

## Intentions of Registered Antenatal Clinic Patients About Utilizing Labour and Delivery Services if They Tested HIV-Positive

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### Abstract

Background: Nigeria bears a sizeable proportion of the global HIV burden; mother to child transmission as a major contributor and prevention of mother to child transmission the hope for a HIV-free generation.

Objective: To find evaluate how booked antenatal attendees intend to utilize the labour and delivery services of the state teaching hospital in Abakaliki in their index pregnancies and if they tested HIV positive.

Methods: This was a cross-sectional survey of the attendees to the booking clinic. Data on patients' ages, marital status, past obstetric history, where clients would deliver their index pregnancies normally and if they tested positive to HIV, and the reasons behind their decisions, were collected with pretested self-administered questionnaires and analyzed using SPSS version 15.

Results: Four hundred and twenty-three (84.6%) of the questionnaires were analyzed. There were 288 patients who had been previously pregnant, of whom 274 (95.1%) booked for antenatal care, with 90.5% of the booking occurring after the first trimester. About 16.7% delivered in facilities without skilled professional care. A total of 90.8% of the respondents desired to deliver their index pregnancies in the teaching hospital because the hospital is equipped for emergency obstetric care. If HIV positive in index pregnancy, 93.9% will prefer to deliver in the teaching hospital mainly to prevent mother to child transmission. However, 6.1% of the respondents did not desire to deliver in the teaching hospital even if positive, with some even preferring to deliver at home.

Conclusion: A HIV-free generation can be achieved if pregnant mothers are encouraged to utilize labour and delivery services that help prevent mother to child transmission of HIV by provision of free maternal services, conduction of staff education to correct unfriendliness, refitting the labour and delivery wards, introduction of community PMTCT, continued awareness creation and economic empowerment.

Keywords: Utilization, Labour, Booking, Antenatal Clients, Nigeria

### Introduction

The HIV/AIDS pandemic has been the most serious natural disaster to hit the world in recent times; sub-Saharan Africa shoulders the largest burden of this global catastrophe with more than 25million infected persons<sup>1,2</sup>. Unfortunately, Nigeria is second only to South Africa in the whole of Africa in terms of the number of HIV-positive adults in this region, and third in the whole world<sup>1,4</sup>. So, Nigeria bears a sizeable proportion of the HIV burden. Theoretically, widespread use of antiretroviral drugs (ARVs) can control this pandemic, but because cure is not achieved, this will amount to a huge source of resource drain at all levels; individually, locally,

Nationally and internationally. Therefore, the only hope of achieving a HIV-free generation is by prevention of transmission from HIV-positive to HIV-negative individuals, and especially from HIV-positive mothers to their babies during pregnancy, childbirth and breastfeeding, that is prevention of mother to child transmission (PMTCT).

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Table 1: The Age Groups and Marital Status of Attendees at EBSUTH Booking Clinic

Parameters	Number (%)
<b>Age groups years</b>	
< 19.0	14 (3.3)
20.0 to 24.0	89 (21.0)
25.0 to 29.0	168 (39.7)
30.0 to 34.0	98 (23.2)
35.0 to 39.9	46 (10.9)
> 40.0	8 (1.9)
Total	423 (100.0)
Mean age	28.1 ± 5.3 years
<b>Marital status</b>	
Married	409 (96.7)
Single	14 (3.3)
Total	423 (100.0)

Mother to child transmission (MTCT) of HIV contributes immensely to HIV infection in sub-Saharan Africa, where more than 90% of all babies infected by HIV globally live<sup>5,6</sup>. Every day about 1,000 children under the age of 15 years are infected with HIV. More than 90 per cent of these new infections occur during pregnancy, at the time of delivery, or during breast feeding<sup>7</sup>. The major contributory factors include high rates of HIV infection among women of reproductive age, large total population of women of reproductive age (women represent nearly 60 per cent of HIV infections), high fertility and birth rates, prolonged breastfeeding and, lack of effective PMTCT programmes<sup>2,5,7</sup>. Nigeria is also a major shareholder in this public health hazard.

Nigeria's PMTCT programme, which commenced in several tertiary hospitals across the nation about seven years ago, had as its goal the reduction of MTCT of HIV by 50% in 2010<sup>1,2</sup>. The PMTCT programme was incorporated into the existing maternal and child health (MCH) care in the health institutions with the hope of reaching expectant mothers during antenatal clinic sessions, labour and delivery, and at the postnatal clinics. But, although this programme has commenced in a lot of centres in Nigeria, the extent to which it has been utilized by clients

varied greatly in different centres<sup>2</sup>.

In most countries, the mortality and morbidity of babies whose mothers benefit from antenatal care and skilled attendance at delivery tend to be less than that of babies whose mothers do not benefit from such cares<sup>8</sup>. The fact that these differences are consistent, with the consistency cutting across a wide range of countries, suggests that it is the access to a continuum of skilled care that really makes the difference<sup>8</sup>. This inference is applicable to PMTCT; if properly utilized, MTCT could be reduced to an infinitesimal proportion with the possibility of achieving a HIV/AIDS-free Nigeria/world in the long run. The experiences gathered from PMTCT programmes in Nigeria and other African nations showed that much of the success of the programmes was determined by the proportion of women who agree to be tested for HIV, returned to obtain their test results, accepted ARV<sup>1</sup>, and continued to receive care through delivery, breastfeeding and beyond.

But it is commonplace for antenatal clinics (ANC) to be a beehive of activities in most Nigerian hospitals without commensurate number of deliveries in the institutions' labour wards. This means that not all women who book for

Table 2: Some Past Obstetric Parameters of Subjects

Parameters	Number (%)
<b>Had pregnancies in the past</b>	
Yes	288 (68.1)
No (primigravidae)	135 (31.9)
Total	423 (100.0)
<b>Booked for antenatal care in previous pregnancies</b>	
Yes	274 (95.1)
No	14 (4.9)
Total	288 (100.0)
<b>Gestational age at booking in previous pregnancies</b>	
< 3 months (first trimester)	24 (8.8)
3 to 6 months (second trimester)	214 (78.1)
7 to 9 months (third trimester)	34 (12.4)
Don't know	3 (1.1)
Total	274 (100.0)
<b>Facilities where previous deliveries occurred</b>	
Government public hospitals	153 (54.1)
Private maternity homes	62 (21.9)
At home	35 (12.4)
Mission hospitals	15 (5.3)
Traditional Birth Attendant	9 (3.2)
Teaching Hospital	5 (1.8)
In the Church	3 (1.1)
National Hospital, Abuja	1 (0.4)
Total	283 (100.0)

antenatal care utilize the services optimally; not all receive skilled professional attention in labour. For instance, only one-third of Nigerian women who gave birth in a five-year period reported being attended to during their last delivery by skilled health care professionals<sup>5</sup>. For most of such women who booked for ANC but failed to receive skilled care during childbirth, breastfeeding and beyond, the gains achieved by the antenatal care with regards to prevention of mother to child transmission and so forth, may be lost.

Several reasons have been adduced why women who booked for ANC in a particular facility fail to deliver in the facility during childbirth. The objective of this study is to find out how pregnant mothers who booked for ANC at the Ebonyi State University Teaching Hospital, EBSUTH, plan to utilize the labour and delivery services of the hospital in their index pregnancies and what the situation will be if they tested positive to HIV in the pregnancy.

Materials and Methods

Table 3: Reasons Why Clients Wished to Deliver Their Index Pregnancies in EBSUTH,

Reasons	Frequency (%)
The hospital has equipments and staff to handle obstetric emergencies	248 (64.6)
Their husbands wanted them to deliver in the teaching hospital	53 (13.8)
The nurses and doctors in the hospital are friendly	38 (9.9)
The hospital was close to where the respondents lived	35 (9.1)
The hospital, especially the labour ward, was neat	16 (4.2)
The respondents could afford the charges	10 (2.6)
The respondent would just like to deliver in the teaching hospital	2 (0.5)
The teaching hospital is the safest place to deliver	1 (0.2)
The doctors and nurses in the teaching hospital are qualified	1 (0.2)
The doctors and nurses are God fearing	1 (0.2)
The doctors and nurses handle pregnant women carefully	1 (0.2)
For no particular reason	1 (0.2)

The Ebonyi State University Teaching Hospital (EBSUTH) is one of the two tertiary hospitals in Ebonyi State, the other being the Federal Medical Centre (FMC). Both are located in Abakaliki, the State capital. The State Government runs a free maternal health care programme that obtains in EBSUTH, but not in FMC. Therefore, the Obstetric unit of the Teaching Hospital is well patronized. The Obstetric population cuts across all socioeconomic strata of the society, with majority in the lower classes. Therefore, literacy level is low and poverty high.

Usually, booking is a prerequisite for routine antenatal care of pregnant mothers. Our Obstetric unit runs the Booking Clinic on Wednesdays and Antenatal Clinic from Mondays

through Fridays. The booking process involved issuance of antenatal cards, giving group health talks on topics of importance to pregnancy, patient clerking, initial clinical evaluation, written requests for laboratory investigations including HIV testing, and written prescription. Patients were expected to go for the laboratory tests at their convenience and present for review of the results at a subsequent visit. However, the tests were often not done as they are not covered by the State Government's free maternal health programme and therefore, attracted payment. Even if the tests were done and results ready, those that tested positive to HIV would be required to do confirmatory tests before starting of antiretroviral drugs, a factor that introduced further delay to provision of prevention of mother to child transmission

Table 4: Reasons Why Respondents Did Not Want to Deliver Their Index Pregnancies in EBSUTH

Reason	frequency (%)
The hospital was far from they lived	15 (39.5)
The respondents had been delivering at home	8 (21.1)
The hospital's charges were high	6 (15.8)
The doctors and nurses were not friendly	3 (7.9)
The hospital especially the labour ward was not neat	3 (7.9)
Other reason	10 (26.3)
• Only God will decide	1
• She no longer lived in Ebonyi State	1
• She lived and will deliver in Abuja	1
• She is not sure of good care	1
• No reason	1
• She had booked elsewhere	1
• She would want to deliver at home	1
• She won't be in Abakaliki at delivery	1

Table 5: Reasons why respondents would wish to deliver in EBSUTH, Abakaliki (n = 397) or elsewhere (n = 26) if they were HIV positive

Reasons	frequency (%)
<b>Those who wished to deliver in EBSUTH</b>	
She would not want her baby to be infected	313 (78.9)
The doctors and nurses would be nice to her during delivery	67 (16.9)
She trusts the doctors and nurses to keep her HIV status confidential	42 (10.6)
Nobody knew her personally in the hospital	9 (2.3)
<b>Those who wished to deliver elsewhere</b>	
The hospital staff would not keep their HIV status secret	17 (65.4)
Some staff of the hospital knew them personally	11 (42.3)
Because of their HIV status, the nurses would not treat them nice when they come to deliver	8 (30.8)

(PMTCT) services.

In February 2009, EBSUTH began partnering with AIDSRelief in the provision of care and drugs to HIV positive clients. This led to the creation of a PMTCT sub-Unit in the Obstetric Unit and the following were introduced to the booking process: pre-test counselling for small groups, HIV testing with opt out and provision same-day results, and individual counselling for positive clients.

This study was a cross-sectional survey of the attendees to our Booking Clinic. The self-administered questionnaire used for data collection was pretested on 20 attendees to FMC's Booking Clinic and then modified for clarity. The main researcher trained three research assistants who applied the questionnaire to pregnant mothers.

The questionnaire collected information on clients' age, marital status, past obstetric history, where clients would deliver their index pregnancies normally and if they tested positive to HIV, and the reasons behind their decisions (Appendix 1). Data was collated and analyzed using the SPSS version 15. The study was approved by the Ethics and Research Committee of EBSUTH.

#### Results

Of the 500 questionnaires applied, 423 or 84.6% were correctly filled and analyzed.

Table I depicts the age distribution and marital status of the respondents. Their mean age was

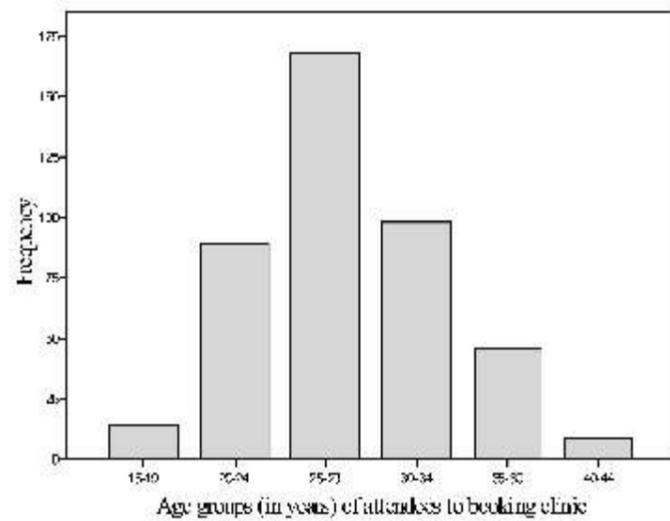
28.1 ± 5.3 years. One hundred and sixty-eight or 39.7% were aged 25 to 29 years (see also fig. 1). Majority of the clients, 96.7%, were married.

The respondents' past obstetric history is shown in table II. A total of 288 or 68.1% had been pregnant in the past, while the remaining 31.9% were primigravidae. Out of the 288 parous women, 283 (98.3%) were married and five (1.7%) single; 274 or 95.1% booked for antenatal care in their previous pregnancies while the rest did not. Of the 274 women who booked for antenatal care in their previous pregnancies, 78.1% of the booking occurred in the second trimester, while only 8.8% booked in the first.

Of the 288 parous women, 273 or 94.8% carried their previous pregnancies to delivery. Ten of them delivered in two different units, bringing the total number of facilities to 283, as shown in table II. Government public hospitals accounted for 54.1% of facilities delivered in, private maternity homes (21.9%) and deliveries at home (12.4%). Other delivery facilities of interest were Traditional Birth Attendants' units, 3.2%, and the Church (1.1%). Therefore, a total of 49 previous deliveries or 16.7% took place either at home, traditional birth attendants' facilities or in the church, without skilled professionals in attendance.

Three hundred and eighty-four of the respondents or 90.8% desired to deliver their index pregnancies in the teaching hospital, 38 (9.0%) did not so desire and one (0.2%) was unsure of where to deliver. The 384 respondents

Fig. 1: Frequency of booking clinic attendance by age groups at EBSUTH, Abakaliki



gave miscellaneous reasons why they wished to deliver their index pregnancies in the teaching hospital (table III). The commonest reason, given by 248 subjects or 64.6% was because the hospital had the equipments and staff to handle obstetric emergencies. Other commoner reasons were because their husbands would want it so (13.8%) and because the nurses and doctors are friendly (9.9%). The 38 subjects who did not desire to deliver in the teaching hospital also gave miscellaneous reasons (IV). The commonest reasons were that the hospital was far from where they lived (39.5%) and that they had been delivering at home (21.1%).

On where they would deliver if they tested positive to HIV in their index pregnancy, 397 or

93.9% preferred EBSUTH, Abakaliki and the rest (6.1%), elsewhere. The respondents gave miscellaneous reasons for their preferences (Table V). The commonest reason for preferring the teaching hospital was because they would not want their babies to be infected by HIV (313 or 78.8%). Among those who preferred to deliver elsewhere, the commonest reason was that the hospital staff would not keep their HIV status secret (17 or 65.4%).

The preferences of delivery facilities for the 26 respondents who did not want to deliver in the teaching hospital are as follows: 23 or 88.5% wanted to deliver in hospitals where they would be well treated irrespective of their HIV status, 50.0% wanted hospitals where nobody knew

them personally, 7.7% preferred private maternity homes and 7.7% wanted to deliver at home.

Discussion

Antenatal care begins with the booking visit which according to World Health Organisation's recommendation, should occur in the first trimester pregnancy<sup>9</sup>. Of the respondents in this study who had been previously pregnant, 95.1% booked for antenatal care, a finding that finding is higher than the national incidence of 58.0% and the 87.0% expected for South East Nigeria as reported by the 2008 Nigeria Demographic and Health Survey<sup>10</sup>. However, only 8.8% of them booked in the first trimester, while 78.1% and 12.4% booked in the second and third trimesters respectively. Although these findings appear to differ from those reported from Enugu<sup>11</sup> also in the South East where 7.7% booked in the first trimester, 42.7% in the second and 49.7% in the third, and that from Ile Ife<sup>12</sup> in South West Nigeria where 21.0%, 32.0% and 47.0% of antenatal bookings occurred in the first, second and third trimesters respectively, they all agree that majority of pregnant mothers in Nigeria book for antenatal care late, usually after the first trimester of pregnancy.

Antenatal care presents important opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being and that of their infants<sup>13</sup>. In this era of HIV, antenatal care provides a unique opportunity for initiating and sustaining PMTCT<sup>14</sup>. Antenatal care, among other things, offers opportunities for HIV counselling and testing (HCT) of pregnant mothers, and for preparing these mothers for childbirth and breastfeeding. HIV positive mothers are commenced on ARVs during the antenatal period with a view to reducing their viral load, thereby reducing antenatal and intrapartum MTCT. These gains of antenatal care<sup>13</sup> may be lost if booked parturient mothers failed to receive skilled professional care during labour and delivery<sup>9</sup>; that is if the antenatal care is not part of a system of care that culminates in good obstetric facilities with adequately trained staff<sup>15</sup>. Skilled professionals use standard protocols during labour and delivery to minimize the

chances of intrapartum MTCT. Furthermore, after delivery, HIV-exposed babies are commenced on ARV from birth throughout breastfeeding period, and their mothers are continued on ARVs for the rest of their lives; practices that essentially aim at reducing the incidence of MTCT to infinitesimal levels with a view to creating a HIV-free generation. Unfortunately, of those respondents in this study who had been previously pregnant, 16.7% had their past deliveries in such facilities as their homes, TBAs' units and churches, facilities that are unlikely to offer the services of skilled birth attendants<sup>9</sup>, as well as HCT and ARV, and therefore more likely to engage in practices that will increase MTCT.

That 90.8% of all the respondents desired to deliver their index pregnancies in EBSUTH is encouraging when considered against the backdrop of the fact that less than 3.0% of the respondents who had been previously pregnant delivered in tertiary institutions, and that nationally, only 39% of births are attended by skilled providers and in the South East, 82%<sup>10</sup>. Moreover, the fact that majority of these women desired to deliver in EBSUTH because "the hospital had the equipments and staff to handle obstetric emergencies" may be an indication of increased awareness of the importance of Emergency Obstetric Care among booked parturient mothers, a topic worthy of further research. Sadly though, some of the mothers did not desire to deliver in EBSUTH and run the risk of losing whatever gains they got from antenatal care, with increased chances of MTCT. The major reasons they proffered, such as the hospital's distance from their homes, high hospital charges, unfriendly staff and dirty labour ward, are pertinent. Long distances to hospitals are a major contributor to maternal mortality in our environment, and may be an important player in perpetrating MTCT, hence the need to decentralize these services and take them closer to the people by means of community PMTCT. The State Government's free maternal care programme may ameliorate the high hospital charges in the short term, although this can only be categorically sorted out in the long term by appropriate economic empowerment programmes. The problem of unfriendly staff can

Figure 2: Reasons why respondents (n=397) would wish to deliver their index pregnancies in EBSUTH if they were HIV positive.

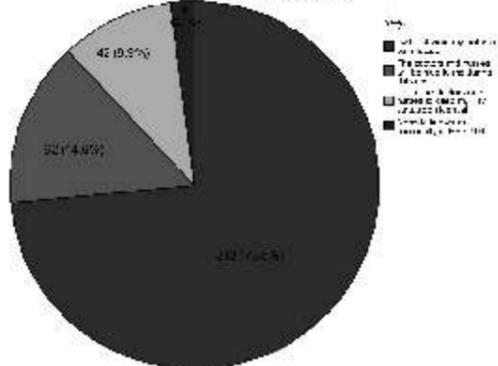
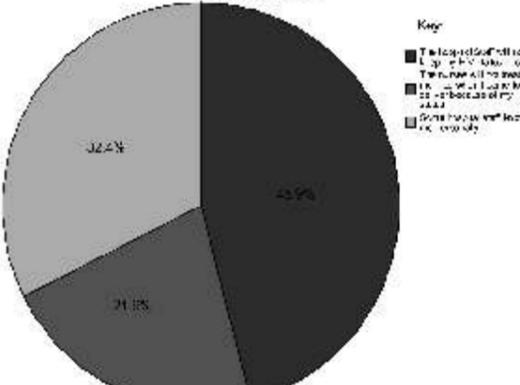


Figure 3: Reasons why respondents would not wish to deliver their index pregnancies in EBSUTH, Abakaliki



be resolved by appropriately directed staff education, while the dirty labour and delivery wards need to be refitted and upgraded.

It is noteworthy that challenged with the possibility of being HIV positive in their index pregnancy, a slightly higher percentage of the respondents, 93.9%, desired to have their deliveries in EBSUTH. This is commendable especially when the major reason was because mothers did not want their babies to be infected by the virus. It demonstrates mothers' love for their unborn babies on the one hand and on the other gives us the hope of achieving a HIV-free generation, and should be encouraged. Unfortunately, some 6.1% of the respondents did not desire to deliver in our hospital even if they tested HIV positive, with majority of them afraid of inappropriate disclosure of their HIV status by hospital staff. And although most of them hoped to deliver in hospitals and maternity homes with the possibility of receiving skilled professional care in labour, a significant 7.7% indicated they would deliver at home, a delivery more likely to be attended by increased risks of MTCT.

In conclusion, of pregnant mothers in Ebonyi State who book for antenatal care, majority do so after the first trimester of pregnancy. And although majority of these women eventually deliver in facilities that offer skilled professional services, a sizeable proportion still deliver in centres where such services are not available, with attendant risks of MTCT. Also, several factors influence the decision of registered antenatal attendees to utilize the labour and

delivery services in EBSUTH. The hospital's ability to provide emergency obstetric and the desire to produce HIV negative babies have very strong positive influence and such factors as distance, high hospital costs, unfriendly staff and dirty labour and delivery ward have strong negative influence.

Proper utilization of antenatal and skilled professional care in pregnancy, labour and the post delivery period, coupled with use of HCT, ART and other preventive strategies make PMTCT an effective public health intervention<sup>5</sup>, and offer us the opportunity of HIV-free generation in Ebonyi State in particular, and in Nigeria. However, the worrisome issue of non-utilization of labour and delivery services by some registered antenatal attendees, albeit for pertinent reasons, continues to pose a threat to the achievement of HIV-free generation. Therefore, to forestall this dangerous trend, we recommend totally free maternal services to parturient mothers, conduction of staff education aimed at correcting negative attitudes and unfriendliness, refitting, renovation and possibly upgrading of the labour and delivery wards, introduction of community PMTCT with decentralization of maternal services, continued awareness creation among, and economic empowerment of the populace. These are enormous tasks and require the involvement of all stakeholders, government, donor agencies, non-governmental organisations, philanthropists and all PMTCT program coordinators and staff.

#### Appendix 1: Questionnaire used for data collection

##### UTILIZATION OF LABOUR AND DELIVERY SERVICES BY REGISTERED ANC CLIENTS

###### Introduction

This questionnaire is meant to have your individual opinion on the labour and delivery services being offered in this health facility. You are required to answer the questions as honest as possible because your responses will help us to improve on the services being rendered to pregnant women that come to this hospital to deliver. Confidentiality of your responses is assured as you are not required to provide your name and contact address.

Thank you for accepting to participate in this survey.

###### A: BIODATA

1. What is your age? [less than 15] [15 – 19] [20 – 24] [25 – 29] [30 – 34] [35 – 39] [40 – 44] [45 – 49]

2. Are you married? [Yes] [No]

###### B: PAST OBSTETRIC HISTORY

1. Have you been pregnant before? [Yes] [No]
2. If yes, did you register for Ante Natal Care in your previous pregnancies? [Yes] [No]
3. At what age of pregnancy did you register for Ante Natal Care in those pregnancies? [Less than 3 months] [3 months to 6 months] [7 months to 9 months] [Don't know]
4. Have you delivered a child before? [Yes] [No]
5. If yes, where did you deliver your child/children?
  - a. At home
  - b. Church
  - c. Private maternity home
  - d. Mission hospital
  - e. Government public hospital
  - f. Others (please specify) \_\_\_\_\_

###### C: CURRENT PREGNANCY

1. Are you going to deliver your baby in this hospital? [Yes] [No]
2. If yes, why will you want to deliver your baby here?
  - a. The hospital is close to where I live.
  - b. I can afford the charges.
  - c. Your husband wants me to deliver here.
  - d. The nurses and doctors are friendly to me.
  - e. The hospital, especially the labour ward, is neat.
  - f. The hospital has the equipments and staff to handle obstetric emergencies.
  - g. Others (specify) \_\_\_\_\_

###### E: HIV COUNSELLING AND TESTING IN ANTENATAL CARE

The reason for HIV Counselling and Testing in Ante Natal Care setting is to Prevent Mother to Child Transmission of HIV during pregnancy, labour and delivery. This is done through educating the women on how to prevent HIV infection; provision of drugs to HIV infected pregnant women and counselling them on infant feeding to prevent them from infecting their babies. These services are provided free of charge in this hospital.

1. If you happen to test HIV positive, will you like to continue your Ante Natal Care and deliver your baby here? [Yes] [No]
2. If yes, why?
  - a. I trust the nurses and the doctors to keep my HIV status confidential.
  - b. I will not want my baby to be infected with HIV.
  - c. I believe the nurses and the doctors will be nice to me when I come to deliver.
  - d. Nobody working in the hospital knows me personally.
3. If no, why?
  - a. I do not care if my baby will be infected or not.
  - b. The hospital staff will not keep my HIV status secret.
  - c. The nurses will not treat me nice when I come to deliver because of my HIV status.
  - d. Some of the hospital staff know me personally.
4. If you will not deliver in this hospital if you test positive to HIV, where will you go to deliver?
  - a. At home.
  - b. In a private maternity home where I will not be tested for HIV.
  - c. In another hospital where nobody knows me.
  - d. In another hospital where I feel I will be well treated irrespective of my HIV status.

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