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Trend of HIV Prevalence in Pregnant Women Attending Antenatal Care Clinic at Faith Alive Foundation and Hospital, Jos, Plateau State

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Abstract: *Objective:* HIV prevalence data from pregnant women who attended Antenatal Care Clinic over a five year period were used in the Prevention of Mother-To-Child Transmission (PMTCT) of HIV programmes and remain useful for Prevention, Care, Treatment and Support of pregnant women and ensuring that the goal of zero transmission is met. It also helped policy makers to take appropriate action in HIV/AIDS programmes. *Methodology:* A descriptive study of pregnant women presenting for the first time at the antenatal clinic of Faith Alive Foundation and Hospital, Jos from 1st January 2010 to 31st December 2014 was carried out. Information regarding age, gestational age at booking, parity and HIV sero status of the clients were analyzed. Screening test was carried out in a serial two step approach using determine and UNIGOLD as the confirmatory test while stat pack was the tie-breaker with discordant result. Positive samples were confirmed by western blot method. *Result:* A total of 1720 pregnant women were registered in the antenatal unit of Faith Alive Foundation and Hospital, Jos from 1st January 2010 to 31st December 2014. 120 were sero positive. The overall HIV prevalence rate was 6.9%. High prevalence rate were observed in those aged 20-39 years. There was a decline in HIV prevalence from 10.7% in 2010 to 6.8% in 2013 and 5.8% in 2014. Majority of the sero positive women booked early in pregnancy, within the 1st and 2nd trimesters from 77.8% in 2010 to 80% in 2014. *Conclusion:* A decline in HIV prevalence was observed during the five year period. The study also revealed that significant number of HIV positive antenatal women registered for antenatal care early. The overall HIV sero prevalence is still high. There is need to astronomically scale up our intervention approach against HIV infection.

Keywords: HIV Prevalence, Antenatal Clinic, PMTCT, HIV Testing and Counselling, Faith Alive Foundation

1. Introduction

The burden of mother-to-child-transmission (MTCT) of HIV is much higher in sub-Saharan Africa due to higher level of heterosexual transmission, high male: female ratio, high total fertility rate and high levels of breastfeeding [1]. Nigeria has the largest burden in the West Africa sub-region with about 2.98 million people living with HIV [2].

Though HIV prevalence in Nigeria is on the decline with an estimated HIV prevalence of 3.4% [3], Nigeria still has the largest HIV disease burden in the sub region as well as the second highest in the world on account of her large

population [4]. This portends negative impact on our economic development due to deterioration in child survival rates, decreasing life expectancy, increasing numbers of orphans and strain on the weak health system [1, 4].

If MTCT is not checked the increasing number of AIDS related deaths in Nigeria may reverse the gains made in child survival [2, 3].

The high prevalence of HIV among pregnant women, high total fertility rate, culture of prolonged breast feeding/mixed feeding, non-use of modern health facilities for antenatal and delivery purpose have contributed to the high rate of MTCT in the country [5].

HIV prevalence data from prevention of mother-to-child-transmission (PMTCT) programmes are being utilized to monitor the trend of HIV epidemics that helps policy makers to take appropriate action [6].

Despite the multi-sectional response to HIV and the promotion of combination prevention what HIV counseling and testing as an entry into treatment, care and support, coverage has remained low especially in rural areas and among pregnant women with Nigeria having least HIV indicators in Africa [3, 5].

The objective of this study was to determine the trend of HIV prevalence among antenatal clients in this facility between January 2010 and December 2014. No previous study in this area has been done in Faith Alive Foundation (FAF) and any other hospital in Plateau State, North Central Nigeria. FAF was established in 1996 to meet the holistic health and social services needs of the less privileged including Persons Living Positively at no cost to them.

2. Materials and Method

A descriptive study was done amongst the patients who booked for antenatal clinic in Faith Alive Foundation and clinic between 1st January 2010 to 31st December 2014.

Faith Alive Foundation (FAF) is located in Jos Plateau state, North Central Nigeria.

Screening test was conducted in a serial two step approach using Determine HIV test kits and UNIGOLD HIV kits after appropriate pre-test counseling with informed consent. Discordant results were subjected to statpak for confirmation. However all positive samples were confirmed with western blot method.

Information regarding HIV sero status age, parity and gestational age at booking of the clients were analysed.

Data were entered and analysed using Epi-info statistical software.

3. Results

Table 1: Shows a progressive decline in prevalence percentage from 10.7% in 2010 to 6.2% in 2012 and 5.8% in 2014.

A total of 1720 women registered for antenatal clinic over the period and total of 120 were sero positive giving a prevalence rate of 6.98%.

Table 2 shows most of the sero-positive clients booked in the second trimester (14-26 weeks) from 55.6% in 2010 down to 48% in 2012 and 66% in 2014. It also shows that most of the sero positive clients had booked within the 1st and 2nd trimester.

Table 1. *HIV Positive status at booking.*

Year	HIV +ve	HIV –ve	Total	Percentage
2010	18	150	168	10.7
2011	19	197	216	8.8
2012	25	340	365	6.8
2013	28	427	455	6.2
2014	30	486	516	5.8
Total	120	1600	1720	6.98

Table 2. *Age at booking with HIV Status.*

Years	2010		2011		2012		2013		2014	
	+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve
15-19	-	3	1	6	1	5	2	6	2	5
20-24	3	20	2	34	4	77	2	90	4	87
25-29	8	58	7	79	9	99	10	136	9	130
30-34	5	44	6	57	4	73	5	108	6	158
35-39	2	23	2	12	4	53	4	79	5	92
40-44	-	2	-	5	3	25	4	5	3	8
45-49	-	-	-	4	-	8	1	3	1	5
Total	18	150	19	197	25	340	28	427	30	486

Table 3. *Gestational Age at booking with HIV status.*

Weeks	2010		2011		2012		2013		2014	
	+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve
<13	4	35	6	13	9	44	7	50	6	53
14-26	10	76	8	126	12	232	15	286	18	304
27-40	4	39	5	58	4	64	6	91	6	129
Total	18	150	19	197	25	340	28	427	30	486

Table 4. *Parity at booking with HIV status.*

Parity	2010		2011		2012		2013		2014	
	+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve
0	5	33	6	56	7	101	4	127	7	149
1	5	56	8	62	8	99	7	119	9	140
2	3	28	4	42	2	63	3	82	4	93
3	2	13	3	19	62	37	4	56	5	61
4	1	6	2	9	4	20	7	21	2	23
Grand mulitpara*	2	14	3	9	2	20	3	22	3	20
Total	18	150	19	197	25	340	28	427	30	486

* ≥ 5

4. Discussion

Our study shows an average sero prevalence over the study period of 6.98%. This is much higher than the 3.4% HIV prevalence in Nigeria [3]. It is equally higher than the 3.29% reported in Jos [7] by Sagay et al, and 5.9% reported over a 3yr study period in Kano [8]. It is equally higher than the 5.4% reported over a 5 year study period in Bishoftu hospital Ethiopia [6]. This agrees with previous assertion that HIV sero prevalence shows large variation between and within regions and countries, moreso between high and low risk urban population [9].

Moreso Faith Alive Foundation and Hospital being known as mainly an HIV/AIDS hospital could have contributed to this increase slightly.

This study shows a trend in decline in HIV sero prevalence from 10.7% in 2010 through to 6.8% in 2013 and 5.8% in 2014. This decline is also noted among pregnant women in sub Saharan Africa and also similar to the finding in Kinshasa [10], Ethiopia [11] and North Uganda [12].

The persistently high burden of HIV and MTCT are indications that the national PMTCT programme has only made modest impact. This may be attributed to the low-level of coverage across the country [5]. To address this problem an accelerated scale-up plan 2010-2015 to rapidly decentralize PMTCT services in the country was developed and is being implemented [13, 14].

The study also shows that majority of the sero positive women booked early in pregnancy, that is within the 1st and 2nd trimesters from 77.8% in 2010 to 84% on 2012 and 80% in 2014. Late bookings in some cases may not allow enough time for some modes of intervention to be adequately implemented [15]. This observation is very encouraging if some of the targets of the 2010-2015 National PMTCT scale up plans are to be met which include, to ensure at least 90% of all pregnancy women have access to quality HIV counseling and testing by 2015, to ensure to least 90% of all pregnancy women requiring ART for this own health receive life-long ART [13, 14]. This will in no doubt help achieve the overall objective of PMTCT of HIV programmes of zero vertical transmission

The study shows a trend of increasing number of pregnant women counseled and tested and who also received their results which is similar to the observation of Agbogoroma et al [5].

The trend of declining prevalence of HIV from this study with the observation that majority of the HIV positive clients book early with the 1st and 2nd trimester are encouraging from this study.

The trends in HIV sero prevalence in this facility though declining is still high and can be lower. Apart from the need to astronomically scale up the intervention strategies, overcoming these challenges will require much political will and strategic commitment of national, state and local government resources and international support to addressing this problem.

There is therefore the need to involve all health care personnel and other stake holders like Traditional Birth Attendants in the ANC HIV screenings and PMTCT programmes as it has shown that Trained Birth Attendants when trained and well supervised can supplement efforts to provide PMTCT services in communities.

Faith Alive Foundation and hospital which offers service mostly to the less privilege including person living positively at no cost to them needs a lot of support in this direction if the target of the 2010-2015 National PMTCT scale up plan is to be achieved.

5. Conclusion

A decline in HIV prevalence was observed during the five year period. The study also revealed that significant number of HIV positive antenatal women registered for antenatal care early. The overall HIV sero prevalence is still high. There is need to astronomically scale up our intervention approach against HIV.

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