

Experience And  
Perceptions On Preterm  
Births Among Women  
Attending Anc Clinic  
At Kisumu County  
Hospital, Kenya

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**ABSTRACT**

Preterm birth is one of the main causes of neonatal death, and it is now the second leading cause of death after pneumonia in children under the age of five. Kenya is estimated to have 12.3% preterm births and 22 neonatal deaths per 1000 live births. It is important to explore the experience and perceptions on preterm births among women attending ANC clinic. A survey was conducted at Kisumu County hospital, Kenya. Focus Group Discussion (FGD) and In Depth Interview (IDI) were used to collect data on preterm birth (PTB) experiences. The four-step iterative process of qualitative data analysis to generate the final interpretation was employed. This study established that mothers are aware of the gestation period (9 months or 39 weeks) in pregnancy, are able to monitor how close they are to the Estimated Date of Delivery (EDD). Mothers with history of PTB or with twin/multiple births had a high risk of premature delivery. Information on PTB was not provided during ANC. ANC services should be expanded to be effective for the detection, treatment or prevention of conditions associated with PTB (serious morbidity or mortality). There is need to investigate the capacity of health care providers to provide quality ANC health information and services with regard to PTB.

**Key words:** Preterm birth, Antenatal care, Qualitative research, Pregnancy

## 1. INTRODUCTION

About 15 million preterm births occur every year and it is still on the rise (WHO, 2012). Over 60% of preterm births occur in Africa and South Asia and within countries poorer families are at high risk (WHO, 2012). Preterm birth (PTB) refers to babies born alive before 37 weeks of pregnancy are completed (WHO, 2012). Symptoms of preterm labor include uterine contractions which occur more often than every ten minutes or the leaking of fluid from the vagina. Premature infants are at greater risk for cerebral palsy, delays in development, hearing and seeing problems. These risks are greater the earlier a baby is born and preterm birth rates are increasing in almost all countries with reliable data (NICHD, 2014).

Preterm birth is one of the main causes of neonatal death (Lawn 2010, Black 2010), and it is now the second leading cause of death after pneumonia in children under the age of five (WHO, 2012). Kenya is estimated to have 12.3% preterm births (Blencowe et al., 2012) and 22 neonatal deaths per 1000 live births (KNBS, 2014). Moreover, Yego et al (2013) found that pre-term birth and asphyxia are the leading causes of early neonatal deaths in a teaching and referral hospital in Kenya.

According to Kisumu County Referral Hospital health records information office in 2016, the preterm birth rate stands at 46%. This to a greater extent contributes to the Kenyan high PTB rates by standards. In western Kenya, there has been no apparent substantial improvement in neonatal or infant mortality associated with PTB despite increases in vaccination coverage for early childhood illnesses. The results of a longitudinal study of mortality in rural western Kenya observed high neonatal mortality of 32 per 1,000 PTB associated live births, which is 2–3 times higher than estimates from several other parts of the country (McElroy et al., 2001).

To effectively reduce preterm births, active participation of women especially those at the reproductive age on relevant health care can help to reduce the potential causes of neonatal mortality and morbidity. This is critical in the global Sustainable Development Goal (SDG) 3 and Kenyan 2030 vision progress in child survival and health which cannot be achieved without addressing preterm births. We qualitatively assess the experience and perceptions of mothers attending ANC clinic at Kisumu County hospital on prevention and care of preterm births.

## 2. METHODOLOGY

### 2.1 STUDY SITE

The study was conducted at Kisumu County Hospital; the hospital has 46% PTB incidence rate and is attended by 100 mothers seeking ANC services averagely on daily basis from Monday to Friday according to the County hospital health records information office, 2016. It is located within the central business district of Kisumu city.

The hospital offers various health care services including ANC clinic; labour/delivery ward; Neonatal Intensive Care Unit (NICU); medical record unit for bio-data of children 0-5 years attending the clinic; the nutrition unit that handles growth monitoring and promotion; food supplement; nutrition education/counselling and nutrition rehabilitation and the health education unit.

**2.2 RESEARCH DESIGN**

The study employed a survey design to generate data in order understand the experiences, perceptions and care practice of preterm births among pregnant women attending ANC services at the referral facility.

**2.3 STUDY POPULATION**

The target group were women at their third trimester who are believed to have gone through focused ANC at the facility as per the provision of the WHO guideline and therefore are attending Kisumu County hospital for ANC services with the following specifications; Group 1- those who have neither witnessed nor experienced PTB, Group 2-those who have no experience on PTB but have witnessed PTB, Group 3- mixture of those who have experienced and witnessed PTB, Group 4- those who have experienced PTB, while In-depth Discussion Interviews(IDIs) were mothers with history of preterm birth (those who have had at least three counts of PTBs) and at risk of PTB (Those who have been examined and found potential of giving birth to preemies)

**2.4 INCLUSION CRITERIA**

The participants were pregnant women of 18 years and above who are in their third trimester and had history of preterm birth or are at –risk.

**2.5 EXCLUSION CRITERIA**

Mothers not of sound mind were excluded from the study.

**2.6 SAMPLING METHODS**

Purposive sampling method was employed in this study. This involved nominating participants in their third trimester and women who are at-risk or have had the history of preterm birth.

*Table 1: Participants and methods of data collection*

Method of data collection	Number of groups/interviews	Time frame	n subject volunteers
1.Focus Group Discussion(FGD)	4 (each group- 12 membership) Purposively selected by nurse in-charge based on the individual clinic book	Each FGD took av. 125minutes	48-for maximum saturation Group 1- Those who have neither witnessed nor experienced PTB Group 2-Those who have no experience on PTB but have witnessed PTB Group 3- Mixture of those who have experienced and witnessed PTB Group 4- Those who have experienced PTB
2.In-Depth Interview(IDI) i)Mothers at risk of PTB ii) Mothers with history of PTB	3 Purposively selected by the nurse in-charge  3 Purposively selected by the nurse in-charge	Each took av.85 minutes  Each took av.95minutes	3 Those who have been examined and found potential of giving birth to preemies  3 Those who have had at least three counts of PTB

## **2.7 DATA COLLECTION METHODS**

Phenomenological approach to qualitative data collection was employed. This included the use of FGD and IDI tools.

## **2.8 DATA COLLECTION TOOLS**

### **2.8.1 FOCUS GROUP DISCUSSION (FGD) GUIDE**

The FGD tool with the unstructured questions (App. 1) served as a strong discussion guide conducted with 4 sets of 12 discussants of FGD (n=48) target group in order to flag out their experiences and perceptions on prevention and care of PTBs. Voice recorders were used as back-ups for recording the content of the responses. Each FGD took approximately 125 minutes.

### **2.8.2 IN-DEPTH INTERVIEW (IDI) GUIDE**

This IDI tool (App. 2) was developed to provide a better understanding of the 3 target persons with PTB history and 3 target persons at-risk of PTB on their knowledge, experience and quality of information provided on prevention and care of PTBs. Six (6) informants/interviewees in total were interviewed. Each discussion took about 90 minutes.

## **2.9 DATA MANAGEMENT**

### **2.9.1 RECRUITMENT AND TRAINING OF RESEARCH ASSISTANTS**

An intensive, one-day training for the 2 research assistants (RAs) was conducted prior to the data collection. The RAs were only to assist the researcher in note taking alternatively. The training covered the basics of note taking, how to conduct focus group discussion and participatory translation and actual fieldwork logistics.

### **2.9.2 TOOL PRE-TESTING**

Pre-testing of the tools (FGD and IDI guides) was done alongside the reconnaissance at the facility to ensure appropriateness and suitability and appropriate corrections were done. This involved one volunteer group of 8 members (FGD) and two volunteer participants for IDI.

### **2.9.3 DATA COLLECTION PROCESS**

The Research assistants captured field notes on the discussion topics during the study. However, it was the responsibility of the investigator to carry out IDIs and to moderate the discussion and verify the completeness and rigour of the tools before the analysis. Data collection started with FGD 1 and the subsequent FGDs and finally with the induction of R-IDIs and H-IDIs.

### **2.9.4 DATA ANALYSIS PROCESS**

Qualitative data generated from FGDs and In-depth discussions were transcribed, coded and analysed based on the thematic areas. This involved a systematic and iterative process of searching, categorising, integrating data, interpreting and synthesizing the organized data into general conclusions or understanding. The four-step iterative process of qualitative data analysis was employed that took into consideration the constant comparison

method, negative case, discrepant data method and analytic induction method that was aimed at generating the final interpretation. A good number of the target group was present to ensure that the saturation point was reached.

### 2.9.5 ETHICAL CONSIDERATION

The approval of study was done by the Board of Post Graduate Studies -Jaramogi Oginga Odinga University of Science and Technology and Baraton University of Eastern Africa Research Ethics and Review Committee. Written informed consent was obtained from respondents and each one of them was informed of their rights and obligations. They were assured of their confidentiality in the study. The FGD discussants were interviewed at MCH clinic while In-depth Interview (IDI) respondents were interviewed at the free space adjacent to the delivery ward for convenience. There was neither legal, nor social/psychological risk involved in this study. The only potential risk was use of their humble time which could be used to address other issues; however, participants had an option of dropping out at any time, or even at the middle of the interview. The data collected from study participants was kept strictly confidential and participants were only identified by numbers (pseudo name). No Participants names have been reported anywhere in this report

## 3. RESULTS

### 3.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS

Majority of the respondents 48% (n=26) were ranging from 19-24 years, 33 % (n=18) ranged from 25-30 of age, 11 % ( n=6) were >31 and 8 % ( n=4) of the participants were younger than 19 years of age (13-18). Majority of the respondents 65% (n=35) had attained secondary level education, 31 % (n=17) had attained primary level, while the rest 4 % (n=2) had not gone to school. About 81% of the participants were married as indicated in the Table 2.

Table 2: Demographic characteristics

Variable	Frequency	Percentage
Age		
13-18	4	8%
19-24	26	48%
25-30	18	33%
>31	6	11%
Education		
None	2	4%
Primary	17	31%
>Secondary	35	65%
Marriage status		
Married	44	81%
Not married	10	19%

### **3.2 AWARENESS ON GESTATION PERIOD**

This study established that mothers are aware of the gestation period (9 months or 39 weeks) in pregnancy. Majority of the Participants in FGD indicated 9-10 months as the gestation period. Because they had information on gestation period of 9 months or 39 weeks as shown in FGD1, 2, 3

“Normal pregnancy usually goes for 9 months (FGD1).”

“I think 39 weeks is normal (FGD2).”

‘We normally see the following signs; abdominal pain, blood and other discharges ,excess urine removal, lots of backache, being tired and weak(FGD3)’

The respondents also indicated that the health care personnel at the ANC clinic tell them when they are due by palpating their abdomen. This clearly indicates that majority of mothers are aware of the gestation period. Findings on awareness on gestation dates indicated that the participants

### **3.3 PRETERM BIRTH AWARENESS**

Majority of the respondents in IDI stated that a baby is considered a PTB if he/she is born 6 or 7 months before the due date (most of the respondents observed that babies born between 8-9 months should not be considered PTB). However, some had the opinion that any delivery below 9 months is a PTB. There were mixed reactions from FGD respondents as many felt that any delivery before 9 months is considered a PTB. Respondents stated that babies delivered prematurely have low birth weight from as low as 900 grams to 2 kg and that the lowest age a baby can survive is 1-2 kg and only if born in the facility. They also observed that babies born at 9 months should weigh about 2.8kg and above. Most of the FGD and IDI respondents agree that the earliest age a baby can survive is 6months, but only when delivered at the health facility. Interestingly, distinguishing between preemies, still birth and miscarriage therefore was a challenge to the mothers. Findings on the preterm birth awareness clearly indicate that majority of the respondents are not aware of the difference between PTB and miscarriage or still-birth thus discordance in the definition of PTB. There was no mention of ultrasound for dating a pregnancy among the respondents. However, majority of the respondents are aware of the preterm birth weight and the survival rate as demonstrated in the FGD2, FGD1, & IDI 3;

‘Any baby born between 6 and 7 months that must be a preterm birth (FGD2)’

‘I think a baby born bellow 9 months whether alive or dead is a preterm ’....[and all discussants yield; ‘yesssss](FGD1)’

‘What I know is that majority of the preterm babies weigh between 900g -2kg and many that survive are between 1-2kg that are born in the facility (H-IDI3)’

### **3.4 MONITORING FOR ESTIMATED DATE OF DELIVERY (EDD)**

Both respondents in the FGD and IDIs stated that they are able to monitor how close they are to the Estimated Date of Delivery (EDD) due to health information on the vital signs of labour provided at ANC clinic. They include; uterus pain/ contractions at regular intervals that indicate the onset of labour pain. Most of the

respondents from the two sets of interview also indicated that experiencing labour pain before due date is a sign of preterm birth. But how to handle a preterm is their main concern. Respondents also stated they employ mastery of the last date of the menstrual cycle as well as confirming pregnancy through a pregnancy test and keeping track of the days/ weeks/ months from that date. The findings on the estimation of the date of delivery by pregnant mothers are clearly demonstrated as evidenced by FGD1 & IDI 2 as follows:

“Yes, we are taught at the clinic by our nurses on how to know when you are about to deliver like; uterus pain and contraction, we also follow on the last date of the menstrual cycle and count 9 months .The problem we have is how to handle a preterm baby (FGD1)”

“You feel that the weight is at the abdomen. When the babies still up it means it’s not yet time. Even this one I used to go to a clinic but the health care providers there used to tell me that it’s not yet time. I had discharge (amniotic fluid) for about 1 week then rushed to the hospital. At the hospital they did some tests and found out that the baby had gone down. They then said to me that, the baby has indeed gone down however it’s still too small. They then advised me to come here at the Kisumu County Hospital. When I arrived the KCH people also told me the same thing that the baby had actually gone down but was still too small. I came on Friday but later gave birth on Saturday at 2100hrs. The nurse who delivered my baby informed me that the baby was too small. He didn’t even cry after birth until he was hit so hard and that is when he cried.”(H-IDI)

### **3.5 MOTHERS WITH HISTORY OF PREMATURE DELIVERIES**

The study established that the three IDI respondents who had the history of preterm births had new-borns who were born prematurely. The other three of the respondents were first-time-mothers who were at-risk of preterm birth. The three with the history were mothers who had experienced preterm births during their third pregnancies (one of whom stated that her third child was born prematurely and died after). The findings showed one respondent had twins prematurely born during her second pregnancy. The study also established that prevalence of PTB is more pronounced in mothers who are under 18 years of age and those mothers who are over 34 years of age in addition to multiple births according to the FGD3 and IDI2.

‘In our community the ones I have seen losing their children when they give birth are those that are less than 18 years and old mothers who delayed getting married and are now giving birth at 34 years and above surely have problems.....[and the discussants yield; yesss!... we have seen many like that in our community](FGD3)’

“Even this one I gave birth to on the 8<sup>th</sup> month. I don’t know what really happened to this one because I delivered at 8 months but I don’t know why he weighed so low. The first baby I delivered on the 8<sup>th</sup> month but he weighed 4 kgs at birth. The second one I also delivered at 8<sup>th</sup> months and weighed 3.9 kgs but unfortunately that baby died. It has really disturbed me a lot because I just delivered normally. While at home the baby fell ill, so we brought him back to the hospital for medical attention. The baby was admitted and after 5 days he passed on. That baby died in March and I later got pregnant in July. This baby is the third one and is doing just fine. Even when I came here (KCH) initially i had some pain but I just decided to stay at home. Upon persistence in pain I decided to come to the hospital. When the doctor went through my ANC book he found the recorded date had not reached for delivery. They recorded using the normal 9 months however I don’t usually take 9 months with pregnancy. I do take 8 months. So they also never know that I was almost. As the pains persisted I just climbed up the delivery couch and just pushed and the baby came out. Within that time I heard them complaining that the baby was too small of which I also witnessed that it was indeed small. I really don’t know what I can say about that because I have also had so many unanswered questions (H- IDI2).”



“For my case the twins I have just delivered are just by the grace of God. The 1<sup>st</sup> child I delivered just here and he died upon arrival at home. So this is just but a blessing from God because I have delivered the twins at 8 months. I don’t know why this time I had PTB. The first child I just delivered normally after the 9 months. This time, I was supposed to come for the last ANC on the 9<sup>th</sup> month on 4<sup>th</sup> of April and before that date I had already delivered...” (H-IDI)

### **3.6 CAUSES OF EARLY LABOUR PAINS AND PRETERM BIRTHS**

The study findings showed that respondents to IDI and FGD observed that in the third trimester of pregnancy, strenuous work involving bending for long periods can cause bleeding, uterus pain/ contractions and lead to PTB. Majority of the FGD participants felt that other major causes of preterm births includes; HIV (a HIV positive mother with low immunity who does not know her status or is not adhering to treatment), family planning (especially hormonal methods), poor nutrition and hard labour especially tasks/ chores that require bending for prolonged periods as well as cultural beliefs. One discussant in the FGD2 stated;

‘I know of a mother whose husband used to beat seriously when she was pregnant and again had to do manual jobs for people in order to get food for her family because the husband was drunkard and could not provide, and therefore she ended up giving birth at 7month and eventually the baby died(FGD2)’

“In our community we have a belief that when you give birth early then it means that your husband is promiscuous. He is cheating on you with other women. When that happens and he comes home then you have sex in that conditions then it can make the baby come too soon, in fact am suspecting my husband .”(R-IDI)

Some respondents stated that hormonal family planning methods cause hormonal changes that can affect a mother during pregnancy hence some mothers who experience false or early labour are asked at the hospital about which type of family planning method they were using before the pregnancy. An FGD discussant made the following statement:

“I only know that it’s the FP that affected me and made me deliver my baby prematurely. Mine was just FP (H-IDI).”

The findings showed that respondents observed that sickness during pregnancy can be a cause of PTB including pregnant mothers who do not know their HIV status and yet they don’t attend ANC clinic at the hospital. A discussant in the FGD made the following statement to emphasize this point:

“Some mothers are afraid of HIV testing during ANC because they fear their status would be known while some mothers are just not serious so they just keep on postponing the ANC visits. Some are just afraid that they can test HIV positive. They are not sure but just afraid.”(FGD2)

“Many pregnant women are afraid of HIV test because people may know her status and as you are aware people are so afraid of the HIV infection, while others have individual weakness. As a result sickness can lead to PTB. Maybe you don’t know your status and you also don’t want to go to the hospital. Some prefer the traditional midwives instead of the hospital where professionals who can diagnose you and treat the baby assuming the baby is unwell even before birth.”(FGD1)

Respondents stated that some mothers including those experiencing premature labour prefer the traditional midwives/ birth attendants instead of the hospital where health service providers can provide quality health care including detecting problems leading to PTB. The respondents also stated that early labour can develop when

a foetus is in wrong position yet the mother does not know because she does not attend ANC. Another factor mentioned as a cause of preterm birth was the fact that some mothers starting attending ANC services as late as at 5 months or even later unless they are experiencing problems with their pregnancy.

The IDI respondents who had experienced PTB had various reasons which they attributed to have caused them to deliver prematurely. Some respondents stated that diseases/ infections/ various conditions including high blood pressure, ulcers, diabetes during pregnancy caused PTB. Other causes of PTB identified were blood clots, stress, poor nutrition, taking of alcohol during pregnancy. Physical abuse by male partner as well as performance of intensive duties and chores remains a challenge. One respondent stated that she suddenly began to bleed in her third trimester, got admitted at KCH, had all relevant tests done, the doctor informed her that the bleeding might have been caused by doing strenuous work at home. The respondent stated that she makes *mandazi* and samosas and she sits and bends a lot while performing these duties and concluded that this may have been the cause of the bleeding which led her to deliver prematurely. Another respondent stated an elderly woman advised her to avoid using any family planning method due to the fact that she had just lost a child five days after delivering prematurely. She stated that the elderly woman advised her that after such an ordeal, it's prudent to conceive immediately. She followed this advice, got pregnant and had a baby soon after. A respondent stated the following with regard to her experience:

"According to me, I have just been delivering normally after the 9 months in last two except this 3<sup>rd</sup> one. After the last two babies, I went on family planning for 6 years. I later had another injectable FP (Depo-Provera) and after 2 months blood clots begun coming out then I decided to stop the FP and that's when I conceived. I could hardly feel the baby moving in the womb for the first four months. That prompted me to visit the hospital where I was given some medications. The drugs triggered the baby's movement in the womb and then stopped again in the 5<sup>th</sup> month. Eventually this baby came out at exactly 8 months even though usually I deliver after 9 months. I know that it's the FP that affected me. I think so because I wasn't using any drug as an FP method in the last two deliveries of my two babies. After the second pregnancy, I started using the injectable FP (Depo-Provera) - the one for 3 months and I practiced that for 6 years. I was going for the injectable FP after every three months and just after the sixth year, I went again for a regular scheduled injectable FP but after the injection I bled for two months and when I went back to the hospital for another FP intervention they found that I was already pregnant and that is why even in this one I have been told to report any problem because the baby is likely to come out before 9 months given the signs am already seeing (R-IDI3)"

"I gave birth to a 7 months old baby due to high blood pressure. I came to KCH when the blood pressure was too high and had really affected me. I was taken directly to the theatre and operated. I could hardly breathe hence they decided to operate on me since they were not so sure whether the baby was alive or not, but my life was in danger, so they decided to remove the baby for me to survive. Luckily the baby also came out alive and has survived. While the baby was being nursed in the hospital nursery, we were taught on how to keep the baby warm as well as exclusive breast feeding for 6 months."(FGD3)

"I delivered my first born at 7 months 3 weeks but he was just fine. In my case when I arrived the health service providers did some tests then sent me for ultra sound. I was given the results and put on medication as I was being monitored. In fact when I came to KCH I even saw other women with preterm labour like me at the hospital."(FGD4)

### **3.7 PRETERM BIRTH CARE PRACTICES AND PREVENTION**

#### **3.7.1 PRETERM BIRTH CARE PRACTICES**

Majority of the respondents to the FGD and IDIs indicated that most mothers come for ANC at 4-5 months of pregnancy. One FGD discussant made the following statement to emphasize this point:

“Many pregnant women come for their first ANC visit at 4 to 5 months; some just don't want to come to the clinic every now and then. They just want to come when they are almost due where they only come once or twice then they deliver.”(FGD1)

The study established that majority of the women go to the health facility when they experience preterm labour and if a woman presents with preterm contractions to the facility, they are examined by the health personnel and referred accordingly. However, the challenge sometimes is the transport cost to the facilities especially if you are coming from remote areas and some of the churches that do not allow going to the health facility.

The findings showed that some respondents stated that at the hospital/clinic, they are provided with health information on the importance of and how to breastfeed babies delivered prematurely (exclusive breastfeeding for 6 months). However, one cannot access this information before you become a victim of PTB. Respondents to IDIs also stated that after delivering prematurely they had bought drugs prescribed to them by the doctor which were then administered to the babies to develop their lungs, strengthen their breathing and heart rate as well as prevent or treat infection. Majority of the respondents did not know about the nature of drugs administered to babies delivered prematurely during supportive care at the neonatal intensive care unit. A respondent on IDI stated the following about the baby she had just delivered prematurely:

“When I first experienced labour pain, I rushed here (KCH) then I was told to transfer to another hospital for an ultrasound scan to identify whether the baby still alive or not. I went to another hospital as was directed, had the scan and it was found that the baby was still alive then I came back here at Kisumu District Hospital. As I came I took 2 days then delivered, and I have been here for five days since I delivered and I have only been taught here after delivery on how take care of the baby(H-IDI3).”

“I go into the nursery and pump my breast milk and feed him through the feeding pipe that has been placed by the doctor. I have been taught how to do this. I take a syringe then suck the milk that had initially been put into the feeding pipe to check whether the breast milk that was put there and perhaps wasn't all consumed is clean or not. If the milk is still clean then the doctor instructed me on the amount to give again. I have been educated on how to take care of him while in the nursery so I like to go check on him in the nursery after every 2-3 hours. I check whether he's released himself on short or long call then I change the bedding and clothes. I also pump my breast milk then feed him using the syringe through the feeding pipe as directed then put him on chest skin to skin for him to remove some gas then take him back to the nursery bed.”(H-IDI1)

Respondents stated that they were advised at the hospital on the importance of exclusive breast feeding for 6 months, maintaining high levels of hygiene and cleanliness of the baby and keeping the baby warm as ways of ensuring babies delivered prematurely survive and develop.

#### **3.7.2 PRETERM BIRTH PREVENTION PRACTICES**

The findings established that in terms of PTB prevention practices, many of the IDI respondents did not make at least 4+ (plus) recommended ANC visits (majority made about 2-3 visits) before delivery and most of them

started attending clinic at about 5 months of pregnancy. Most of the respondents emphasized that attending ANC clinics is the most effective way of reducing preterm births but also felt that ANC package should integrate information on PTB. Respondents also suggested male partners should accompany their spouses to ANC clinics to enable them to get health information on how to prevent PTB. This calls for emphasis on *focussed ANC*.

### 3.8 INFORMATION AND SERVICES ON PRETERM BIRTH DURING ANC

The study established that mothers felt that were not getting any package of information and/or care and prevention services dealing with PTB during their ANC visits. Respondents stated that they did not receive any health information on PTB during ANC and even at the level one service provision by the CHVs. However, respondents observed that during ANC visits they are given health information on need to take iron-folic acid supplementation (IFAS) pills to prevent anaemia during pregnancy. Respondents stated that they were also provided with IFAS pills during ANC. Participants also stated that during the visit they are put on Fansidar (antimalarial drug) for prevention and management of malaria during pregnancy. Mothers also stated that tetanus toxoid (TT) vaccination was administered to them during ANC. Respondents were aware of services including physical examinations that are done at health facilities in case a mother is at risk of premature delivery. An IDI respondent made the following observation about her knowledge on prevention of PTB:

“I believe there is an injection on the arm (tetanus vaccine) as well as the anti-malarial drug and a mosquito net given to expectant mothers during ANC but we have never been told about preterm birth!(R-IDI2)’

### 3.9 ATTENDANCE OF ANC CLINIC

The study established that most mothers attend ANC very late in pregnancy (from the 5<sup>th</sup> month). Findings showed most mothers make only two ANC visits before delivering. The respondents provided the following reasons for the low and/or late attendance of ANC: long queues at the ANC clinic discourage them from attending ANC, fear of knowing their HIV status, peer influence by other mothers in the community who influence their friends/ peers to attend ANC together when they are almost due. Respondents also stated that absence of pain or other complications during pregnancy was also a factor that influenced their low/ late ANC attendance.

One of the FGD discussant stated the following:

‘With me I only attended ANC clinic twice before delivery because I did not have any complication and so I did not see the need of going every month (FGD1)’

#### 3.9.1 AWARENESS OF NEO- NATAL CARE AFTER PREMATURE DELIVERY

The study showed that mothers were aware that after premature delivery, babies born preterm were observed in nursery incubators for observation in the neonatal intensive care unit until a doctor determines that the health of the baby is not in danger as stated by one the IDI respondent;

“I go into the nursery and pump my breast milk and feed him through the feeding pipe that has been placed by the doctor. I have been taught how to do this. I take a syringe then suck the milk that had initially been put into the feeding pipe to check whether the breast milk that was put there and perhaps wasn't all consumed is clean or not. If the milk is still clean then the doctor instructed me on the amount to give again. I have been educated on how to take care of him while in the nursery so I like to go check on him in the nursery after every 2-3 hours. I check whether he's released himself on short or long call then I change the bedding and clothes. I also pump my breast milk then feed him using the syringe through the feeding pipe as directed then put him on chest skin to skin for him to remove some gas then take him back to the nursery bed.”(H-IDI1)

Table 3: Iterative process responses by FGDs and IDIs highlighting emerged major and minor themes

Major theme	Minor theme	Response
Experience on preterm births	Awareness on gestation period	a) 9 months or 39 weeks b) 9-10 months
	Due signs	<ul style="list-style-type: none"> <li>abdominal pain, blood and other discharges, excess urine removal, frequent long calls, back ache, body and hips restless, tiredness, thighs heavy, weak and clinician palpating their abdomen</li> </ul>
	Preterm birth awareness	<ul style="list-style-type: none"> <li>6-7 month-preterm</li> <li>8-9 months-term</li> <li>Below 9-PTB</li> <li>900g-2kg-LBW</li> <li>1-2kg survive in facility(die at home)</li> <li>2.8kg-9months(term)</li> <li>6months-earliest to survive at facility(die at home)</li> </ul>
	Monitoring for Estimated Date of Delivery(EDD)	<ul style="list-style-type: none"> <li>use of health info on vital signs</li> <li>labour pains</li> <li>labour pain before due date is PTB</li> <li>calendar dates for due</li> </ul>
Perception on preterm births	Mothers with history of premature deliveries	Associate twins with PTB PTB pronounced in<18>34 yrs Majority don't know why they experience PTB
	Causes of early labour pain and preterm birth	Strenuous work HIV/AIDS Family planning(hormonal) Poor nutrition Cultural beliefs TBAs Late ANC services High blood pressure Ulcers, diabetes Alcohol use Stress Physical abuse by male partners
Preterm birth care practices and prevention	PTB care practices	Go to facility when experiencing preterm contractions Kangaroo mother care(KMC) Medication to stop contraction Church intervention
	ANC attendance	Attendance as late as 5 <sup>th</sup> month Majority- 2-3 visits to delivery Reasons for low low attendance; Long queues at clinic discourage Fear of knowing HIV status Peer influence Absence of pain during pregnancy
	PTB prevention	<ul style="list-style-type: none"> <li>Majority recommended emphasis on focussed ANC</li> <li>Focussed ANC to integrate information on PTB</li> <li>Men to accompany their spouses to ANC clinic</li> <li>Mothers in the 8<sup>th</sup> month to attend ANC every two weeks</li> <li>Third trimester mothers to avoid hard labour ,stress, alcohol etc</li> <li>Improve on the nutrition</li> <li>Mothers to deliver at facility</li> <li>5+ ANC before delivery</li> <li>Medication to preemies to be mixed with mothers milk</li> <li>Male partners to be faithful</li> <li>Avoid family planning methods especially hormonal</li> </ul>

## 4. DISCUSSION

### 4.1 EXPERIENCE ON PRETERM BIRTHS

This study shows that mothers consider a premature delivery to be a baby born between 6 to 7 months and has a weight of 900 g to 2 kg. However, PTB is considered as a baby born a live before 37 weeks of pregnancy are completed and has a weight of 2,499 grams or less (< 2.5kg) regardless of gestational age (WHO, 2007; Blencowe et al., 2016).

Twin and multiple births that occur prior to 37 weeks' gestation have been found to be a risk factor for PTB (Audrey et al., 2013). The study established that a mother delivered her second child prematurely and after five days the baby died. This could be due to complications of birth asphyxia and prematurity, since it has been reported that neonatal death that occurs in the first week of life is often related to complications of birth asphyxia and prematurity, while deaths occurring after one week of life are commonly due to infectious causes (WHO, 2007).

The study established that mothers who had the history of preterm births had new-borns who had been delivered prematurely. Prior preterm birth has been identified as one of the main risk factors for preterm delivery (Sulima et al., 2013). It is estimated that after one premature delivery, the risk of another is three times as high. If there have been two preterm births, the risk is six times higher. Furthermore, if there has been a delivery before the pregnancy week 28, the risk of another preterm birth is 20-35 times as high (Sulima et al, 2013). Preterm birth has also been found to be common among the twin pregnancies (Audrey et al., 2013). Similarly in our study, there was a mother who delivered twins prematurely during her second pregnancy. The factors identified by this study as causes of preterm deliveries are infections/ various conditions including high blood pressure; ulcers; diabetes; HIV; stress; poor nutrition; taking of alcohol during pregnancy; blood clots; use of hormonal contraceptives including IUD; implants; Depo-Provera (injection) and pills; premature leak of amniotic fluid; physical abuse by male partner as well as performance of physically intensive duties; and chores. Cultural beliefs were also identified by mothers as factors causing preterm births. The study showed that some mothers believe that sexual intercourse during pregnancy with a husband/ male partner who is promiscuous can lead to delivering prematurely. This finding is supported by (Sulima et al, 2013) who stated that the direct causes of preterm delivery are: spontaneous premature systolic function of the uterus muscle (around 50% of preterm deliveries), premature leak of amniotic fluid (accounting for around 30% of preterm deliveries) and premature completion of pregnancy for medical reasons (around 20% of preterm deliveries). The risk factors for preterm birth are: history of obstetric abnormalities, demographic and socio-cultural factors, intrauterine infections, pregnancy-related irregularities, genetic factors, environmental factors and using stimulants (Sulima et al, 2013,). This is also supported by (Morana, 2016) who argues that Depo-Provera documented side effects include increased risk of HIV infection, breast cancer and cervical cancer; blood clots; ectopic

pregnancy; reduced fertility; excessive weight gain, and bone loss. Hormonal birth control, in general, increases a woman's risk of blood clots, and it is indisputably linked to increased risks of cardiovascular disease, cervical and liver cancer, elevated blood pressure, decreased desire and sexual dysfunction and stroke (Morana, 2016).

The study established that most mothers attend ANC 2-3 times and make their first visit at about 5 months during pregnancy. This finding contradicts the World Health Organization recommendation of at least four ANC visits during a woman's pregnancy. According to the KDHS report, only 58 percent of women reported having four or more antenatal visits for their most recent birth. Urban women are more likely to have four or more ANC visits compared with women in rural areas (68 percent and 51 percent, respectively) (KDHS, 2014). Across sub-Saharan Africa there is wide variation in ANC attendance: although 71% of pregnant women attend formal ANC at least once, only 44% attend ANC four or more times (Pell et al., 2013).

Findings showed that many mothers start attending ANC at 5 months unless they are experiencing complications which could lead to PTB. This finding is contradicted by (Pell et al., 2013) who state that 'focused' ANC package, consisting of at least four visits to a health facility during an uncomplicated pregnancy incorporates a range of interventions of which some interventions have been shown to be effective for the detection, treatment or prevention of conditions associated with serious morbidity or mortality: monitoring of chronic conditions, anaemia, for example; screening for and treatment of infections, including sexually transmitted infections; prevention of mother-to-child transmission of HIV (PMTCT); insecticide treated bed nets (ITNs); and intermittent preventive treatment of malaria (IPTp) with sulfadoxine-pyrimethamine (SP). Antenatal care is also viewed as an important point of contact between health workers and mothers and an opportunity for provision of health education – including how to detect pregnancy complications – and development of a birth plan to ensure delivery at a health facility. Mothers in most parts of Africa only have a vague understanding of specific ANC procedures. This limited understanding influences mothers' motivations for attending ANC: they have general ideas about caring for their pregnancy, such as checking the foetus' position or monitoring its progress (Pell et al., 2013).

The study established that mothers felt that, even though ANC clinic is the most effective way of reducing preterm births, the ANC package should integrate information on PTB. This finding is supported by a (KDHS, 2014) report which states that there is no evidence that the ANC health care information package incorporates prevention and management of preterm births as a service offered to mothers during ANC visit.

Mothers suggested male partners should accompany their spouses to ANC clinics to enable them to get health information on how to prevent PTB. This finding is supported by a (Pell et al., 2013) study which states that in Malawi and Kenya, health staff promote the involvement of husbands in ANC through, for example, giving preferential treatment and a free shawl for their child if the husband attended ANC with his wife, an aspect that should be emphasized. For a minority of Kenyan women, however, the participation of husbands in ANC

decision-making, combined with HIV-related stigma, has negative implications for their ANC attendance: women are wary of attending ANC because they would be informed of their HIV status and a positive result has ramifications if their husbands discover their status. Husbands often refuse to be tested and rather, in the most extreme instances, accused their wives of adultery and lead to separation (Pell et al., 2013). Mothers with preemies were also provided with health information at the hospital on maintaining high levels of hygiene and cleanliness of the baby and keeping the baby warm as ways of ensuring babies delivered prematurely survive and develop. This finding is supported by a (Blencowe et al., 2016) fact sheet that more than three-quarters of premature babies can be saved with feasible, cost-effective care, e.g. essential care during child birth and in the postnatal period for every mother and baby, provision of antenatal steroid injections (given to pregnant women at risk of preterm labour and under set criteria to strengthen the babies' lungs), kangaroo mother care (the baby is carried by the mother with skin-to-skin contact and frequent breastfeeding) and antibiotics to treat new-born infections. Preventing deaths and complications from preterm births start with a healthy pregnancy. Quality care before, between and during pregnancies will ensure all women have a positive pregnancy experience. WHO's antenatal care guidelines include key interventions to help prevent preterm birth, such as counselling on healthy diet and optimal nutrition, and tobacco and substance use; foetal measurements including use of ultrasound to help determine gestational age and detect multiple pregnancies; and a minimum of 8 contacts with health professionals throughout pregnancy to identify and manage other risk factors, such as infections (Blencowe et al., 2016).

## 5. CONCLUSION

Preterm birth awareness is still low among women of the reproductive age though aware of the features of preterm babies. Majority of the mothers are aware of how to tell when they are due and when they are experiencing early labour pains that is associated with PTB. Mothers with history of PTB, multiple births are at high risk of premature delivery. Because of the lack of information on PTB majority of the mothers of reproductive health still believe in the myths and misconception, like promiscuousness as a potential source of PTB. Majority of women feel that physical abuse of pregnant women and strenuous activities is a potential cause of PTB. Women of the reproductive age have a feeling that family planning services is a potential cause of premature births. Majority of the women are aware of the ANC services provided at the facility. However, there is no information on Preterm birth. ANC interventions (information and services) provided at KCH and other health facilities in Kenya should be expanded to be effective for the detection, treatment or prevention of conditions associated with PTB (serious morbidity or mortality). There is need to investigate the capacity of health care providers to provide quality ANC health information and services with regard to PTB.



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