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# AWARENESS AND PERCEPTION TOWARDS REVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV GUIDELINES AMONG HEALTH PROVIDERS AT SAUDI MATERNITY HOSPITAL, SUDAN



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## Abstract

**Background:** The prevention of mother-to-child transmission (PMTCT) is a basic approach to control the HIV epidemic. The goal of this research is to learn more about healthcare practitioners' knowledge, attitudes, and practices to PMTCT. **Methods:** A descriptive cross-sectional institutional study was conducted among nurses working at the Saudi maternity Hospital in Sudan. The data is collected by using a questionnaire designed for the study to collect the necessary data addressing knowledge, attitude, and factors associated with PMTCT services. Data analysis achieved by a statistical package for social science (SPSS) V 20, presented in figures and tables. **Results:** From the respondent's answers, found the mode of transmissions more than half of the nurse's selected needle stick (51.2%), encouraging women for HIV tests during the pregnancy (97.5%), more than two-third (67.5%) felt worried when they were caring for pregnant women with HIV. On the other hand, (91.2%) of the respondents indicated a willingness to assist with the delivery of a baby born to a mother with HIV/AIDS. **Conclusion:** Without extensive training and an increase in staffing levels of knowledge, the quality of and access to PMTCT services will likely impact negatively.

**Keywords:** Antiretroviral (ARV), HIV, Mother-to-child transmission, Sudan.

## INTRODUCTION

The Human Immunodeficiency Virus (HIV) disease and its implications for women and children constitute a major public health issue (1).

Around 330,000 children acquired HIV infection, this represents a 43% decline from 560,000 children reported infection with HIV. More than 90% of new HIV infections amongst children in a year occurred in Sub-Saharan Africa, home to 92% of pregnant women living with HIV. Furthermore, only 59% of pregnant women living with HIV in Sub-Saharan Africa received therapy or prophylaxis (2). Moreover, only 9.3% of the estimated numbers of HIV-positive pregnant women were provide with antiretrovirals [ARVs] for PMTCT (3).

Implementing a successful PMTCT program requires a comprehensive approach, including ensuring the availability of a few staff, providing training, and cascading a continuum of care for mothers, infants, and their families after delivery (4). In Sudan the HIV epidemic is fuelled by heterosexual transmission and a higher incidence of HIV infection occurs in women aged 15-49 years this makes Prevention of mother to child transmission an important public health intervention in Sudan's setting (5).

Effective delivery of PMTCT interventions is highly rewarding as it can reduce the risk of maternal-to-child transmission of HIV infection from 20-45% to <5% in breastfeeding populations and to <2% in non-breastfeeding populations. However, the performance of the existing PMTCT services in Sudan has been poor as evidenced by <1% access to antenatal HIV testing and <10% coverage of antiretroviral therapy for HIV-infected pregnant women (6).

HIV-related stigma and discrimination have an impact on a pregnant woman's decision to join in PMTCT programs, as well as her adherence to treatment and retention in care (7). It has been estimated that over 50% of vertical HIV transmissions from mother-to-child globally, can contribute to the cumulative effect of stigma when accessing prevention of mother-to-child transmission (PMTCT) services (8). Pregnant women may not seek PMTCT services because they fear the stigma if they are found to be HIV-positive following an HIV test (9). In some countries, pregnant women who disclose their HIV status may be physically or verbally abused or socially marginalized (10). Combination antiretroviral prophylaxis given to the mother's antenatal has been linked to prenatal transmission rates of fewer than 2% in subsequent trials and observational studies. In resource-constrained regions, additional trials have discovered basic regimens that are effective in minimizing perinatal transmission (11, 12).

Failure to avert vertical HIV transmission eventually leads to increasing the burden of pediatric morbidity and mortality. The current prevalence of HIV infection in Sudanese children aged 0–14 years is estimated to be 0.13% at the population level (13).

The knowledge and attitude of the health care providers affect the quality of prevention maternal to child transmission services. Even though there is a great service led by nurses throughout the world, and there are only little data available about the knowledge of prevention of mother to child transmission of HIV in health facilities in Sudan. The objectives of our study were to assess the knowledge and determine the attitude of nurses in Saudi Maternity Hospital regarding the PMTCT program, with an attempt to improve services through globally identified guidelines and interventions.

## **MATERIALS AND METHODS**

### **STUDY DESIGN**

This descriptive cross-sectional hospital-based study was carried out at Saudi Maternity Hospital in Omdurman province of Sudan.

### **STUDY POPULATION**

A total of 80 participants were included in this study (all registered nurses and midwives with different categories working in the labor room and postnatal ward were enrolled).

The collection of data was done by using a questionnaire specifically designed for this study. The first part of questionnaire included demographic data such as age, level of education, etc. The second part included data on knowledge of PTMC and third part included questions related to the attitude of the participants

### **STATISTICAL ANALYSIS**

Double-check to ensure the quality of data entry, data analysis achieved by statistical package for social science (SPSS) 20.

### **ETHICAL CONSIDERATION**

Ethical approval was taken from Alneelain University ethical committee, permission was also taken from the State Ministry of Health, Saudi Hospital Authority while, verbal agreement was obtained from respondents.

## **RESULTS**

Nurses were asked about the knowledge for PMTCT of HIV, response of n=49 (61.2%) nurses was positive and n=31(38.8%) nurses were unaware about the PMTCT of HIV. The opinion of the study subjects about the mode of HIV transmission was different.

Table I shows all nurses who participated in the study i.e. n=80 (100%), out of which n=49 (61.2%) were aware about the PMTCT. The respondent opinion about mode of transmission of PMTCT of HIV was different, more than half of the nurses selected needle stick n=41 (51.2%) and n=25 (31.5%) selected sexual intercourse.



**Table I.** Nurse's Knowledge toward pregnant women with HIV/AIDS

Characteristics	Frequency	Percentage
<b>Have you heard about PMTCT services of HIV?</b>		
Yes	49	61.2%
No	31	38.8%
<b>Modes of Transmission of HIV/AIDS</b>		
Breast feeding	2	2.5%
Sexual intercourse	25	31.5%
Needle stick	41	51.2%
During the delivery	10	12.1%
Blood transfusion	2	2.5%
<b>Does HIV during the pregnancy can be transmitted to the fetus?</b>		
Yes	49	61.2%
No	31	38.8%

Majority of the nurses n=72 (90%) were chosen counseling to women individually, more than half of the nurses, n= 78 (97.5%), encouraging women to do the test of the HIV during the pregnancy. Nurses, n=54 (67.5%) were worried when caring pregnant women with HIV but n=73 (91.2%) of the respondents indicated a willingness to assist with the delivery of a baby born to a mother with HIV/AIDS (Table II).

**Table II.** Nurse's Attitudes toward pregnant women with HIV/AIDS

Variable	Frequency	Percentage
<b>Do you think counseling should be given to the woman in:</b>		
Groups	8	10.0%
Individually	72	90.0%
<b>Are you encouraging women to go testing HIV during pregnancy?</b>		
Yes	78	97.5%
No	2	2.5%
<b>Are you feeling too worried about caring for pregnant women with HIV/AIDS?</b>		
Yes	54	67.5%
No	26	32.5%
<b>Are you willing to assist with the delivery of a baby born to a mother with HIV/AIDS?</b>		
Yes	73	91.2%
No	7	8.8%
<b>Does antenatal HIV screening reduce the risk of mother- to- child transmission?</b>		
Yes	43	53.8%
No	35	43.8%
Don't know	2	2.5%

No significant association between experience and feeling worry about caring for pregnant women with HIV/AIDS was observed, p-value=0.786 (Table III).

**Table III.** Association between experience and feeling worry about caring of pregnant women with HIV/AIDS

Variables	Are you feeling worried about caring for pregnant women with HIV/AIDS?		Total	P-value
	Yes	No		
Experience of respondent	12	4	16	0.786
	75.0%	25.0%	100.0%	
	2	1	3	
	66.7%	33.3%	100.0%	
	1	0	1	
	100.0%	.0%	100.0%	
	39	21	60	
Total	65.0%	35.0%	100.0%	0.786
	54	26	80	
	67.5%	32.5%	100.0%	

## DISCUSSION

Human immune deficiency virus (HIV) is responsible for 1/4 of deaths during pregnancy and six-week postpartum period (14). The experiences of the nurses in our study were different, although more



experience is very important because it increases the optimal level of care. Most of them were unaware of transmission HIV through breastfeeding and during the delivery. Despite the sense of anxiety about the care of pregnant women with HIV they wanted to help a child born to HIV mothers. This proved that nurses have morals and humanities towards the care of pregnant women with HIV.

Our results show that the respondents practice strict aseptic for safe delivery of HIV mothers as it reduces the risk of mother-to-child transmission, similar to the study finding by Townsend *et al.*, 2014 (16). Breastfeeding is only important mode for postpartum transmission to newborns and infants, inconsistent with the study result conducted by Drake *et al.*, 2014 (17, 18).

The nurses have positive views about importance of pregnant women to do the HIV test during the pregnancy, which is in concordance with earlier statements of Ogaji *et al.*, (2008), and report of study by (AIAU, 2008) they are state and realize the earlier diagnosis of the infection is better for earlier treatment initiation(15, 19). Breastfeeding is thought to be the only important mode for postpartum transmission to the newborns and infants, inconsistent with the study result conducted by Drake *et al.*, 2014 (17, 18). A study reported by (AIAU, 2008) stated the earlier diagnosis of the infection is better for earlier treatment initiation (15, 19). Grellier's study on midwives' knowledge of HIV and how it affects their attitudes and practices illustrates the necessity of training for better practice in a larger context.

The justification of our result shows that more than half of the respondents had lack of training which decreases the quality of the service and increases the transmission of HIV (20). On the other hand, the attitude of the respondents of our study have a positive attitude to caring for pregnancies with HIV ( $p$ -value=0.00). It varies with a research conducted in Lagos State, Nigeria, on the attitude of health care professionals toward people living with HIV/AIDS by Adebajo, Bamgbala, and Oyediran, which found that the majority of nurses have moderate to good knowledge but a bad attitude toward people living with HIV/AIDS (21).

## CONCLUSION

The need of an HIV test during pregnancy should be stressed by the health care practitioner. Without extensive training and an increase in staffing levels of knowledge, the quality and access to PMTCT services will likely be negatively impacted.

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## Conflicts of interest:

There are no conflicts of interest.

## References:

1. Aryal N, Regmi PR, Mudwari NR. Violence against Women Living with HIV: A Cross- Sectional Study in Nepal. *Glob J Health Sci.* 2012;4(3):117–125.
2. Asefa A, Mitike G. Prevention of Mother-to-Child Transmission (PMTCT) of HIV services in Adama town, Ethiopia: clients' satisfaction and challenges experienced by service providers. *BMC Pregnancy Childbirth.* 2014;14:57.
3. Federal Ministry of Health. Accelerated Plan for Scaling Up Prevention of Mother to Child Transmission (PMTCT) Services in Ethiopia. Addis Ababa: Federal Ministry of Health. 2011.
4. Perez F, Orne-Gliemann J, Mukotekwa T, Miller A, Glenshaw M, Mahomva A, *etal.* Prevention of mother to child transmission of HIV: evaluation of a pilot program in a district Hospital in Rural Zimbabwe. *BMJ.* 2004;13:1147–150.



5. Elsheikh IE, Crutzen HW, Van den Borne. Perceptions of Sudanese women reproductive age towards HIV/AIDS and services for Prevention of Mother-to-Child Transmission of HIV. BMC Public Health. 2015;15:674.
6. Abiodun O, Sotunsa J, Ani F, Olaleye A, Taiwo A. Elimination of Mother-To-Child Transmission of HIV in Nigeria: The Roles, Preparedness and Determinants of Successful Involvement of Traditional Birth Attendants. J AIDS Clin Res. 2015;6:7.
7. T Katz, Annemarie E R, Afiachukwu G O, Christina P, Sheri D W, David R B, *et al.* Impact of HIV-related stigma on treatment adherence: systematic review and meta-synthesis. J Int AIDS Soc. 2013; 16(3Suppl 2):18640.
8. Turan J, Nyblade L, Monfiston P. Stigma and Discrimination: Key Barriers to Achieving Global Goals for Maternal Health and Elimination of New Child HIV Infections'. USAID five-year project, Health Policy 2012; working paper4 available: [www.healthpolicyproject.com](http://www.healthpolicyproject.com)
9. Stacey A H, Kristie EA, Athena PK. Prevention of mother-to-child transmission of Human Immunodeficiency Virus Type 1 (HIV): the role of neonatal and infant prophylaxis. Expert Rev Anti Infect Ther. 2015;13(2):169–181.
10. Kontomanolis NE, Michalopoulos S, Grigorios Gkadaris, Zacharias Fasoulakis. The social stigma of HIV–AIDS: society's role. HIV AIDS (Auckl). 2017; 9:111–118.
11. Mulenga C, Naidoo JR. Nurses' knowledge, attitudes and practices regarding evidence-based practice in the prevention of mother-to-child transmission of HIV programme in Malawi. *curationis*. 2017;40(1):1-8.
12. Nyondo AL, Chimwaza AF, Muula AS. Exploring the relevance of male involvement in the prevention of mother to child transmission of HIV services in Blantyre, Malawi. BMC International Health and Human Rights. 2014;14(1):1-2.
13. Dunlap J, Foderingham N, Bussell S, Wester CW, Audet CM, Aliyu MH. Curr HIV/AIDS Rep. 2014;11(2):109-18.
14. Zahir OE, Dlshtm DT, Abdalla A M, JMPHE, Elbushra AM Herieka. The current status of maternal HIV infection in Sudan: time for action? Sudan Medical Journal. 2010; 46(3).
15. Eva Lathrop, Denise J. Jamieson, Isabella Danel. HIV and maternal mortality. Int J Gynaecol Obstet 2014;127(2):213– 15.
16. Joel A. Lamounier · Zeina S. Moulin, César C. Xavier. Recommendation for breastfeeding during maternal infections. J. Pediatr. (Rio J.) 2004; 80( 5).
17. Victor OA, Mildred A. Sunday, Aluye-Benibo Data, Amachree E. Numoipre. Nurses care for pregnant women living with HIV/AIDS: Practice, knowledge, and prevention of mother to child transmission in Bayelsa State, Nigeria. Sky Journal of Medicine and Medical Sciences. 2015;3(2):024-030.
18. A Moses, C Chama, S Udo, B Omotora. Knowledge, Attitude And Practice Of Ante-Natal Attendees Toward Prevention Of Mother To Child Transmission (PMTCT) Of Hiv Infection In A Tertiary Health Facility, Northeast-Nigeria. East Afr J Public Health. 2009;6(2):128-35.
19. Ndikom MC, Onibokun A. Knowledge and behavior of nurse/midwives in the prevention of vertical transmission of HIV in Owerri, Imo State, Nigeria: a cross-sectional study. BMC Nurs. 2007; 6: 9.
20. Adebajo SB1, Bamgbala AO, Oyediran MA. Attitudes of health care providers to persons living with HIV/AIDS in Lagos State, Nigeria. Afr J Reprod Health 2003;7(1):103-12.
21. McNairy ML, Teasdale CA, El-Sadr WM, Mave V, Abrams EJ. Mother and Child Both Matter: Reconceptualizing the PMTCT Care Continuum. Current Opinion in HIV and AIDS. 2015;10(6):403.

