

# **FACTORS AFFECTING EARLY ANTENATAL CARE BOOKING IN SINDA DISTRICT.**

*(Conference ID: CFP/966/2018)*

**Patrick Mzyece,**  
**Information and Communication University,**  
**Lusaka – Zambia**  
**patrick.mzyece@gmail.com**

## **Abstract**

This article examines the factors that affect early antenatal booking in Sinda District. Antenatal care is a key strategy to improve maternal and infant health. However, survey data from sub-Saharan Africa indicate that women often only initiate antenatal after the first trimester and do not achieve the recommended number of antenatal visits. Drawing on qualitative data, this article comparatively explores the factors that influence antenatal attendance in Sinda District in Zambia. When implemented according to the set standards and guidelines, antenatal care contributes greatly to better health outcomes for women and their infants. Despite the implementation of World Health Organization (WHO) guidelines for focused antenatal care known to improve quality and high utilization of antenatal care services before 14 weeks of pregnancy in Zambia, maternal mortality rates remain unacceptably high per 100,000 live births. 1<sup>st</sup> antenatal attendance is doing fine in Sinda but antenatal utilization before 14 weeks is very bad in most health facilities mostly falling below 35%. Resulting into most of the women delivering at home without skilled providers

indicating a deficiency in the quality of care provided. This descriptive-cross sectional study factors influencing the quality of antenatal before 14 weeks of pregnancy in health facilities in Sinda district in Zambia. Simple random sampling was used to identify facilities for study according to the data for Quarter 2, 2017 where 148 systematically sampled mothers meeting the inclusion criteria were interviewed to explore their views and experiences with care during pregnancy.

***Keywords:** Antenatal care, Pregnancy, Sinda*

## **Introduction**

Antenatal care refers to the interventions to curb maternal and infant mortality. Mothers who attend antenatal care late miss the opportunity of early detection of HIV and STDs, malaria and anaemia prophylaxis, health education and treatment or prevention of complications. Many women in Sinda District make their first antenatal care visit after 20 weeks of gestation, the reasons for coming late are not documented. The objectives were to determine the factors affecting early antenatal booking in Sinda District.

## Background

Many health problems in pregnant women can be prevented, detected and treated by trained health workers during antenatal care visits. The World Health Organization (WHO) recommends a minimum of four antenatal visits, comprising interventions such as tetanus toxoid vaccination, screening and treatment for infections, and identification of warning signs during pregnancy.

The main objective of antenatal care is to prevent and treat any complications, emergency, preparedness, birth planning, satisfying any unmet nutritional, social, emotional and physical needs of pregnant woman, provision of patient education, including successful care and nutrition of the newborn, identification of high-risk pregnancy, encouragement of male partner involvement in antenatal care. The first of such antenatal visits should be conducted in the first trimester before 14 weeks of gestation.

According to study done by Brink (2012) in Nigeria showed that the prevalence of anaemia in pregnancy at booking was high (40.4%) and recommended that early antenatal booking and improved antenatal care are necessary for early diagnosis and treatment of the condition. Globally, during the period 2000 to 2010, about 53% of pregnant women attended the recommended minimum four times antenatal care. The proportion of pregnant women in developing countries who attended at least one antenatal care visit has increased from approximately 64% in 1990 to about 81% in 2009 but, in low-income countries, only 39% of pregnant women attended four times or more antenatal care during 2000–2010.

## Methods

**Research design:** a descriptive design was used to establish factors contributing to late antenatal

**Target population:** pregnant women who had started antenatal care booking after 20 weeks of gestation in 15 health facilities in Sinda District who met eligibility criteria. These include; Kampamule, Chilasa, Chitabe, Kanjiwa, Nyaluwiro, Mng'omba, Mtandaza, Sinda Zonal, Maela, Mthunya, Seya, Katema, Chimtengo, Chindeza and Chataika.

**Sample selection:** simple random sampling technique was used to select the participants in the 15 health facilities. Every member in the population having an equal chance of selection. A sample size of 148 sample size was calculated by proportion formula considering the prevalence of late antenatal booking and 95% confidence of interval.

## Sampling criteria

Pregnant women above 18 years, who had started antenatal care after 20 weeks of gestation and gave informed consent were included while pregnant women below 18 years, who started antenatal care before 20 weeks of gestation, too sick and eligible respondents unwilling to give consent were excluded. Participation was voluntary, information was kept confidential and all respondents had to sign confidentiality binding form.

## Data analysis

A questionnaire was used to collect data for this study. Then Ms. Excel and Statistical Package for Social Science (SPSS) was used to analyze the data.

## Study variables

Maternal age and gestational age were continuous variables while categorical variables included marital status and benefits of antenatal care.

## Reliability

Same questionnaires and questions were used for all respondents and piloting was conducted but probing was discouraged to avoid bias. Findings were generalized within Sinda District.

## Ethical consideration

Permission to conduct study was obtained from the District Health Director for Sinda District and supervisor.

**Limitation of the study:** Some of the respondents were not sure of their last normal menstrual period which made it difficult to determine whether it was late or early booking.

## Results

### Age distribution

The respondent's age ranged between 16 and 43 years. The respondents' age decreased with increasing age. The age was of significance in this study to find out if it has an effect in late antenatal care booking. While 25.7 % of the respondents were aged between 15 to 19 years, majorities (51.4%) were between 20-29 years and the remaining 22.8% were women of 30 years and above.

See Table 1.1 below

Age	No. of respondents	Proportion
15-19	38	25.7
20-24	47	31.8

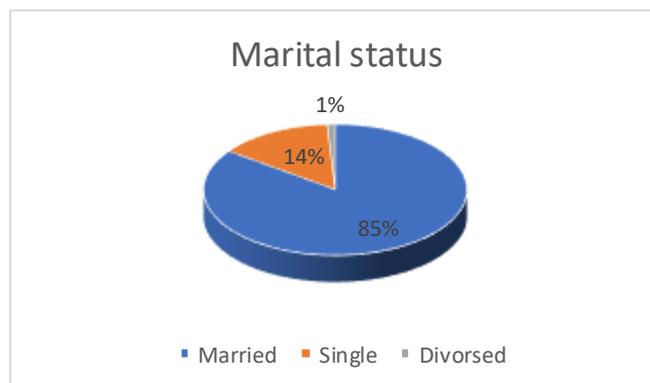
25-29	29	19.6
30-34	18	12.2
35+	16	10.8
<b>Total</b>	<b>148</b>	<b>100.1</b>

### Marital status

Most respondents were married (n=148, 85.4%). 97.5% living with their spouses at the time of the study. Close to 13.5% (n=20) were single and 1.3% (n=2) were either divorced or separated.

The women not married are likely to face delays in seeking care as husbands play a crucial role in influencing women to seek skilled care during pregnancy and delivery (Jimoh, 2003).

See Figure 1.1



### Level of education and employment

From the 91 respondents, majority 60 (65.93%) were women of low academic attainment who only went up to primary. Employment status, from 138 respondents 66.8% (n=92) were unemployed. 23.2% (n=32) of the respondents were self-employed and only 9.5% (n=13) were formally

employed. These women lack the ability to make autonomous decisions on seeking care leading to delays in reaching and receiving adequate care even when such care is available in the health system (Mbugua, 2002).

## Access to the health facility

Majority of participants stay over 3 km from the clinic (n=96, 65%) and 79.2% walk when going to the clinic which contributes to laziness. This is a similar situation to findings in Malawi, where ANC mothers failed to access health services due to long distance to the facilities (John, 2013). Many sites also confirmed specific ANC days in a week

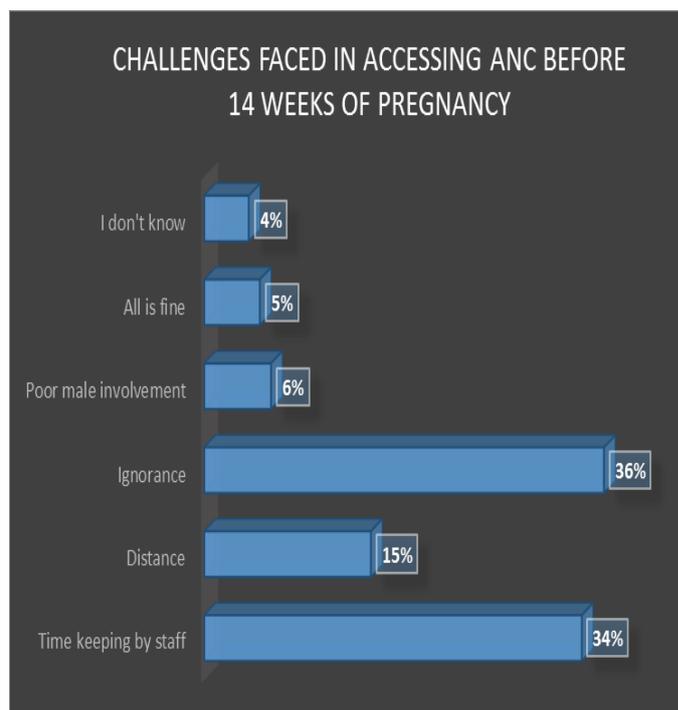
## Obstetric history of the study participants

Among the 148 pregnant women, 115 (77.7%) were sure of the date of the first day of their last normal menstrual period (LNMP). 78 (52.7%) pregnant women were multi-gravid. A history of abortion was reported by 40 (27.0%) pregnant women. 62 respondents (41.89%) reported a history of at least one problem in the current or previous pregnancies.

## Reasons for coming late for the first antenatal care visit

In this study, from 130 respondents, the biggest cause of late antenatal was ignorance or lack of information on the importance of seeking early antenatal (n=47, 36%), then poor time keeping by the Health Care Workers was identified as another barrier at 34% (n=44). Apart from this, distance to the clinic was also contributing to laziness as 10% confirmed this (n=20), poor partner male involvement 5%, fear of HIV/AIDS 4%, lazy 3%,

belief in traditional delivery 2% and so on. See below Figure 1.2



The results showed that 91 (61.49%) of the study participants did not know the right gestation age at which a pregnant woman should start attending antenatal care. The 109 (27.3%) women who knew the right gestation age stated this time as three months (n=83, 76.1%); four months (n=17, 15.6%); two months (n=6, 5.5%) and when a menstrual period is missed (n=3, 2.8%). The majority (n=101, 92.7%) of these 109 women said that they were taught this time during health education in a health facility when they had attended antenatal care in previous pregnancies. Others said they had been told by their mother, sister or friend while one mother said she knew it from common sense. Still one mother said that she was taught in school.

## Discussion

This study showed that many pregnant women do not know the right time of gestation at which they should start seeking antenatal care which partly explains why they reported late for the first antenatal care visit. Not knowing the right gestation age at which to start the first antenatal care visit was the commonest reason for late attendance.

The few pregnant mothers who knew the right time of gestation at which they should come for the first visit had been taught in health facilities during health education in previous attendance for antenatal care. This means that it is less effective to give this health education only during antenatal care attendance because the mother will already be late and worse still she may also come late on that particular day when health education has already been done.

Further still, a prime gravid who has never attended antenatal care before will not know this information. In addition, there are other people who influence a pregnant woman to attend antenatal care and once these people are also not informed then pregnant women will not make informed decisions.

## Biographical data

There was no association between age and late antenatal booking as most respondents (n=46, 36.2%) attended antenatal late and this might have been assumed because this is the age at which respondents were married. Marital status could be associated with late booking as majority of the respondents (n=59, 46.5%) were single. This was supported by a cross-control study conducted by

John (2014:5) in southwest Nigeria which stated that 32% of the respondents who booked late for antenatal care were single and lacked partner support.

The highest level of education was identified as determinants of level of knowledge about antenatal in pregnant women and in the results of this study (n=16, 12.6%) of the respondents had tertiary education this was supported by results from the study conducted in Uganda by Edward (2011:517) on factors influencing the utilization of antenatal care content, that women who have attained post-secondary education compared with those with less or no education are 0.4 ( $p<0.05$ ) to 0.5 ( $p<0.01$ ) likely to attend antenatal earlier.

Occupation contributed to late antenatal care booking (n=105, 82.7%) of the respondents were housewives and financially dependent on someone. Similar results were found in the study conducted in Iran by Hajizadeh, Ramezan, Simbar and Farzadfar (2016:551) on factors influencing the use of prenatal care service. These results concluded that unemployment is one of the barriers against optimal, timely and frequent utilization of prenatal services, employed women were likely to receive early prenatal care compared to housewives.

In terms of the distance, the majority of respondents (n=59, 46.5%) were at a walking distance but

(n=40, 31.5%) used carts to reach health care facility meanwhile (n=8, 6.3%) had to use two buses or two taxis to the clinic. All these factors resulted in to late antenatal booking. It is also supported by a study conducted by Assegid and Wondafrash (2015:2) on factors associated with late antenatal care initiation in an Ethiopian clinic that concluded that longer travelling time and greater distance to health facilities in rural areas constituted the greatest barriers to antenatal care utilization.

### **Comparison of parameters in late antenatal booking among different age groups**

Parity in this study had a significant contribution to late antenatal care booking ( $X^2=114.070$  and  $p=0.0000$ ) respondents second or more pregnancies were likely to attend antenatal care. These results were also confirmed by a study conducted in Ethiopia by Yilala (2015:44) on assessment of late initiation of antenatal care and associated factors among antenatal attendees in selected health centers of Addis Ababa which stated that 96.6% of the respondents had pregnancies before. These respondents started antenatal care late due to experience of pregnancy compared to women who had no previous experience of pregnancy as they were more careful with their first pregnancies and therefore started antenatal care earlier. Lack of information on antenatal care contributed to late antenatal booking, the majority of respondents

(n=120, 94%) had knowledge about antenatal care and (n=65, 51%) obtained antenatal information from family and friends, those with poor information on antenatal care information could also have misinformed the respondents.

### **Reasons for late antenatal care booking**

On the generalized reasons for late antenatal booking, 79% of the respondents indicated waiting time as a barrier that prevented them from seeking care earlier and was supported by the study conducted in Uganda by Kawungezi et al (2015:133) on attendance and utilization of antenatal care (ANC) services stated that most women spend most of their time caring for children, collecting water or fuel, doing household chores and trade than their own health.

The majority of respondents (73%) agreed that they ignored signs of pregnancy which made them start antenatal care late. Results from the study conducted by Amnesty International Researchers (2014:13) on struggle for maternal health: Barriers to antenatal care in South Africa stated that some of the clinics they visited were in unsuitable buildings which lacked privacy; the rooms were small and overcrowded making it difficult to maintain confidentiality. These results had similarity with the results of this study because 72% of the respondents strongly disagreed that privacy was maintained in the health facilities and contributed to late antenatal

care booking and 64% strongly agreed that it was due to poor infrastructure.

Health care worker's attitude is one of the reasons for late antenatal care booking as stated by 53% of the respondents this was supported by a study conducted by Gross, Alba Glass, Schellenberg and Obrist (2012:16) on timing for antenatal care for adolescent and adult pregnant women in South Eastern Tanzania which concluded that poor services and attitude by health workers who did not allow pregnant women to book for antenatal care earlier and turned them back.

The majority of respondents (56%) had unplanned pregnancies supported by the study conducted by De Vaal (2011:6) on late booking at the Michael Mapongwana antenatal clinic of which one of the reasons identified abortion as the reasons for late antenatal booking as pregnant women still considered that option. Unstable clinic operating hours also contributed to late antenatal care booking in this study. The results were that 15% of the respondents strongly agreed as all clinics offer eight hour services and those working did not have an opportunity this was also supported by a study done in Zimbabwe by Mugumbate (2012:34) on late antenatal care booking by pregnant women at Sakubva.

## Conclusion

The study fulfilled two objectives which were to establish factors contributing to late antenatal care booking and to help policy makers develop strategies will improve early antenatal care booking.

From the results, the majority 50% of the respondents (n=70) indicated that the best time to start antenatal care was between three and six months. According to Maternal Care Guidelines a woman should visit the health care provider as soon as she suspects pregnancy, even as early as the first missed menstrual period (WHO, 2016: 21). Therefore 55% of the respondents started antenatal care late as compared to the instructions or rules in Maternal Care Guidelines.

The majority of the respondents (n=120, 94.4%) had agreed that they had knowledge about antenatal care but the source of information is from family and friends and responses were from (n=65, 51%) of the population and this may occur that they had been misinformed because a woman who booked late for antenatal care would have advised others to do so. WHO (2016:21) on recommendation of antenatal care for a positive pregnancy experience revealed that pregnant women should be offered health care advice and pregnancy related information by health providers as this will make pregnant women to engage with health services with high confidence.

Most (n=99, 78%) of the respondents ignored the signs of pregnancy similar results were revealed in the study conducted in the United Kingdom by Haddrill et al (2014:5) on understanding delayed access to care: a qualitative interview study that many of the respondents interviewed had not known they were pregnant for weeks or months which had delayed them accessing care, other respondents had experienced pregnancy symptoms but had misinterpreted them due to lack of knowledge or experience.

Pregnant women identified health care workers' attitude as one of the factors preventing them from attending health care facilities (n=74, 58%) the study conducted by Nhemachema (2011:20) on factors influencing the gestational age at booking in primigravida clients within the Prevention of Mother to Child Transmission of HIV at Khayelitsha revealed that health workers attitudes play a great role in determining how a pregnant woman perceives antenatal clinic services and bad attitude forms a barrier to accessing antenatal care, the pregnant woman who experienced bad attitude will share her uncomfortable experience with her peers and community members and pregnant women will delay antenatal booking.

Another study conducted in Nigeria by Sanda (2014:103) on media awareness and utilisation of antenatal care services by pregnant women in Kano

State led to findings that unfriendly attitude by health care workers discourages pregnant women to start antenatal care earlier and also made them lose faith in modern medical services, they resorted to traditional sources whom they believe are more available and more friendly than attending clinics at advanced stages.

Clinic operating hours and long waiting time contributed to late antenatal care booking, (n=19, 15%) of the respondents feel that clinic operating hours was a barrier and the majority of the respondents strongly agreed that it took long to get services at health facilities (n=100, 79%), this was supported by the results of the study conducted by James, Rall and Strumpher (2012) on perception of pregnant teenagers with regard to antenatal care environment which revealed that respondents came early to be first may be before six o'clock and go home after four o'clock as midwives took long tea or lunch breaks whilst keeping pregnant women waiting.

Poor infrastructure was stated by respondents (n=81, 64%) as another factor and this may have contributed to the strongly disagree in the aspect which enquired if privacy was maintained which had (n=92, 72%) the results from a study conducted by Valla (2016:35) on a patient flow system for antenatal primary health care facilities in the Frances Baard.

On the other hand, most of the facilities in this study were relatively rural and respondents stated that health facilities were overcrowded, lack of space which compromises health care user's right to privacy, the quality of infrastructure has a major impact on how services function and influence patient satisfaction with services and pregnant women need space where they can undress and be examined.

Marital status was found to be another reason for late antenatal booking in this study (n=59, 46.5%) of the respondents were single which is similar to a study conducted by Muhwava et al (2014:18) on psychosocial factors associated with early booking and frequency of ANC visits in rural and urban setting in Zambia, revealed that single or never married, divorced or separated pregnant women were less likely to attend antenatal compared to married women with husbands to give support.

Distance was another factor contributing to late antenatal booking (n=68, 53.5%) of the respondents used buses, taxis and some of the distance they had to take two taxis or two buses to reach the clinic which increased transport costs, a similar study was conducted in People's Democratic Republic by Manithip, Edin, Sihavong, Wahlstrom and Wessel (2012:47) on quality and utilization of antenatal care services in rural Lao, which revealed that distance and transport has been shown to affect the

decision of the pregnant women to use health care services.

Respondents (n=71, 56%) strongly disagreed that pregnancy was planned which resulted in late attendance of antenatal care as they had to conceal the pregnancy from the family and friends or thought about abortion thus delaying to start antenatal care, this was supported by the study conducted by Shabila, Ahmed and Yasin (2014:18) on women's views and experiences of antenatal care in Iraq which concluded that women's perception of antenatal care could be due to having unintended pregnancy that might have resulted in poor utilization of antenatal care services.

This study also demonstrated relationship between parity and late antenatal care booking (n=72, 56, 6%) of the respondents had parity of three and above as they perceive themselves to be of low risk due to experience from previous pregnancy this finding was similar to the study conducted in Ethiopia by Lerebo, Kidanu and Tsadik (2015:171) on magnitude and associated factors of late booking for antenatal care in public health centers of Adigrat town which stated that pregnant women with parity one and above were likely to book late for antenatal care compared to those with zero parity and these

women feel that they do not need to attend ANC early because they already know what to expect

during pregnancy and childbirth and they may also have difficulty of arranging childcare for other children in order to attend antenatal care.

Lack of education and unemployment had also contributed to late antenatal care minority of the respondents (n=16, 12.6%) had attained tertiary qualifications and (n=105, 82.7%) of the respondents were unemployed, poor education led to poor knowledge on importance of antenatal care and, it was supported by a study conducted in Ethiopia by Belayneh, Adefris and Andargie (2014:39) on previous early antenatal service utilisation improves timely booking which concluded that pregnant women who had formal education were likely to attend antenatal care earlier than their uneducated counterparts and they were also financial independent.

## Acknowledgements

Special thanks go to the University of Information and Communication, School of Humanities and Social Sciences and Project Planning Management Unit staff for the guidance during the research design, analysis and writing of this research paper. The Sinda District Health Office for giving permission to obtain and use the 2017 DHIS data set. All the supervisors and mentors for their support and guidance throughout the research.

## References

- [1] Amna, A. (2015). Late antenatal booking, its barriers and maternal complications. *Israel Medical Journal*:38.
- [2] Burns, N. (2015). *Understanding nursing research*. 6th edition. Pretoria: Saunders/Elsevier.
- [3] Brink, H. (2012). *Fundamentals of research methodology for health care professionals*. 3rd edition. Cape Town: Juta.
- [4] Banda, C. (2013). *Barriers to utilization of focused antenatal care among pregnant women in Ntchisi District in Malawi*. Master's Thesis University of Tampere. Tampere school of Health Science communities of Copperbelt Province of Zambia.
- [5] Carroli, G. (2001). *WHO systematic review of randomized controlled trials of routine antenatal care*, *Lancet*, 357: 1565-1570
- [6] Central Statistics Office (CSO), (2004), *Zambia Demographic and Health Survey Republic of Zambia 2003*, Lusaka
- [7] Cottrell, R. (2011). *Health promotion education research methods: Using the five-chapter thesis/dissertation model*. Sudbury: Jones & Bartlett.
- [8] Creel, L. (2002). *Client-centered quality: Clients perspectives and barriers to receiving care*, *Population Council and Population Reference Bureau*, New Perspective to Quality Care
- [9] Dennis, L. (1995). *Characteristics of pregnant women, utilization, and satisfaction with prenatal services in St. Petersburg, Russia*, *Public Health Nursing*
- [10] Ewnetu, W. (2015). *Factors associated with late antenatal care initiation in an Ethiopian*

- clinic*. Public Health and Medical Sciences, Jimma University: Jimma, Ethiopia.
- [11]Hajizadeh, S. (2016). Factors influencing the use of prenatal care: a systematic review. *Journal of Midwifery and Reproductive Health* 4(1):544-557.
- [12]Pell, C. (2013). *Factors affecting antenatal care attendance*. Results from qualitative studies in Ghana, Kenya and Malawi. *Plos ONE* 8(1):5-6.
- [13]Polit, D. (2012). *Nursing research, generating and assessing evidence for nursing practice*. China: Wolters Kluwer Health/Lippincott/Williams & Wilkins.
- [14] Rahmani, Z. (2013). Antenatal and obstetric care in Afghanistan. A qualitative study among health care receivers and health care providers. *BMC Health Service Research* 13:166.
- [15]Shabila, P. (2014). Women's views and experiences of antenatal care in Iraq: a Q methodology study. *BMC Pregnancy and Childbirth* 14:18. Available from: <http://www.biomedcentral.com/1471-2393/14/43> (accessed 19 July 2016)
- [16]Monette, D. (2011). *Applied social research: A tool for human services*. 8th edition. Belmont: Brooks.
- [17]Ministry of Health (MOH), (2004), *Maternal health care in government facilities, Lusaka province*, Division of Reproductive Health, Republic of Zambia, Lusaka, Zambia
- [18]Mbugua, G. (2002). *Utilization of antenatal and maternity services by mothers seeking child welfare services in Mbeere District*, Eastern province of Kenya, *East Afr-Med J.* 79(4):184-7
- [19]Notzon, F. (1996). *The effectiveness of antenatal care in preventing intrauterine growth retardation and low birth weight due to preterm delivery*, *Intl Journal of Quality Health care*, 8; 13-20
- [20]World Health Organization. (2012). *Recommendations-optimize MNH: Optimizing health worker roles for maternal and newborn health*. Geneva: WHO. Available from: <http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843-eng.pdf> (accessed 8 January 2015).
- [21] World Health Organization. (2016). *Recommendations on antenatal care for a positive pregnancy experience*. Geneva: WHO.

## AUTHOR'S BIOGRAPHY



Mr. Patrick M. Mzyece is currently the Provincial Monitoring and Evaluation Coordinator at USAID (Right to care, EQUIP Project - Zambia). He has 10 years' experience in HIV/AIDS health programming having worked for Center for Disease Research in Zambia (CIDRZ) as Provincial Monitoring and Evaluation / Data Coordinator and at Center for Disease Control and Prevention (CDC) as Data Specialist. He holds a Bachelor of Arts in Development Studies Degree from Zambian Open University, Diploma in Computer Studies from Evelyn Hone College. His main research interests include HIV/AIDS, Reproductive Health, Education, Sexuality and Contemporary Issues