondents.

Table 4.10 Number and Percentage of Traditional Birth Attendants Who Reported having Undergone Training at Different Pregnancy Stages

Pregnancy level	**Frequency**	**Percent**	**Total**
During pregnancy	22	52.4	42(100)
During delivery	21	53.8	39(100)
After delivery-mother	19	48.7	39(100)
After delivery-baby	18	48.6	37(100)

At the time of the study, a total of 22 (52.4%) reported having undergone training in the recognition of pregnancy-related danger signs while 21(53.8%) claimed to have undergone some training in the identification of danger signs during delivery. Approximately 49% reported having undergone some training in the identification of danger signs that may occur after delivery.

The providers of training included the Ministry of Health and organizations like Adventist Relief Agency (ADRA), Prevention of Mother to Child Transmission (PMCT) programme, Churches Health Association of Zambia (CHAZ) and MSF. Among them, ADRA was the main provider accounting for 63.2% of respondents who received training on danger signs during pregnancy and during delivery, respectively. About 67 percent (66.7%) and 74 percent (73.7%) of the traditional birth attendants reported having received training on identification of danger signs in mothers and babies after delivery from the same source. Interestingly, less than half (44.4%) of the traditional birth attendants indicated that their knowledge on obstetric complications improved after undergoing the training. Other sources of information include grandmothers, friends, other traditional birth attendants and relatives.

5.0 PRACTICES OF TRADITIONAL BIRTH ATTENDANTS

Information on practices of Traditional Birth Attendants on the obstetric complications was collected by asking the respondents to state what action they took when selected obstetric complications were/are observed. Results are presented in Table4.11.

Findings show that between 22% and 66.7% of the respondents were able to refer pregnant women to a modern health centre when complications were observed. The complications that were mostly referred included baby not moving (66.7%), sores on private parts (63.2%), severe headache (57.1%), and vaginal bleeding (57.1%). The least danger signs to be referred were tiring easily (22.0% and looking very pale (24.5%).

Table 4.11 Action taken when danger signs are observed during pregnancy

COMPLICATIONS	Action taken when danger sign observed			
	REFERED	WAIT	TREAT	NOTHING
Severe headache	(57.1)20	3(7.1)	12(28.6)	3(7.1)
Vaginal bleeding	20 (57.1)	5(14.3)	7(20.0)	3(8.3)
Swelling feet	21 (40.4)	12(23.1)	5(9.6)	14(26.9)
Body hotness	17 (48.0)	10(28.6)	-	8(22.9)
Abdominal pain	22 (51.2)	8(18.6)	9(20.9)	4(26.9)
Feeling very cold	11 (33.3)	5(15.2)	9(27.3)	8(22.9)
Baby not moving	28 (66.7)	1(2.1)	-	13(31.0)
Vaginal discharge	16 (53.3)	-	-	-
Sores on private parts	24 (63.2)	3(7.9)	7(18.4)	4(10.5)
Tiring easily	9 (22.0)	7(17.1)	6(14.6)	19(46.3)
Looking very pale	12 (24.5)	7(14.3)	8(16.3)	22(44.9)
Fits/convulsions	6 (35.3)	1(5.9)	1(5.9)	9(52.9)

For the danger signs that were not referred to a health facility, the traditional birth attendant either waited (between 2.1% and 28.6%) or treated (between 9.6% and 28.6%) the symptoms. The proportion who indicated doing nothing about the observed danger sign(s) ranged from 7.1 percent for severe headache to as high as 52.9% for fits/convulsions.

Box 1**.** Shows type of treatment for cases that TBAs administered treatment

BOX 1:Treatment given to pregnant women when obstetric complications are observed

COMPLICATIONS	TREATMENT GIVEN
Severe headache	Tattooing, sangalwendotree,fancida, panadol, cafemol
Vaginal bleeding	Traditional medicine(different tree parts)
Swelling feet	Traditional medicine, massaging with warm water
Body hotness	Traditional medicine(cassava leaves)
Severe abdominal pain	Traditional medicine
Feeling very cold	Traditional medicine
Sores on private parts	Traditional medicine(salt, tree parts etc)
Fits/convulsions	Traditional medicine

5.1 During Delivery

Table 4.12 presents actions taken by TBAs when danger signs are observed during delivery.

Table 4.12 Number and Percent Distribution of Respondents and Action taken when

Danger signs are observed During Delivery

COMPLICATIONS	REFERED	WAIT	TREAT	NOTHING
Labour lasting more than 12 hours	25 (51.0)	13(26.5)	10(20.4)	1(2.0)
Placenta not delivered within 30minutes	21 (41.0)	7(13.7)	21(41.0)	2(3.9)
Heavy bleeding	30 (52.1)	7(14.6)	4(8.3)	14(25.0)

Findings presented in **Table4.12** show that only between 41% (for placenta not delivered within 30 minutes) and 52.1% (for labour lasting more than 12 hours and for heavy bleeding) of the respondents were able to refer the patients to the modern health facility. Between 14.6% and 26.5% simply waited until delivery. Surprisingly, approximately a quarter (25%), did nothing even when there was heavy bleeding.

Box 2: Treatment given to women during delivery when obstetric complications are observed

COMPLICATIONS	TREATMENT GIVEN
Labour lasting more than 12hs	Traditional medicine(different tree parts)
Placenta not delivered within 30 minutes	Traditional medicine (banana roots, different tree parts).
Heavy bleeding	Traditional medicine(different tree parts)

5.2 After Delivery-Mother

The proportions of traditional birth attendants who referred women to a health facility when danger signs were observed after delivery also fall far short of the requirement that all obstetric danger signs once noticed should be referred to a modern health facility. This is evident in **Table 4.13.**

Findings in **Table 4.13**show that only between 4.2% and 48.3% were able to refer the patients to the modern health centre.

Table 4.13 Number and Percent Distribution of Respondents by Action Taken when Danger Signs are Observed in Mothers after Delivery

COMPLICATION	REFERRED	WAIT	TREAT	NOTHING
Severe headache	17 (37)	5(10.9)	20(43.5)	4(8.7)
Body hotness	9 (34.6)	7(26.9)	-	10(38.5)
Feeling very cold	6 (14.0)	7(16.3)	24(55.8)	6(14.0)
Pain in private parts	4 (10.0)	9(22.5)	25(62.5)	2(5.0)
Abdominal pain	10 (27.0)	4(10.8)	19(51.4)	4(10.8)
Heavy bleeding	21 (41.0)	8(20.5)	3(7.7)	12(30.8)
Breast sores	27 (48.3)	2(6.9)	5(17.2)	8(27.6)
Cracked nipples	1 (4.2)	5(20.8)	3(12.5)	15(62.5)
Redness of breasts	7 (31.8)	2(9.1)	2(9.1)	11(50.0)
Swelling of breasts	7 (21.2)	3(9.1)	3(9.1)	20(60.6)
Bad smelling vaginal discharge	10 (31.2)	6(18.8)	1(3.1)	15(46.9)
Fits/convulsions	25 (45.8)	1(4.2)	1(4.2)	11(45.8)

Box 3 shows the type of treatment given to mothers for various observed danger signs during delivery.

BOX 3: **Treatment given to mothers after delivery when obstetric complications are observed**

COMPLICATION	TREATMENT
Severe headache	Panadol,sangalwendotree,tomatoe roots
Body hotness	Cafemol
Feeling very cold	Massaging with warm water,panadol
Pain in private parts	Traditional medicine, salt water, massaging
Abdominal pain	Traditional medicine, panadol, cafemol
Heavy bleeding	Traditional medicine, sitting in salt water,potatoe leaves
Breast sores	Traditional medicine,tomatoe leaves, salt water
Cracked nipples	Bathing nipples with cold water
Redness of breast	Traditional medicine(banana leaves)
Swelling breast	Traditional medicine
Vaginal discharge	Traditional medicine
Fits/convulsions	Traditional medicine

5.3 After Deliver-Baby

A similar pattern is observed with regard to practices of TBAs with regard to danger signs when observed in newly born babies **(Table 4.14)**

Table 4.14: Number and percent distribution of respondents who indicated having taken

certain actions when complications delivery in new born babies are observed

COMPLICATIONS	REFERED	WAIT	TREAT	NOTHING
Difficulty in breathing	19(40.4)	7(14.9)	18(38.3)	3(6.4)
Not breathing	7(16.3)	9(20.9)	22(51.2)	5(11.6)
Fits	18(56.2)	1(3.1)	7(21.9)	6(18.8)
Yellow skin	19(45.2)	-	13(31.0)	10(23.8)
Constipation	14(33.3)	1(2.4)	15(35.7)	12(28.6)
Fever/chills	23(56.1)	1(2.4)	8(19.5)	9(22.0)
Poor sucking	14(28)	21(42.0)	9(18.0)	6(12.0)
Baby not active	12(27.3)	11(25.0)	8(18.2)	13(29.5)
Baby vomiting	10(24.4)	2(4.9)	16(39.0)	13(31.7)
Diarrhea	19 (33.3)	3(7.7)	12(30.8)	11(28.2)
Pus from umbilical stump	30 (54.8)	1(3.2)	6(19.4)	7(22.6)
Red umbilical stump	25 (45.5)	-	2(9.1)	25(45.5)

From **Table 4.14** it is clear that only between 27.3% and 56.2% were able to refer babies with signs of complications to a modern health facility. The obstetric complications which were more likely to be referred to the modern health center include not breathing, fever/ chills, pus from umbilical stump and constipation. The obstetric complications which were less likely to be referred include baby not active (27.3%), baby vomiting (24.4%) and poor sucking (28%). Those who did not refer to modern health facilities either waited or treated the signs themselves.

Box 4 shows obstetric complications that may occur in babies after delivery and the type of treatment administered by TBAs once the obstetric complications are observed.

BOX 4 Treatment given to children after delivery when obstetric complications are observed

DANGER SIGN	TREATMENT GIVEN BY TBAs
Difficulty in breathing	Traditional medicine, sucking baby's nostrils, hold baby upside down
Fits	Traditional medicine
Yellow skin	Traditional medicine
Constipation	Traditional medicine, Gripe water, cooking oil, inserting soap in anus
Fever/chills	Traditional medicine(pinches leaves) warm clothes
Poor sucking	Traditional medicine(breast feed the baby)
Baby inactive	Traditional medicine(Goats feaces) massaging the with warm water
Baby vomiting	Traditional medicine(banana roots, different tree parts)
Diarrhea	Traditional medicine(different tree parts)
Pus from umbilical	Traditional medicine(salt water, leaves of different trees)
Red umbilical stump	Traditional medicine(charcoal powder)

Evidently, use of traditional medicine to treat danger signs in babies that were not referred to a health facility is very common among traditional birth attendants. This was common for all types of danger signs babies may experience.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

The main objective of the study was to investigate knowledge and practices of Traditional Birth Attendants (TBAs) on pregnancy -related obstetric complications in Chilumba area of KapiriMposhi district of central province of Zambia. A total number of 56 TBAs, identified through Key informants and through snow-ball sampling, were reached and participated in the study.

Among the major findings is that awareness of obstetric complications is quite high among the traditional birth attendants in the study area. This is evident from the proportions of respondents who were able to name the major danger signs at different pregnancy levels. Out of the 56 TBAs who were interviewed for the study, more than eight out of ten were able to identify swelling of feet (92.9%), abdominal pain (89.3%), looking very pale (87.7%) and severe headache (87.5%) as pregnancy-related danger signs or complications. Other pregnancy-related danger signs were identified by between 55.4% and 73.2% with the exception of fits/convulsions which only about 36 percent (35.7%) were able to identify as danger signs related to pregnancy. The same pattern is evident with regard to delivery-related complications. Between 95% and 100% were aware that labour lasting more than 12 hours, placenta not delivered within 30 minutes and heavy bleeding that may occur at the time of delivery. Furthermore, more than 70% reported being aware of the main complications that women may experience after delivery. Additionally, approximately 9 out of ten respondents were aware of danger signs that may be experienced by new born babies. Through responses to open-ended questions which yielded qualitative data, the findings indicate that traditional birth attendants are not only aware of the danger signs that may occur during pregnancy, during delivery and after delivery but they are, generally, also aware of the most likely serious consequences if these danger signs are not treated or if treatment is delayed.

Contrary to what was postulated in the conceptual framework, only age of the traditional birth attendant was positively associated with knowledge of obstetric complications that may occur at different pregnancy stages (during pregnancy, during delivery and after delivery). On the other hand, awareness of danger signs declined with the level of education. Findings suggest that awareness of danger signs was higher among those with primary education compared to those with higher education especially among those with tertiary education. Also, awareness was comparatively lower among those without any formal education. Most

likely, this is due to few numbers of respondents in the three educational categories (no education, secondary education, and tertiary education) compared to those with primary education. The reason for the inconsistent relationship between awareness of danger signs and length of practice as a traditional birth attendant is difficult to explain with the collected data.

Notwithstanding high levels of knowledge of danger signs and the associated negative consequences of untreated or delayed treatment of danger signs, this study has demonstrated that the practices of many traditional birth attendants fall far short of what is expected of them given the fact that all obstetric complications are supposed to be referred to a modern health facility where appropriate care can be given. Instead of doing this, many traditional birth attendants either did nothing about the observed danger signs or administered traditional medicine for treatment. As findings have demonstrated, only between 22% and 67% of the danger signs that were observed during pregnancy and between 41% and 52% of those that were noticed during delivery and approximately between 4% and 48% that were observed in mothers after delivery were referred. The corresponding figures for babies presenting danger signs that were referred were only between 27% and 56%. For the rest of danger signs observed either during pregnancy, during delivery or after delivery, the traditional birth attendants either did nothing or administered traditional medicine whose efficacy or safety has not been scientifically established. Such practices by traditional birth could result in adverse outcomes for both the mother and the baby.

From the foregoing, it becomes inevitable to conclude that TBAs may be contributing to the current high perinatal mortality rate and maternal mortality ratio in Zambia (estimated at 38 deaths per 1,000 pregnancies and 591 maternal deaths per 100,000 live births, respectively (CSO, 2007). This is because most maternal and neonatal deaths in resource-poor countries like Zambia are attributed to three delays in; (1) recognizing and deciding to seek appropriate medical help for an obstetric emergency; (2) reaching an appropriate obstetric facility; and (3) receiving adequate care when a facility is reached. (Thaddeus, S. Maine D., 1990).

From the findings of this study, it is clear that traditional birth attendants may be contributing to the first delay by not referring or advising women to seek appropriate

medical care from appropriate obstetric emergency facility such as a health facility. Traditional Birth Attendants can prevent delays in deciding to seek medical care by women by referring them to health centers once they notice obstetric complications. In this way, traditional birth attendants can play an important role in promoting maternal health by reducing the delay in recognizing obstetric complication when their patients require medical attention. Early detection of the problem leads to timely referrals in the case of complications; this is of particular importance in areas where physical barriers are a challenge to the health care delivery system. Since every pregnancy is a risk, it is therefore only prudent that every pregnant woman with danger symptoms delivers in a health facility with emergency obstetric services. This can go a long way in contributing to the reduction in maternal and neonatal deaths. Good practices at all levels of pregnancy can reduce the risk of complication and infections to the mother and babies as well.

It is important to point out that, currently, it is not possible to avoid the services of the Traditional Birth Attendants, although some advocates have called for the banning of their activities. Stopping Traditional Birth Attendants from carrying out the deliveries will be counterproductive as we know they are a source of information and inspiration to the community women. The major role of Traditional Birth Attendants on obstetric complications is early recognition and referral. There is need for Traditional Birth Attendants to conduct safe deliveries and promptly refer mothers and new born babies with complications to health facilities. If unsafe practices persist among Traditional Birth Attendants, reducing maternal and neonatal deaths will not be achieved. In fact, past studies have demonstrated the positive impact of trained TBAs. As already alluded to, a study in Tanzania showed, among other things, that trained TBAs were knowledgeable on obstetric complications during pregnancy and child birth and were more likely to refer women with complications to modern health center (Mpembeni R 1999). Also, a study in Eritrea demonstrated that the trained TBAs were more likely aware of obstetric complications and they did refer their clients to modern health facilities (Eritrean Medical Association Year 2005? In Zimbabwe (Post, M. 1997) actually established that, training of TBAs resulted in 32% reduction in maternal deaths in rural areas and 28% in urban areas. Researchers in Gambia also established that there was an increase in timely referral of pregnant cases following training of TBAs (Post M,, 1997, opp.cit). These results were consistent with

those found in Pakistan (Jokhio, AH, Winter HR and Cheng KK, 2005) that demonstrated that there was a significant reduction (of about 30%) in both perinatal and maternal mortality and an increase in the number of referrals through training of traditional birth attendants. Similar results were reported in a study that examined the effects of traditional birth attendant training on maternal and neonatal care (Miller P.C., Rashida G., Tasneem Z., and ulHagque, M., 2012). In this particular study, the TBAs were evaluated according to various measures of knowledge, skill, and practice, including referral. Results showed that, by most measures, trained TBAs outperformed untrained ones, often to significant degrees. On the basis of the findings, the researchers concluded that properly TBAs can substantially contribute to improved delivery outcomes.

Too often in the past, TBAs have not been viewed as being part of the solution to reproductive health. The majority of the interventions and services to promote sexual and reproductive health, including care during pregnancy and child birth have exclusively focused on skilled health workers. It is time for TBAs to get involved in reproductive health because they have the capacity to influence and make decisions on health among the rural community. Since the community midwifery system is not in place, Traditional Birth Attendants would continue to play a vital role in providing care especially during deliveries and post-natal care.

CONCLUSION AND RECOMMENDATIONS

CONCLUSION

The study concludes that as long as Traditional Birth Attendants continue to function as delivery attendants we need to educate and encourage them to identify danger signs and promptly refer complications to the nearest health center. The Ministry of health and organizations like ADRA,CHAZ should continue creating awareness regarding obstetric complications through a targeted community based health educational interventions aiming at promoting early recognition of the danger signs at the household level.

As it is known that the highest risks of fatal maternal complications are at the time of delivery and the period just after delivery, Traditional Birth Attendants should be empowered with knowledge on obstetric danger signs which are an indication that urgent

emergency care needs to be sought from skilled attendants. They should also be advised to prepare for child birth through health education using all available channels. The availability of radios needs to be utilized by health educators innovatively so as to reach as many people as possible. High prevalence of radios in households is an opportunity to be exploited by intervention programmes on safe motherhood programmes. Through innovative approaches to the radios can be used as channels of providing a continuum of care between Traditional Birth Attendants and health care workers. Providing information on pregnancy related danger signs especially to the women aged 15-49 years who are the most affected by maternal and neonatal death may lead to the reduction in maternal and neonatal deaths, because they will make an early decision to go and see the skilled birth attendant without delay hence increasing the chance of not dying.

The knowledge and practices of Traditional Birth Attendants need to be addressed by policy makers and planners to make positive effort through research based on a firm understanding of what Traditional Birth Attendants can and can not do. Some delivery care practices of the Traditional Birth Attendants can be harmful which could result in adverse out comes for both the mother and the baby. It is necessary to develop and test effective interventions to improve health care services. It is also important to know the strength and limitation of Traditional Birth Attendants practices as they affect maternal mortality rate.

Too often in the past, TBAs have been seen not being part of the solution to reproductive health. The majority of the intervention and services to promote sexual and reproductive health including care during pregnancy and child birth have exclusively focused on skilled health workers. There is need for TBAs to get involved in reproductive health because they have the capacity to influence and make decisions on health among the rural community.

RECOMMENDATIONS

The following recommendations are made in the hope that if implemented, they can go a long way in increasing the knowledge and practices among the Traditional Birth Attendants and ultimately reduce the number of maternal and neonatal death. Traditional Birth Attendants are supposed to know all the danger signs so that they are able to identify mothers with complications and on their prompt refer to health facility that can provide obstetric care.

There is need for the Ministry of health to find ways of involving all men, women and girls in communicating factual information about the danger signs. Promotion of drama in communities focusing on consequences of danger signs if not treated. The Ministry of health and other organizations should continue training the Traditional Birth Attendants because this will help reduce the first delay in the three delays model developed by the prevention of the maternal mortality network.

There is also need for organizations like ADRA, CHAZ, MCF and PMCT to do more than what they have done so far, they should encourage the Traditional Birth Attendants to refer all danger signs to the nearest health centre. There is need to discourage the Traditional Birth Attendants who give treatment to women with complications because this may result in adverse outcomes for both the woman and the baby.

The Ministry of health should constantly meet and provide incentives to the Traditional Birth Attendants. A programme needs to be designed where TBAs will be motivated to provide more attention and support to their clients; this in turn many women's lives would be saved or may prevent disability of women due to obstetric complications. This may reduce the gap that exists between the skilled birth attendants and the Traditional Birth Attendants. In other words the two should work in collaboration.

The Traditional Birth Attendants themselves can be used as agents of change by the ministry of health to encourage referral to health facilities and discourage treatment of any complications. Therefore the Traditional Birth Attendants should be encouraged to refer their patients to health center and at no time should they treat someone with a complication.

There is need to develop community based referral strategy to facilitate the early and timely access to appropriate health services in case of any emergency and complications related to pregnancy, during and post delivery in mothers and new born babies.

There is need for the Ministry of healthy and other organizations to increase awareness and promote positive maternal and neonatal health behavior; they should also increase access to emergency obstetric and neonatal care through community involvement in maternal and child health services and they improve on services quality in health facility particularly related to management of obstetric and neonatal complications.

There is need to improve on the quality and methods of delivery of antenatal care education and it may require review so as to improve its effectiveness. This will depend on a functional referral system from rural communities to health facilities with skilled attendants and emergency care services.

Every woman should be made aware of the likelihood of complications during pregnancy, child birth (labour) and postpartum periods. Women and their spouses should be availed all information on danger signs, because knowledge of danger signs need to be given priority as it prepares women and their families for timely and appropriate decision making in case of complication, where as birth preparedness offers readiness to reach health facilities for normal or complicated child birth.

Providing information on pregnancy related danger signs especially to the women aged 15-49 years who are the most affected by maternal and neonatal death may lead to the reduction in maternal and neonatal deaths, because they will make an early decision to go and see the skilled birth attendant without delay hence increasing the chance of not dying.

The knowledge and practices of Traditional Birth Attendants need to be addressed by policy makers and planners to make positive effort through research based on a firm understanding of what Traditional Birth Attendants can and can not do. Some delivery care practices of the Traditional Birth Attendants can be harmful which could result in adverse out comes for both the mother and the baby. It is necessary to develop and test effective interventions to

improve health care services. It is also important to know the strength and limitation of Traditional Birth Attendants practices as they affect maternal mortality rate.

Too often in the past, TBAs have been seen not being part of the solution to reproductive health. The majority of the intervention and services to promote sexual and reproductive health including care during pregnancy and child birth have exclusively focused on skilled health workers. There is need for TBAs to get involved in reproductive health because they have the capacity to influence and make decisions on health among the rural community.

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TOPIC: KNOWLEDGE AND PRACTICE OF TRADIONAL BIRTH ATTENDANTS ON PREGNANCY RELATED OBSTETRIC COMPLICATIONS AND CHILDBIRTH. A CASE STUDY OF CHILUMBA AREA OF KAPIRI MPOSHI **DISTRICT**

RESEARCH QUESTIONNAIRE

Please answer the following questions by ticking (✓) the relevant block or writing down your answer in the space provided. Your responses will remain anonymous. Your co-

Example of how to complete this questionnaire

What is your age? If your answer is 45 years old. You would answer this question as follows

16-21	22-25	26-35	36-49
1	2	3	4 ✓

SECTION A

This section aims to obtain background information

1 What is your current age?

Please select only	10-29	30-40	41-50	51+
One option	1	2	3	4

2 Education level attained

Please select only	Primary	Secondary	Tertiary	None
One option	1	2	3	4

3 When did you become a Traditional Birth Attendant?

Please select only	1-5	6-15	16-21	22-35	36+
One option	1	2	3	4	5

4 How did you become a Traditional Birth Attendant?

……

……

……

5 When did you last conduct a delivery as a Traditional Birth Attendant?

Please indicate the	0-6	7-12	13-24	25-36	37+
Number of months	1	2	3	4	5

6 In the last 12 months, how many deliveries have you assisted?

Explain your answer in columns of question 6

TRAINING IN OBSTETRIC COMPLICATION RECOGNITION

7. For each of the following, indicate whether or not you have undergone any training in the recognition of obstetric complications, who provided training, number of times you have under gone such training, whether or not the training improved your knowledge of obstetric complications and how you were told to deal with any obstetric complications.

PERIOD	Received training	Provider of training	Times	Improved knowledge of obstetric complications	What were you told to do if you observed any obstetric complications during this stage
During	(a)Yes			(a)Yes	

pregnancy	(b)No			(b)No	
During delivery	(a)Yes (b)No			(a)Yes (b)No	
After delivery-mother	(a)Yes (b)No			(a)Yes (b)No	
After delivery-baby	(a)Yes (b)No			(a)Yes (b)No	

8 Below are some of the obstetric complications some women experience during pregnancy indicate whether or not you have heard about them, how frequent and what you do/ did.

obstetric complications	**Ever heard**	**Come across**	**How often**	**If yes, what action did/do you take**	**If you treat(ed) what do/did you use**
Severe headache	(a) yes (b) No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer (b)wait (c)Treat (d)Nothing	
Vaginal bleeding	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer (b)Wait (c)Treat (d)Nothing	
Swelling of feet	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer (b)Wait (c)Treat (d)Nothing	
Body hotness	(a)Yes (b)No	(a)Yes (a)No	(a)Always (b)Sometimes	(a)Refer to Clinic	

			(c)Rarely	(b)Wait (c)Treat (d)Nothing	
Severe abdominal pain	(a) Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a) Refer (b) Wait (c) Treat (d)Nothing	
Feeling very cold	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer (b)Wait (c) Treat (d)Nothing	
Baby not moving Danger signs	(a) Yes (b) No Ever heard	(a) Yes (b) No Come across	(a)Always (b)Sometimes (c)Rarely How often	(a) Refer (b) Wait (c) Treat (d) Nothing If yes, what action did/do you take	
Less movement by baby	(a) Yes (b)No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer (b)Wait (c)Treat (d)Nothing	
Vaginal discharge	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer (b)Wait (c) Treat (d)Nothing	
Sores on private parts	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer (b)Wait (C)Treat	

				(d)Nothing	
Tiring easily	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (C)Treat (d)Nothing	
Looking very pale	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c) Treat (d)Nothing	
Fits	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Convulsions	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (C)Treat (d)Nothing	

9 Below are some of the obstetric complications some women may experience during delivery .Indicate whether or not you have heard about them, how frequent and what you do/did

obstetric complications	**Ever heard**	**Come across**	**How often**	**If yes, what action did/do you take**	**If you treat(ed) what do/did you use**
Labour lasting more than	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes	(a) Refer (b)Wait	

12hours			(c)Rarely	(c)Treat (d)Nothing	
Placenta not delivered within 30minutes	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer (b)Wait (c)Treat (d)Nothing	
Heavy bleeding	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer (b)Wait (c)Treat (d)Nothing	
Baby in a wrong position	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Bad smelling vaginal discharge	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	

10 Below are some of the obstetric complications some women may experience after delivery. Indicate whether or not you have heard about them, how frequent and what you do/did

obstetric complications	Ever heard	Come across	How often	If yes, what action did/do you take	If you treat(ed) what do/did you use
Severe headache	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes	(a)Refer to Clinic	

			(c)Rarely	(b)Wait (c)Treat (d)Nothing	
Body hotness	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Feeling very cold	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a) Refer to clinic (b) Wait (c) Treat (d) Nothing	
Severe increasing abdominal pain	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Pain in private parts	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Heavy bleeding	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	

Breast sores	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Cracked nipples	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Redness of breast	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Swelling breasts	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Bad smelling vaginal discharge	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Fits	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	

Convulsions	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	

11. Below are some of the obstetric complications some new born children may experience soon after delivery. Indicate whether or not you have heard about them, how frequent and what you do/did.

obstetric complications	Ever heard	Come across	How often	If yes, what action did/do you take	If you treat(ed) what do/did you use
Fits	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Yellow skin	(a)Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Fever/Chills	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Poor Sucking	(a) Yes (b) No	(a) Yes (b) No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	

Baby inactive	(a) Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Baby vomiting	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Diarrhea	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Constipation	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Red Swollen eyes	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Not Breathing	(a) Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Red Umbilical stump	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	

Difficult Breathing	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (c)Treat (d)Nothing	
Pus from umbilical stump	(a)Yes (b)No	(a)Yes (b)No	(a)Always (b)Sometimes (c)Rarely	(a)Refer to Clinic (b)Wait (C)Treat (d) Nothing	

12. Below are some of the danger signs some women may experience during pregnancy. Indicate the possible causes and consequences if not treated.

obstetric complications	Consequences if not treated
Severe headache	
Vaginal bleeding	
Swelling of feet	
Body hotness	
Severe abdominal pain	
Feeling very cold	
Baby not moving	
Less movement by baby	
Vaginal discharge	
Sores on private parts	
Tiring easily	
Looking very pale	
Fits	
Convulsions	

13. Below are some of the obstetric complications some women may experience during delivery. Indicate the possible causes and consequences if not treated

Labour lasting more than 12hours	
Placenta not delivered within 30minutes	
Heavy bleeding	
Baby in a wrong position	
Bad smelling vaginal discharge	

14. Below are some of the danger signs some women may experience after delivery. Indicate the possible consequences if not treated.

obstetric complications	Consequences if not treated
Severe headache	
Body hotness	
Feeling very cold	
Severe increasing abdominal pain	
Pain in private parts	
Heavy bleeding	
Breast sores	
Cracked nipples	
Redness of breast	
Swelling breasts	
Bad smelling vaginal discharge	
Fits	
Convulsions	

15. Below are some of the obstetric complications some new born children may experience soon after delivery. Indicate the possible causes and consequences if not treated.

obstetric complications	Consequences if not treated
Fits	
Yellow skin	
Fever/chills	
Poor sucking	
Baby inactive	
Baby vomiting	
Diarrhea	
Constipation	
Red swollen eyes	
Not breathing	
Red umbilical stump	
Difficult breathing	
Pus from umbilical stump	