



THE NURSES' KNOWLEDGE ABOUT THE VERTICAL TRANSMISSION OF HIV/AIDS

O CONHECIMENTO DOS ENFERMEIROS ACERCA DA TRANSMISSÃO VERTICAL DO HIV/AIDS CONOCIMIENTO DE LAS ENFERMERAS ACERCA DE LA TRANSMISIÓN VERTICAL DEL VIH/SIDA

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ABSTRACT

Objective: analyzing the knowledge of nursing professionals of the Family Health Strategy (FHS) about the vertical transmission of HIV/AIDS. **Method:** a descriptive study, quantitative, with nurses of the Family Health Strategy in the city of Teresina-PI. There were collected the data on self-administered questionnaire, statistically analyzed and presented in tables. The research project was approved by the Research Ethics Committee, Protocol 222.620. **Results:** show that most professionals 61 (61,0%) participated in training addressing HIV/AIDS; however, they are unaware about the Ministry of Health protocols related to vertical transmission of HIV/AIDS. **Conclusion:** the lack of knowledge among professionals about the subject is high, a factor which may reflect the steps taken in relation to HIV-positive pregnant women and the high child transmission rates of HIV. **Descriptors:** Serodiagnosis of AIDS; Maternal and Child Health; Nursing.

RESUMO

Objetivo: analisar o conhecimento dos profissionais enfermeiros da Estratégia Saúde da Família (ESF) acerca da transmissão vertical do HIV/AIDS. **Método:** estudo descritivo, quantitativo, com enfermeiros da Estratégia Saúde da Família na cidade de Teresina-PI. Coletaram-se os dados em questionário autoaplicado, analisados estatisticamente e apresentados em tabelas. O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa, Protocolo 222.620. **Resultados:** demonstram que a maioria dos profissionais 61 (61,0%) participou de treinamento abordando o HIV/AIDS, no entanto, desconhecem os protocolos do Ministério da Saúde relacionados à transmissão vertical do HIV/AIDS. **Conclusão:** o déficit de conhecimento entre os profissionais sobre o tema é alto, fator que pode refletir nas condutas tomadas em relação às gestantes HIV positivas e nas altas taxas de Transmissão Vertical do HIV. **Descritores:** Sorodiagnóstico da Aids; Saúde Materno-Infantil; Enfermagem.

RESUMEN

Objetivo: analizar el conocimiento de los profesionales de enfermería de la Estrategia de Salud de la Familia (ESF) acerca de la transmisión vertical del VIH/SIDA. **Método:** un estudio descriptivo, cuantitativo, con las enfermeras de la Estrategia Salud de la Familia en la ciudad de Teresina-PI. Recogieron los datos de cuestionario autoadministrado, analizados y presentados en tablas estadísticamente. El proyecto de investigación fue aprobado por el Comité de Ética en la Investigación, Protocolo 222.620. **Resultados:** muestran que la mayoría de los profesionales 61 (61,0%) participaron en el entrenamiento de lucha contra el VIH/SIDA, sin embargo, desconocen los protocolos del Ministerio de la Salud relacionados con la transmisión vertical del VIH/SIDA. **Conclusión:** la falta de conocimiento entre los profesionales a respecto de la materia es alto, un factor que puede reflejar en las medidas adoptadas en relación con las mujeres embarazadas VIH-positivas y en las altas tasas de Transmisión Vertical del VIH. **Descriptores:** Serodiagnóstico de la SIDA; Salud Materno-Infantil; Enfermería.

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INTRODUCTION

Since it was identified in 1981, the Acquired Immunodeficiency Syndrome (AIDS) has remained endemic in the world and has affected, in increasing proportion, women of all social strata, especially those living in poverty and low education. An important shift in the profile of AIDS, held in Brazil, including more and more women of 15-40 years old in full reproductive age, reflects the increase in the number of children infected by the Human Immunodeficiency Virus (HIV) and vertical transmission (VT) as the main route of infection.¹

As policies of prevention of vertical transmission of HIV, the Ministry of Health, through the National STD and AIDS established in the last two decades, since the appearance of the first cases, a number of plans and goals for the control of VT of HIV, in addition to the disclosure of actions for its prevention. Since 2000, surveillance of infected pregnant women and exposed children has become compulsory by decree nº 993/GM. In 2001, the Ministry of Health (MOH) has established recommendations for prophylaxis of VT of HIV and Antiretroviral Therapy (ART) in pregnant.² Added to even the Sunrise project strategies, launched in 2002, in order to allow for decreased number of children infected through the provision of quick testing for women without HIV serology, chemoprophylaxis and treatment in pre, during and after childbirth.

It was identified that in Brazil, VT is responsible for over 90% of reported AIDS cases in children under 15 years old, it is attributed to this percentage, among other reasons, the low testing coverage for HIV in the period of prenatal care, which is presented below recommended by the Ministry of Health, which is associated mainly to the low acceptance to prenatal care.¹

For most pregnant women living with HIV/AIDS, the main opportunity to access serological evaluation, counseling and prevention of vertical transmission is in childbirth. It is estimated that 15-30% of children born to infected women acquire the virus because they were not on prophylaxis, which is the intervention with anti-retroviral (ARV) drugs during pregnancy, during parturition and after

birth, and such a measure that can reduce the chances of infection.³

The ART is recommended for women who are diagnosed with HIV during pregnancy from the 14th week of pregnancy (oral) during parturition (intravenous) and newborn (orally) up to six weeks of life.⁴ As a strategy to prevent VT of HIV, the Ministry of Health advises that the use of ART, as its use may reduce the risk of vertical transmission from 14% to 30% to 8.3%, giving hope for the reduction of number of children infected.¹

The evolution of the AIDS epidemic in Brazil, has affected women in a special way, bringing a new challenge to be faced, control of vertical transmission of HIV. Currently, a considerable number of cases of retroviral infection diagnoses among females occurs during pregnancy, reflecting the adequacy of health policy on prenatal care, by serological screening HIV. In this sense this study shows to be relevant by addressing a public health problem that even before the confrontation policy still has high indicators in our country.

Even after numerous efforts by the MOH as incentive to prenatal care, access to ART programs and Testing fast, there are still high rates of transmission between mother and child. The hypothesis in this paper questions whether there is a deficit in knowledge of health professionals regarding the transmission of HIV and how to perform the handling of such cases. Given the above, there have as subject matter knowledge of professional nurses of the Family Health Strategy (FHS) on the vertical transmission of HIV/AIDS.

OBJECTIVES

- Analyzing the knowledge of nursing professionals of the Family Health Strategy (FHS) about the vertical transmission of HIV/AIDS.
- Describing aspects that make up the knowledge of the FHS professional nurses about the vertical transmission of HIV as the diagnosis, treatment and monitoring of health of pregnant women with HIV infection.
- Analyzing the steps taken by such health professionals facing such aspects.

METHOD

This study was taken from the Final Report of the Conclusion of Course Research

Project << **Knowledge of professionals of the Family Health Strategy on the prevention of vertical transmission of HIV/AIDS** >> held in 2013.

It is a descriptive study developed with a quantitative approach, performed next to the Health Units of the city of Teresina - Piauí, which makes up the Family Health Strategy with a current coverage in the local search of nearly 100%. The study included 100 nurses of health teams Family Municipal Health Foundation of Teresina-PI, originating in the Regional Health North, South and East/Southeast, however were initially planned 109 nurses as sample calculation by lot, to a degree the 95% and an error margin of 5%.

Data were collected through a self-applied questionnaire divided into two parts. The first part included the variables professional category, gender, age, degree of time, response time in the FHS, conducting training related to HIV/AIDS and knowledge about the existence and monitoring of standards recommended by the Ministry of Health.

The second part addressed issues related to recommendations for prevention of vertical transmission of HIV and antiretroviral therapy in pregnant women, the Ministry of Health, launched in 2010, for prevention of vertical transmission of HIV/AIDS, evaluation questions about diagnosis of HIV, the types of tests, serological status of HIV infection and

aggravation of AIDS, recording information on prenatal care, the achievement and test offering, consensual approach, the test offer for partner, actions to be taken after completion of the diagnosis of HIV, the introduction of antiretroviral (ARV), the types of childbirth and breastfeeding.

These issues are related and present in the work process of primary health care professionals in attendance to pregnant women. Even if some actions are not part directly from the routine of care in the FHS, as the introduction of ARV and choose the type of birth, it is essential that the health professional is knowledgeable about these actions, in order to increase speed and contribute to reduction of the VT.

Data were processed with the aid of the Statistical Package for Social Sciences (SPSS) version 15.0, and analyzed by means of frequency. The study met all the standards established by Resolution 466/2012 of the National Health Council, which deals with ethics in research involving human subjects and was approved by the Research Ethics Committee with the opinion number: 222 620 and CAAE: 09967513.0.0000.5210.

RESULTS

Most health professionals are female (78,0%), between 25-29 years of age (33,0%), having more than 4 years of vocational training (68,0%) and work in the FHS for more than four years (59,0%) according to Table 1.

Table 1. Age, time of performance and time of graduate nurses of the Family Health Strategy. Teresina, PI, 2013.

	Nurse	
	Total	
	nº	%
Gender (n=100)		
Female	78	78,0
Male	22	22,0
Age of the professional (N=100)		
25 - 29	33	33,0
30 - 35	25	25,0
36 - 45	17	17,0
46 - 54	18	18,0
> 55	7	7,0
Time of Graduation in years (N=100)		
1	10	10,0
2	10	10,0
3	12	12,0
> 4	68	68,0
Time of performance in FHS, in years (N=100)		
1	20	20,0
2	17	17,0
3	4	4,0
>4	59	59,0

In Table 2 below, 61,0% of professionals say they have been trained to perform the

quick test for HIV. It was observed that 46,0% of professionals received training

after joining FHS, offered by the health service where they work. About HIV prevention, routines recommended by the Ministry of Health, most professionals (74,0%) know of the existence and know the VT-prevention routines, but 23,0% reported

that they deeply knew, even knowing its existence as recommended standards.

Table 2. Training situation of the Nurses of the Family Health Strategy about HIV quick test. Teresina, PI, 2013.

	Nurse	
	Total	
	n	%
HIV quick test training (n=100)		
Yes	61	61,0
No	39	39,0
No answer	-	-
Training - When? (N=100)		
Prior to joining FHS and not related to FHS	12	12,0
After entry into the FHS and offered by the service	46	46,0
After entry into the FHS and offered by other institutions	2	2,0
Does not apply *	40	40,0
The Ministry of health has routines for prevention of VT of HIV? (N=100)		
Yes, and I know.	74	74,0
I don't know about it.	2	2,0
Yes, but I don't know.	23	23,0
No answer	1	1,0

According to Table 3, (77,0%) of the professionals said there was no need of consensual approach of the mother prior to the rapid testing; however the majority of professionals (94,0%) recognized the need for pre and post HIV-test. About (97,0%) of professionals, research participants acknowledge that HIV-infected individuals do not necessarily have the AIDS disease. Asked about the annotation of the International Classification of Diseases (ICD-10) for the diagnosis of HIV in pregnant woman's card, (84,0%) indicated the need for this record.

Table 3. Nurses' knowledge of the Family Health Strategy about the implementation of HIV quick test. Teresina, PI, 2013.

	Nurse	
	Total	
	n	%
The expectant mother must consent to the test? (n=100)		
Yes	18	18,0
No	77	77,0
No answer	5	5,0
There must be pre and post HIV test counseling? (n=100)		
Yes	94	94,0
No	3	3,0
No answer	3	3,0
All HIV positive have AIDS? (n=100)		
Yes	3	3,0
No	97	97,0
No answer	-	-
The ICD 10 must be annotated in the maternity card, if HIV positive? (n=100)		
Yes	84	84,0
No	14	14,0
No answer	2	2,0

As shown in Table 4 below, about the measures to be taken against a non-reactive/negative result by the quick HIV test (96,0%) reinforce guidance on measures to prevent STDs. Faced with a reagent/positive for HIV identified through rapid testing (37,0%) of the professionals would ask the confirmatory test (47,0%) thereafter forward the pregnant woman to a health service reference, and (5,0%) would take another course starting ARV medication only at 14 weeks of gestation.

Table 4. Conduct of nurses of the Family Health Strategy after rapid HIV test result.Teresina, PI, 2013.

	Nurse	
	Total	
	n	%
Negative test result, what to do? (n=100)		
Reinforcing the guidelines (sexual intercourse using condoms; Discourage sharing of needles and syringes if it is the case).	96	96,0
Reassure and guide the sexual intercourse without a condom.	1	1,1
Calls for another examination to check immediately.	1	1,0
No answer	2	2,0
Pregnant women in follow-up with HIV reagent, how to proceed? (n=100).		
Requests the confirmatory test.	37	37,0
Treat pregnant women with AZT after birth, because this medicine can do harm to the child.	-	-
Start treatment immediately.	9	9,0
Redirect to a health reference service.	47	47,0
It would take another attitude: starting HAART with 14 weeks.	5	5,0
No answer	2	2,0

Finally, according to Table 5, related to health monitoring by professionals to pregnant women (86,0%) of professionals treat pregnant women with ARV as early as possible after diagnosis of HIV, while (9,0 %) would treat pregnant only during

parturition. Regarding the type of birth which would prevent vertical transmission of HIV (85,0%) answered that the Caesarean birth would be the most suitable and (98,0%) prescribe a lactation inhibitor for women, avoiding breastfeeding.

Table 5. Knowledge of nurses of the Family Health Strategy on the follow-up with HIV positive pregnant women.Teresina, PI, 2013.

	Nurse	
	Total	
	n	%
HIV-positive pregnant women receiving AZT when? (N=100)		
The earliest as possible.	86	86,0
During parturition.	9	9,0
After birth.	1	1,0
No answer	4	4,0
Birth type that prevents VT of HIV? (N=100)		
Cesaeran	85	85,0
Vaginal	12	12,0
No answer	3	3,0
HIV-positive pregnant women, what posture about breastfeeding? (N=100)		
Prescription of inhibitor of lactation.	98	98,0
Guide her breast-feeding normally because she is taking the medication.	1	1,0
Let another woman breast-feed the child.	-	-
No answer	1	1,0

DISCUSSION

Most health professionals who participated in this study are female between 25 and 29 years old, with graduation time and acting in the FHS equal to or greater than four years. These data are similar to those observed in a study conducted by the Health Ministry that evaluated the implementation of the Family Health Program in ten large urban hundreds of the country in 2002, showing that this is a common professional profile in this area.⁵ The weather performance in primary care, in this case more than four years, may be

associated with greater security in the ducts taken in relation to patients in general, because the daily life improves the practical skills, however is not a determining factor when it comes to pipelines compared to patients living with HIV.

Nursing professionals within the Primary Health Care are seen as the leader of the team, because among higher education professionals is generally what is in closer contact with the population, it is in daily attendance, either in the campaigns and other actions outside the walls of the family health team. Such professional as integrator and strengthening the bond population-

service, several communities becomes the professional reference to the demand of health problems and acts as a buffer to such situations, welcoming, informing and distributing such demands according to their degree of resolutiveness.

So, this professional, for factually concentrates himself most of the demands of the population, hosts under his responsibility much of prenatal care, so he is faced mainly with different situations that end up requiring him something more than just skills practices. The results showed that most professionals (61,0%) received training on Rapid Test for HIV in pregnant women after joining family health teams, but it is noteworthy that although most are trained, even reasonable portion of these professionals about of (39,0%) did not receive any training regarding rapid testing, which suggests that there may be errors in both test offer the pregnant woman, as consequently there may be concurrent to that a situation of not testing and underreporting.⁶

It was observed that the professionals who have been trained (46,0%) received this training through the family health strategy, performed throughout the country, in partnership with state health departments and the Ministry of Health, which in a way reflects the effort by the latter in promoting actions that enable the reduction of the real numbers of vertical transmission of HIV notifications. On training, inefficient teaching methods can make them improductives.⁶ So, it is essential that the moments of skills and training are optimized, more efficient teaching methods.⁷

About the standards and procedures recommended by the MOH to avoid VT of HIV, the total number of participants (74,0%) claim to know of the existence and know the routines, but the percentage of professionals who claim to know of the existence but who do not know routines reach (23,0%). The Ministry of Health recommends simple actions, which if taken at the right time can reduce or even prevent vertical transmission of the virus, such as the counseling pre and post-test, referral of pregnant women to reference service if positive, need for early start of TARV.⁸ The lack of pre-established routines contribute to the increase in VT, given that this is a preventable infection.

Regarding the diagnosis of HIV infection, 98,0% of professionals believe in the importance of the early realization of the rapid test during prenatal care, according to the recommendations by the Ministry of Health, which suggests the supply and implementation of counseling and testing HIV at the first visit and in the third quarter of the pre-cream⁷. The results showed that (77,0%) of the professionals believe that women must make the HIV test even without their consent. This is a point that should be clarified as the MOH advocates and sustains the voluntary testing, accompanied by counseling⁹.

Inherent to testing, it is necessary the advice that constitutes guidelines and information methodologically organized to be passed on to mothers before and after the test, the research showed that about it (94,0%) of the study professionals recognize the importance such stage. However, less than half of women undergoing testing of HIV, given the counseling.¹⁰ The moment that takes place counseling and HIV testing allows the healthcare professional to strengthen the guidelines on prevention of STD infections because it's relevant practice, even when there is non-reactive/negative for HIV infection in order to avoid future risk exposures.¹⁰

Ensuring the performance of HIV testing in pregnant women is the first VT preventive step, and reagents/positive for the infection, the recommendations to prevent vertical transmission are adopted. When it identifies a reagent/positive for HIV infection should be recorded in the prenatal booklet the alphanumeric code that identify disease or index case syndrome, according to the ICD-10 (International Classification of Diseases), the registration of the completion date and signature of professional health.⁷ Registration through ICD10 code enables maintaining the confidentiality of HIV diagnosis for individuals who are not of health, but there are pregnant cards in this filling is done by point "yes" or "no" to HIV infection. In this way the confidentiality of information is compromised.

In some situations, pregnant women find having HIV infection during prenatal or at birth.⁶ And this discovery can be difficult and painful, because in addition to dealing with the diagnosis itself, there is the possibility of transmission of virus HIV to the baby that is generating. It is for the health

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care professional welcome and support the pregnant woman, and provides care according to their needs.¹⁰ So, making early diagnosis, even prenatally, and use counseling as a powerful instrument of listening, enables the health professional and the mother agree together with a plan of care according to the health needs identified.¹¹

Faced with a reagent/positive for HIV infection, particularly in pregnant women, should be made an immediate request from the confirmatory test, clarify the available treatment and guidance on the control of maternal infection to reduce vertical HIV transmission.¹² According to the results, we identified a mismatch between the steps taken by professionals (37,0%) of them would request the confirmatory test and (47,0%) thereafter forward the pregnant woman to a health service reference, and this difference may reflect difficulties in avoiding VT. According to the Ministry of Health, after the results of the confirmatory test and to get directions, the pregnant woman should be referred for specialized reference service, and monitoring of prenatal care should be carried out by the reference service and the BHU concomitantly.¹³

The rates of HIV transmission without any intervention during pregnancy are between 25% and 30%. From this percentage, 25% refers to the intrauterine transmission and 75% for intrapartum transmission. The 076 protocol, the Pediatrics Aids Clinical Trial Group (PACTG 076) was the first clinical study using antiretroviral therapy in order to reduce rates of HIV transmission resulting in a composed protocol oral zidovudine from 14 weeks, intravenous AZT (EV) 4 hours before birth and oral AZT solution to the newborn for 6 weeks.¹⁴ This intervention applied by the study in 1998, reduced the rate of vertical transmission of HIV in 67.5%.

Why it is so important that health professionals recognize and know how to identify when using ARV therapy. In this study (86,0%) of professionals recognized that early use of ARV drugs contributes to a reduction in the chain of mother-child transmission of HIV. However, (9,0%) of the professionals considered that the woman should take the medication only during parturition. The late onset of ARV does not favor the reduction of VT and continue to an

increase in the number of children infected.⁷

Studies such as the Cochrane Group conducted in 2005 showed differences in vertical transmission rates when comparing elective and vaginal birth, cesarean birth in preventing transmission of HIV, mainly when the viral load is below 1.000 copies/ml in pregnant women who are in scheme usage combined antiretroviral making evident a reduction of 70% in vertical transmission.⁸ Facing the foregoing, elective cesarean birth is the main mode of birth to prevent the VT, it was evidenced in this study that 85.0% of professionals recognize this.

The transmission of HIV through breastfeeding has been proven in the early 90s, and the mother ARV use does not eliminate the virus in maternal milk.¹³ Breastfeeding is associated with a risk of HIV infection 7-22% and 29% in cases of acute matern infection.⁶ Therefore, health professionals should be able to guide non-nursing mothers. Of professionals in this study (98%) would indicate the use of an inhibitor of lactation as a means of preventing transmission of HIV. Other measures can be targeted as bandaging the breasts, the right to receive infant milk formula, the contraindication of cross-feeding (child breastfeeding by another nursing mother), mixed feeding (breast milk and infant formula) and the use of Human milk pasteurization home.¹⁵

CONCLUSION

Health professionals of this study are unaware of the Ministry of Health recommendations in various sectors of prevention of vertical transmission of HIV, as well as counseling, consensual approach and follow-up in health. It needs to think about strategies for training in the continuing education of the FHS professionals, addressing issues related to prevention of vertical HIV transmission in order to provide higher quality of care in prenatal and reducing vertical transmission rates.

Despite the 75% of hits related to prevention of vertical transmission of HIV, this may be a bias in this data collection instrument that allowed the choice of alternative answers as closed. Therefore, further studies with new methods will be appropriate to better address issues related to the knowledge of health primary care

professionals on the vertical transmission of HIV.

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