

DOI: <https://doi.org/10.36489/saudecoletiva.2021v11i69p7000>

# The role of nurses in the prevention of vertical HIV transmission: an integrative review

El papel del enfermero en la prevención de la transmisión vertical del VIH: una revisión integradora

O papel do enfermeiro na prevenção da transmissão vertical do HIV: uma revisão integrativa

## ABSTRACT

**OBJECTIVE:** to analyze the role of nurses in the prevention of vertical transmission of HIV. **METHOD:** this is an integrative literature review. The databases LILACS, MedLine and BDNF were used. The research was carried out from September to December 2018, with the review of articles published between 2013 and 2017. **RESULTS:** Articles 1 and 2 brought the nurse's main action to carry out rapid tests against STIs, Article 3 brought the empowerment of the nurse in actions previously performed only by doctors, and article 4 brings as action a new approach in relation to mothers living with HIV. **CONCLUSIONS:** there was a great disparity in the service offered depending on the region. Despite this, it is noted that there are numerous and different actions by nurses regarding the prevention of vertical transmission of HIV, which are extremely important to obtain a greater and better quality of care for pregnant women and their newborns.

**DESCRIPTORS:** HIV; Nursing; Infectious Disease Transmission, Vertical.

## RESUMEN

**OBJETIVO:** analizar el papel del enfermero en la prevención de la transmisión vertical del VIH. **MÉTODO:** se trata de una revisión integradora de la literatura. Se utilizaron las bases de datos LILACS, MedLine y BDNF. La investigación se llevó a cabo de septiembre a diciembre de 2018, con la revisión de artículos publicados entre 2013 y 2017. **RESULTADOS:** Los artículos 1 y 2 interpusieron la principal acción de la enfermera para realizar pruebas rápidas contra las ITS, el artículo 3 trajo el empoderamiento de la enfermera en acciones que anteriormente solo realizaban médicos, y el artículo 4 trae como acción un nuevo enfoque en relación con las madres que viven con el VIH. **CONCLUSIONES:** existía una gran disparidad en el servicio ofrecido según la región. A pesar de ello, se observa que existen numerosas y diferentes acciones de las enfermeras en cuanto a la prevención de la transmisión vertical del VIH, las cuales son de suma importancia para obtener una mayor y mejor calidad de atención a las gestantes y sus recién nacidos.

**DESCRIPTORES:** HIV; Enfermería; Transmisión Vertical de Enfermedad Infecciosa.

## RESUMO

**OBJETIVO:** analisar o papel do enfermeiro na prevenção da transmissão vertical do HIV. **MÉTODO:** trata-se de uma revisão integrativa da literatura. Foram utilizadas as bases de dados LILACS, MedLine e BDNF. A pesquisa foi realizada de setembro a dezembro de 2018, com a revisão de artigos publicados entre 2013 e 2017. **RESULTADOS:** os artigos 1 e 2 trouxeram como principal ação do enfermeiro a realização dos testes rápidos contra ISTs, o artigo 3 trouxe o empoderamento do enfermeiro em ações previamente realizadas apenas por médicos, e o artigo 4 traz como ação uma nova abordagem em relação a mães vivendo com HIV. **CONCLUSÕES:** encontrou-se grande disparidade no atendimento ofertado a depender da região. Apesar disso, nota-se que existem inúmeras e diferentes ações do enfermeiro quanto à prevenção da transmissão vertical do HIV, as quais são de extrema importância para que se possa obter uma maior e melhor qualidade no atendimento às gestantes e seus recém-nascidos.

**DESCRIPTORES:** HIV; Enfermagem; Transmissão Vertical de Doença Infecciosa.

RECEIVED ON: 04/07/2021 APPROVED ON: 04/20/2021

## Carlos Luiz Nunes Correa Júnior

Bachelor of Nursing from UniRitter (Ritter dos Reis University Center). Postgraduate MBA in Intensive Care from Faculdade Unilya. Integrated Multiprofessional Residency in Cardiology Health by the University Foundation Instituto de Cardiologia do Rio Grande do Sul.

ORCID: 0000-0002-9252-2994

**Cláudia Rodrigues de Oliveira**

Bachelor of Nursing from Uniritter. Sanitary Nurse at the Campo da Tuca Family Clinic, Porto Alegre-RS.  
ORCID: 0000-0003-0074-9495

**Bruna dos Santos**

Bachelor of Biomedicine from the Federal University of Rio Grande do Sul (UFRGS). Resident at the Multiprofessional Residency in Collective Health at UFRGS.  
ORCID: 0000-0002-8477-5692

**Amanda Pereira Ferreira Dellanhese**

Manager of the Campo da Tuca Family Clinic, Porto Alegre-RS. PhD in Child and Adolescent Health from UFRGS. Collaborating Professor at the Integrated Multiprofessional Residency in Collective Health at UFRGS.  
ORCID: 0000-0002-1515-9693

**INTRODUCTION**

The human immunodeficiency virus (HIV) epidemic represents a major public health problem. According to the UNAIDS statistics report,<sup>1</sup> since the epidemic began in 1980, an estimated 75,7 million people have been infected with HIV. It is known that there are 38 million people living with HIV/AIDS (PLWHA), 36,2 million of which are adults and 1 million are children under 15 years of age. For those under 15 years of age, the main route of infection is through vertical transmission.<sup>1</sup>

Vertical transmission (VT) is the main route of HIV infection in children under 13 in the world, and it can occur in three moments: intrauterine, labor or delivery itself, and breastfeeding.<sup>2</sup> Intrapartum VT is the main form of transmission of the virus, comprising about 65% of infections. It refers to the exposure of the newborn's mucosa to maternal blood and other infected secretions during the baby's passage through the birth canal. Infection from breastfeeding may account for a third of half of VT. The first few days are especially susceptible due to the absence of gastric juice, capable of inactivating the virus, and the ingestion of HIV-infected macrophages present in maternal colostrum. This risk increases to 30-50% of all VT with prolonged breastfeeding after 12 months of life.<sup>3</sup>

According to data from the 2017 Ministry of Health epidemiological bulletin,

<sup>4</sup> over a ten-year period, there was an increase of 23,8% in the HIV detection rate in pregnant women: in 2017, 7.882 HIV-infected pregnant women were reported in Brazil, with 2,8 cases/thousand of live births. About 35% of these transmissions occur during pregnancy, 65% occur in the peripartum period and there is a risk of 7 to 22% of vertical transmission through breastfeeding.<sup>5</sup> Without adequate treatment during pregnancy and childbirth, and care related to breastfeeding, it is well established that this risk can range from 15% to 45%.<sup>6</sup>

In Brazil, from 2000 to June 2020, 134,328 pregnant women infected with HIV were notified, of which 8.312 in 2019, with a detection rate of 2,8/1000 live births. In 2019, 12 Federation Units (UF) had an HIV detection rate in pregnant women higher than the national rate: Rio Grande do Sul (9,0 cases/1000 live births), once again, Porto Alegre was among the Brazilian capitals with the highest rate of HIV detection in pregnant women, with a rate in 2019 of 17,6 cases/1000 live births, six times higher than the national rate.<sup>4</sup>

Given this scenario, it is up to health authorities to develop and implement strategies to reduce these high rates of HIV infection. In 2014, UNAIDS announced the 90-90-90 goals, these goals consist in that 90% of all PLWHA know their serological status, 90% of diagnosed people receive continuous and adherent ART, and that 90% of these achieve undetectable VL until 2020.<sup>7</sup> The 90-90-90 goals aim to end the AIDS epidemic by 2030.

However, in health care, there are several factors that make it difficult to implement interventions against vertical HIV transmission, some of which are the low coverage of prenatal care and childbirth care, lack of preparation or outdated professionals in relation to care protocols, in addition to social issues that generate even more vulnerability in relation to the disease and difficulty in accessing health services, such as socioeconomic status and drug use.<sup>8-10</sup> In addition, social and emotional vulnerability factors are also highly correlated with poor treatment adherence in HIV-positive patients.<sup>11</sup>

In this context, the fundamental role of the nurse stands out, providing direct assistance to pregnant and postpartum women through prenatal and childcare consultations, for example. Since the first prenatal consultation and rapid testing for STIs, the professional nurse has an essential role in the development of education, prevention and control of vertical transmission of HIV, as well as the adequate support and care for HIV-positive mothers.<sup>5,6</sup> In this context, the objective was to carry out an integrative review of the role of this professional in actions that reinforce the prevention of HIV TV in different contexts.

**METHOD**

This study is an integrative review, which is characterized by being one of the most used research methods in

the context of Evidence-Based Practice (EBP).<sup>12</sup> The first step consisted of choosing the guiding question of the study – “how does nursing care work in relation to vertical transmission of HIV?”. For the second stage, data collection, the keywords and databases chosen for the collection of information relevant to the study were defined. In the third stage, there was an evaluation of the records found, with definition of filters and exclusion of articles that do not correspond to the research topic. The last step consisted of analyzing and interpreting the data found. The study steps are described in Figure 1.

The time limit for the research was from September to December 2018, with data collection being carried out in the month of October. The search

was carried out through the Virtual Health Library (VHL), and selected the electronic databases Latin American and Caribbean Literature in Health Sciences (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE) and Database in Nursing (BDENF). Articles were selected only in Portuguese, English and Spanish.

The following descriptors were used for the research: HIV; Enfermagem; Nursing; Enfermería; Transmissão Vertical de Doença Infecciosa; Infectious Disease Transmission, Vertical; Transmisión Vertical de Enfermedad Infecciosa, along with the Boolean operators AND and OR. The first search found 5463 articles, which were filtered by year of publication: 2013, 2014, 2015, 2016 and 2017; language and document type, selecting only the full text articles available.

The inclusion criteria used were: corresponding to the research theme, having the full text, being in Portuguese, English or Spanish and having been published in the years 2013 to 2017. The exclusion criteria, in addition to those already mentioned, used were: after reading the title, abstract or full text, article that does not correspond to the research topic; repeated articles.

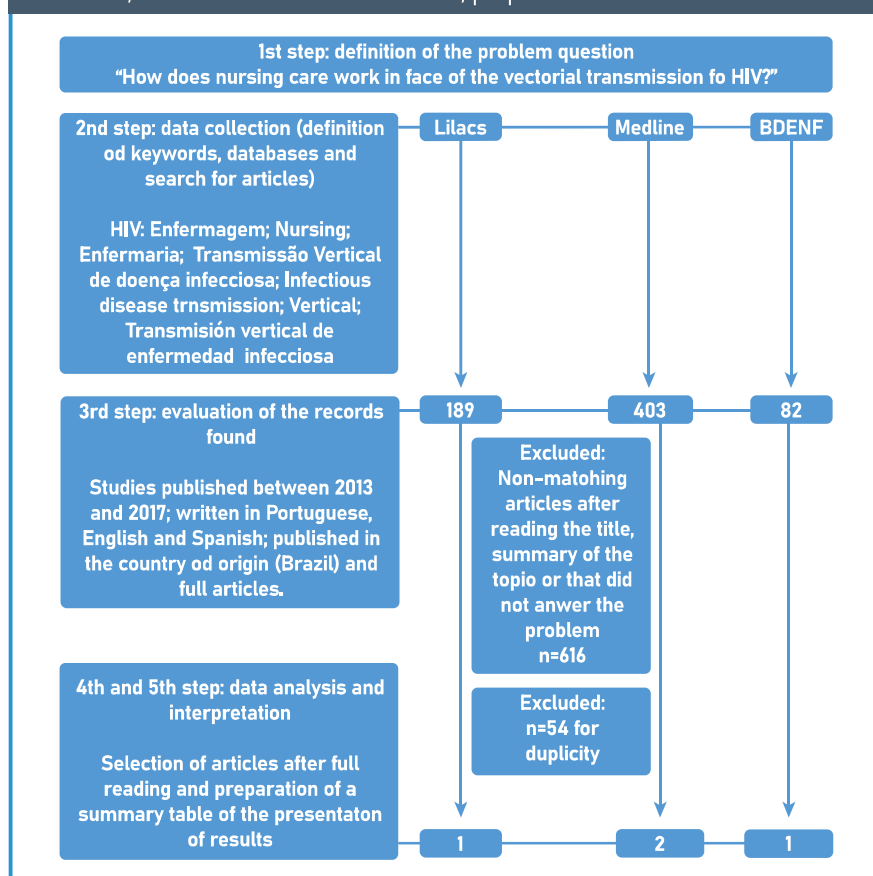
A total of 674 articles were found, 54 articles were excluded for being published repeatedly, and 61 were excluded for not having the full text available for reading. Soon after, all 559 titles of these articles were read. 33 articles were pre-selected for reading the abstract. After reading the abstracts, 15 were selected to be read in full. Finally, when reading all 15 previously selected articles, 4 were chosen to compose this study because they were more aligned with the research problem question. The studies will be presented through a flowchart, in a descriptive way and discussed with the available literature. The data selection and validation process was carried out by four researchers.

## RESULTS

From the data survey, four articles that met the previously established inclusion criteria were analyzed, which are specified in Chart 1. Two of the studies were published in Brazil and the other two published in South Africa and Sub-Saharan Africa.

The productions related to this study are shown in Table 1, in which the titles and respective authors of the articles, year, journal, place of publication and methodological approach are presented. Two studies were published in 2013 and two in 2015. Among the methodologies of the researched articles, two are descriptive and exploratory research with a qualitative approach, one is an integrative literature review research and the last one is a qualitative research. Of these, half are available in journals that address HIV and AIDS as the main topic, and

Figure 1. Flowchart of the stages of study and selection of articles in the MEDLINE, LILACS and BDENF databases, prepared in 2018.



Source: prepared by the authors. 2018.

# artigo

Correa Júnior, C.L.N.; Oliveira, C.R.; Santos, B.; Dellanese, A.P.F.;

The role of nurses in the prevention of vertical HIV transmission: an integrative review

the other half are available in journals that address all types of research aimed at the health area. Table 2 presents the main results and objectives of each study in question.

Regarding the objectives of the articles used, most of them present them clearly and all aim at the nurse's role in the care of HIV-positive pregnant women and the prevention of vertical transmission of HIV. Articles 1 and 2 brought as their main objective to know

and analyze the contextual aspects of nursing care in the face of prevention of vertical transmission of HIV, having as main action the realization of rapid tests of Sexually Transmitted Infections - STIs, in addition to previous and relevant guidelines to the problematic. Article 3 brought as its main objective the changes in the performance of tasks in the treatment of HIV, delegating the functions of doctors to nurses and midwives in order to increase HIV

care services in Sub-Saharan Africa, addressing actions such as diagnosis and adherence to antiretroviral treatment. Finally, article 4 brought as an objective and challenge to create a new method of approaching HIV-positive mothers in order to improve programs aimed at improving the quality of HIV PMTCT, through nursing, resulting in a significant improvement in contextual parameters, exemplified below in table 2.

Chart 1 – Summary Table for the Summary of Studies Included in the Integrative Review, prepared in 2018.

| ARTICLES  | AUTHORS  | YEAR AND COUNTRY         | PERIODIC   | ARTICLE TITLE  | METHODOLOGICAL APPROACH  |
|-----------|--|--------------------------|--|--|--|
| Article 1 | Costa AMS, Vieira BDG, Alves VH, Rodrigues DP, Leão DCMR e Pereira AV.                                 | 2015/ Brazil             | Revista de Pesquisa Cuidado é Fundamental Online | Nursing care for HIV-positive mothers in the face of the impossibility of natural breastfeeding  | Descriptive, exploratory research with a qualitative approach  |
| Article 2 | Costa RHS, Silva RAR e Medeiros SM.  | 2015/ Brazil             | Revista de Pesquisa Cuidado é Fundamental Online | Nursing care in the face of prevention of vertical HIV transmission.   | Integrative Review   |
| Article 3 | McCarthy CF, Voss J, Verani Andre R, Vidot P, Salmon ME e Riley PL.                                    | 2013/ Sub-Saharan Africa | Journal of the International AIDS Society (IAS)  | Nursing and midwifery regulation and HIV scale-up: establishing a baseline in east, central and southern Africa  | Qualitative research   |
| Article 4 | Fatti G, Alfeous R, Puddu B, Mothibi E, Jason A, Shaikh N, Robinson P, Eley B, Jackson D e Grimwood A. | 2013/ South Africal      | J Acquir Immune De cSyndr                        | An Innovative Approach to Improve the Quality of Prevention of Mother-to-Child Transmission of HIV Programs Through Nurse Clinical Mentoring in South Africa | Descriptive, exploratory research with a qualitative approach. |

Source: prepared by the authors. 2018.

Chart 2 – Distribution of articles regarding objectives and main results, prepared in 2018.

| ARTICLES  | OBJECTIVE  | MAIN RESULTS   |
|-----------|--|--|
| Article 1 | Knowing the experience of nurses in the care of HIV-seropositive mothers regarding breastfeeding; identify the interaction of nurses with women with HIV regarding the impossibility of breastfeeding. | The experience of rooming-in nurses on breastfeeding, in the face of HIV-positive puerperal women, indicates that the diagnosis during the prenatal period is a facilitator for the continuity of the guidelines and intensifying awareness regarding the issues of breastfeeding suppression during the puerperium. |
| Article 2 | To analyze the contextual aspects of nursing care regarding the prevention of vertical HIV transmission.   | It is noticed in the study that nursing care in the face of prevention of vertical transmission runs through a range of possibilities in terms of care, mainly as a result of advances in the Unified Health System, but there are still many challenges to overcome regarding the practice of this care.            |



|           |   |   |
|-----------|---|---|
| Article 3 | Shifting roles in HIV treatment by delegating roles from doctors to nurses and midwives to scale up HIV care services in sub-Saharan Africa.                                    | Changing tasks for nurses and midwives was reported in eleven of thirteen countries. Eight countries have updated their practice goal in the past five years, and only one has reported its regulations to reflect the shift in tasks. The countries covered in the article vary with regard to licensing, pre-service accreditation, and continuing professional development regulations in place. Importantly, there was no consistency in terms of which standards were used to design national practices and educational regulations.   |
| Article 4 | Create a new method of approaching HIV-positive mothers, to improve programs aimed at improving the quality of prevention of mother-to-child HIV transmission, through nursing. | A total of 27,458 pregnant women were included, of which 4951 (18,0%) attended prenatal care before the introduction of NMQs and 22,507 (82,0%) thereafter. Repeat HIV testing at 32 weeks' gestation increased from 38,5% to 46,4% after the introduction of QNMs. ZDV uptake for eligible women improved from 80,9% to 88,1%. The estimated proportion of children tested for HIV at 6 weeks after birth increased from 68,5% to 76,7%. Estimated uptake of HIV testing in 18-month-olds increased nearly 2-fold from 12,4% to 22,9%. The positivity of the 6-week PCR test decreased from 3,4% to 2,7%. The proportion of positive HIV tests at 18 months decreased by 50%, from 9,1% to 4,1%. |

Source: prepared by the authors. 2018.

## DISCUSSION

In this article, it is understood as a person living with HIV/AIDS, pregnant women, parturients and postpartum women, that is, every woman in whom HIV infection is detected, or one who already has a confirmed diagnosis of HIV or AIDS, at the time of pregnancy, childbirth, or puerperium. Just as exposed child is understood as any child born to an infected mother, or who has been breastfed by an HIV-infected woman. Therefore, space is open to discuss the reproductive rights of these women and the rights of these children exposed to the infection.

Os artigos utilizados apresentam diversas ações de enfermagem para a PTV do HIV, como testes rápidos de ISTs; solicitação de exames laboratoriais para controle de carga viral; adesão à terapia antirretroviral (TARV); acompanhamento no pré-natal de alto risco; conscientização do caso e os riscos para a gestação; e inibição da amamentação através do uso de medicação e orientações. Além das ações apresentadas nos estudos, preconizam-se outras ações da PTV do HIV, tais como busca ativa de crianças expostas ao HIV até os 18 meses de idade; distribuição de fórmulas lácteas a crianças expostas ao HIV e discussão de caso através

## do Comitê de Transmissão Vertical do HIV e da Sífilis Congênita.<sup>13</sup>

TEIXEIRA and CALVO<sup>14,15</sup> elucidate about the context of the occurrence of VT of HIV in women living with HIV/AIDS to their newborns, the authors bring a characterization of women living with HIV and who were diagnosed during pregnancy, describe how women living in this situation of vulnerability, who started prenatal consultations late, who have low education, financial dependence on their partner and/or family, living with an income of up to 1 minimum wage per month, difficulty in negotiating condom use with their partners.

## NURSING ACTIONS FOR THE PREVENTION OF THE VERTICAL TRANSMISSION OF HIV

### Rapid Tests for Sexually Transmitted Infections - STIs

Articles 1 and 2 developed in Brazil show that nurses have as one of their attributions to perform rapid tests of STIs. In addition, another attribution is to provide guidance on preventive care, before and after performing the rapid tests, regardless of the results found, thus contributing to a better quality of life for pregnant women and their future

children.<sup>16,17</sup> In articles 3 and 4, developed on the African continent, rapid tests are not reported. Performing rapid STI tests offers numerous advantages, including that of providing accurate results in a short time, allowing for better counseling of cases and immediate action by health professionals.<sup>18</sup> All rapid tests for STIs performed in early pregnancy should be repeated in the middle and at the end of the gestational period, thus avoiding a possible lack of knowledge regarding the diagnosis of such infections, which may have been contracted at different times, or even have been tests performed in the period called the immunological window that such rapid tests have.<sup>5,6</sup> In addition, it is mandatory, immediately after performing the rapid tests and after their confirmation through laboratory tests, the notification of the case to the General Health Surveillance Coordination (CGVS - Coordenadoria Geral de Vigilância em Saúde) according to the Ministry of Health protocol.<sup>13,19</sup>

### Notification of cases at the General Health Surveillance Coordination (CGVS)

In Brazil, cases of HIV/Aids are monitored by the CGVS, through the Committee on STI/HIV/AIDS, Viral Hepa-

titis and Tuberculosis. HIV infection is included in the National List of Diseases with Compulsory Notification, in addition to AIDS cases, pregnant/parturient/puerperal women with HIV and exposed children, the notification that is part of the Information System for Notifiable Diseases (SINAN). Health surveillance services aim to provide means for the development, implementation and execution of actions for the prevention and control of diseases and conditions, because of this, updated information on these occurrences is needed. The main source for collecting this information is the notification of injuries and illnesses by health professionals.<sup>19</sup>

This practice is cited in article 2 as an action of HIV PVT. In Brazil, compulsory notification is mandatory for all medical health professionals, nurses, dentists, veterinarians, biologists, biomedical doctors, pharmacists and others in the exercise of their profession; as well as those responsible for public or private health organizations and establishments of health and education, in accordance with Law 6,259 (10/30/1975). In the African continent, where the other two articles present in the study were published, the existence of such coordination and the performance of such a practice is not addressed. The notification of cases in which there is a diagnosis of HIV-positive pregnant women facilitates the implementation of strategies for HIV PMTCT, at the primary, secondary and tertiary levels of the health system.<sup>20</sup>

### Adherence to antiretroviral therapy (ART)

Another action found in the professional practice of nurses is monitoring adherence to antiretroviral treatment (ART), which is recommended by the Ministry of Health through the STI/AIDS program.<sup>5,6</sup> In the two articles carried out in Brazil, good adherence to ART was pointed out, but in both there are reports of seropositive mothers who allege difficulties in adherence to ART, as lack of social support and in the bond

with the health unit in the prenatal period.<sup>16,17</sup> In studies carried out on the African continent, the results were quite different: a low patient commitment to ART was identified for various reasons, such as the lack of qualified professionals to follow up on the case and prescription of the drug, the delay in patient care, low income and places of extreme social vulnerability.<sup>21,22</sup>

Article 4, carried out in South Africa, reports the creation of a new method that will contribute to HIV PMTCT: the delegation of a role relating to the care of HIV-positive people to nurses and midwives in the treatment of HIV. This is due to the shortage of qualified professionals to manage these situations and a demand that has grown disproportionately, making it difficult to provide basic health services. These professionals were delegated the autonomy regarding the diagnosis of the disease, until the prescription of ART and their respective care and management with PMTCT of HIV<sup>22</sup>. It is important to understand that the social vulnerability of a given region requires actions that are capable of transforming.<sup>23</sup>

### Classification of pregnant women's prenatal care as high risk

Article 2 presents the classification of prenatal care for pregnant women as high risk as a nursing action.<sup>17</sup> The classification of high-risk prenatal care is recommended for pregnant women who are diagnosed as seropositive, because their baby is directly exposed to a possible vertical transmission of HIV. This allows the pregnant woman to end up linking up with the referral hospital, so that, in addition to routine appointments, she has specialized follow-up with the infectious disease physician, in order to control the HIV viral load.<sup>5,6</sup>

### Request for laboratory tests

Only article 2 reports on the request for laboratory tests to better control the viral load of STIs.<sup>17</sup> In cases where there is confirmation of the pregnant woman

being HIV positive, laboratory tests for CD4/CD8 T lymphocyte count and viral load should be requested frequently. These tests are routine in prenatal care and serve to monitor drug treatment and identify the pregnant woman's viral load.<sup>5,6</sup>

### Health education on vertical transmission

Health education actions are presented in articles 1 and 2. It is observed that awareness of cases in which there is a possibility of vertical transmission may be the practice that requires greater skill and management by the professional.<sup>16,17</sup> Restriction of breastfeeding for children exposed to HIV must be achieved through great care with the guidelines, pre and postpartum counseling and in carrying out prenatal consultations.<sup>16,17</sup> Articles 1 and 2 carried out in Brazil show that nurses have as their action in PMTCT HIV counseling and guidance regarding the non-breastfeeding of the newborn (NB), as well as providing guidance on the administration of the lactation inhibitor drug.<sup>16,17</sup> Articles on the African continent do not report such practice used in HIV PMTCT.

Articles 1 and 2 carried out in Brazil also highlight the help of nurses during treatment, counseling and the provision of psychological support, making it easier for postpartum women to feel welcomed regarding the care to be performed, as it is extremely important that there is the mother's bond with the NB, thus obtaining the affective bond. On the other hand, these articles show that, even performing such activities, the fact of not being able to breastfeed your child causes a painful and embarrassing situation among the mothers.<sup>16,17</sup> The bandage of the breasts, which is still widely used, is not recommended by the Ministry of Health, and pregnant women should not be advised to carry out this practice to inhibit lactation. According to their reports, it is considered a violent act and makes them feel different from other mothers, being targeted by their diagnosis and often discriminated against.<sup>5,6,16,17</sup> Counseling of

HIV PVT actions requires the exchange of information between the patient and the professional, and should be guided by active listening and a relationship of trust between the individuals involved in this process.<sup>5</sup> In addition to the actions that were evidenced in the articles of this study, the Ministry of Health recommends that nurses carry out other actions to prevent vertical transmission of HIV.

### OTHER ACTIONS FOR THE PREVENTION OF VERTICAL TRANSMISSION RECOMMENDED BY THE MINISTRY OF HEALTH

#### Active Search

It is important to point out that the analyzed articles did not address the active search, requested by the nurses of the health units, carried out together with the community agents. This action facilitates and guarantees the bond between the HIV-positive pregnant woman and the unit, obtaining better care in high-risk pregnancy, prenatal consultations, adherence to treatment and control of the viral load.<sup>5,6</sup> Article 2, carried out in Brazil, emphasizes the importance of nurses knowing their area of coverage, in the sense of primary care, thus having their target audience, to carry out greater care with the Vertical Transmission (VT) of HIV for people with greater vulnerability, in addition to developing activities and practices that further publicize the care of STIs.<sup>17</sup>

#### Distribution of dairy formulas

The distribution of milk formulas for feeding children exposed to HIV, who cannot be breastfed by their mothers, has its right guaranteed in accordance with the Ministry of Health protocol.<sup>5</sup> In the city of Porto Alegre – RS, the Nascer Project, which has been in place since 2003, is responsible for providing milk formulas to make up for the lack of breastfeeding of seropositive mothers to the NB until the child's 12 months of age. 10 cans of N1 milk formula are distributed in the first 6 months and

09 cans of N2 milk formula in the remainder of the bond, in addition to monitoring the child's weight gain and adequate growth through active search, recorded in consultations held monthly in the Health Units by nurses, according to the Ministry of Health protocol.<sup>5</sup>

#### Injectable and Oral Zidovudine

No article in the present study reported the practice of injecting the drug Zidovudine (AZT) in pregnant women at the time of delivery, to further help inhibit a possible VT of HIV. As stated in the Ministry of Health – CN –STD/

AIDS, injectable AZT must be administered during labor, until the clamping of the umbilical cord occurs, thus preventing the increase in cases in which VT of HIV occurs.<sup>5,24</sup>

Soon after the birth of the child exposed to HIV, as stated in the Ministry of Health – CN-DST/AIDS, the newborn must receive Zidovudine in oral solution within the first 8 hours after birth, and must be maintained for the first 28 days, a measure that helps to stop a possible VT of HIV.<sup>5,24</sup> Only article 2 carried out in Brazil reports the practice of such action in HIV PMTCT. 17 While article 1, carried out in Brazil, and articles 3 and 4, carried out on the African continent, do not mention the performance of such practice used in PMTCT of HIV.

#### HIV Vertical Transmission Committee

In none of the articles covered in this study was mentioned the carrying out of actions involving the discussion of cases where TV with HIV has already occurred or not, in order to develop new practices and conducts. The Ministry of Health of Brazil has put into effect the creation of an action aimed at PMTCT of STIs, called Committee on Vertical Transmission of HIV and Congenital Syphilis. Currently, in Porto Alegre – RS, the Committee meeting is held once a month. Health professionals participate in it, representing their respective public agencies, hospitals, health units, among others, gathered in order to better clarify and resolve cases where VT of HIV has already occurred, or where there has not yet been confirmation of the latter, serving to discuss cases and create new actions that meet HIV PMTCT.<sup>5,6</sup>

#### CONCLUSION

It is concluded that the actions performed by nurses are extremely important for HIV PMTCT. In addition, it is evident that there are still many barriers to be faced and discussed regarding these actions so that a greater and better quality of care for PLWHA and their newborn-

**In the city of  
Porto Alegre – RS,  
the Nascer Project,  
which has been in  
place since 2003,  
is responsible  
for providing  
milk formulas to  
make up for  
the lack of  
breastfeeding  
of seropositive  
mothers to the NB  
until the child's  
12 months of age**



ns can be obtained. The study highlights the great disparity found in the care provided to the HIV-positive population in certain regions of the world, such as the African continent, which is highlighted

by its extreme vulnerability.

Therefore, it is necessary that health professionals are involved in the development of strategies aimed at improving HIV PMTCT and the quality of the

service offered to patients. The need for permanent education and continuing education strategies for these professionals is perceived in order to improve their health care to this population. ■

## REFERENCES

1. UNAIDS Brasil. Estatísticas. <https://unaids.org.br/estatisticas/>.
2. Jussara, N. et al. PERFIL EPIDEMIOLÓGICO DE CRIANÇAS NASCIDAS DE MÃES HIV POSITIVAS EM REGIÃO METROPOLITANA DA AMAZÔNIA EPIDEMIOLOGIC PROFILE OF CHILDREN BORN OF HIV-POSITIVE MOTHERS IN A METROPOLITAN REGION IN THE AMAZON REGION. *Saúde e Pesqui.* 11, 423–430 (2018).
3. FRIEDRICH, L. et al. Transmissão vertical do HIV: uma revisão sobre o tema.
4. Boletim epidemiológico HIV/Aids 2017 | Departamento de Doenças de Condições Crônicas e Infecções Sexualmente Transmissíveis. <http://www.aids.gov.br/pt-br/pub/2017/boletim-epidemiologico-hiv-aids-2017>.
5. Protocolo Clínico e Diretrizes Terapêuticas para Prevenção da Transmissão Vertical de HIV, Sífilis e Hepatites Virais | Departamento de Doenças de Condições Crônicas e Infecções Sexualmente Transmissíveis. <http://www.aids.gov.br/pt-br/pub/2015/protocolo-clinico-e-diretrizes-terapeuticas-para-prevencao-da-transmissao-vertical-de-hiv>.
6. WHO | Mother-to-child transmission of HIV. WHO (2019).
7. (No Title). [https://unaids.org.br/wp-content/uploads/2015/11/2015\\_11\\_20\\_UNAIDS\\_TRATAMENTO\\_META\\_PT\\_v4\\_GB.pdf](https://unaids.org.br/wp-content/uploads/2015/11/2015_11_20_UNAIDS_TRATAMENTO_META_PT_v4_GB.pdf).
8. Araújo, C. L. F., Signes, A. F. & Zampier, V. S. de B. O cuidado à puérpera com HIV/AIDS no alojamento conjunto: a visão da equipe de enfermagem. *Esc. Anna Nery* 16, 49–56 (2012).
9. Carolina Maria Araújo Chagas Costa Lima, A. et al. Transmissão vertical do hiv: reflexões para a promoção da saúde e cuidado de enfermagem Transmisión vertical del vih: reflexiones sobre la promoción de la salud y el cuidado de enfermería Artículo de Investigación. (2017) doi:10.15446/av.enferm.v35n2.39872.
10. Pinheiro Campos, D., Kanaan, S., Garcia Lourenção, L., Glória Silami Lopes, V. & Rampazzo Xavier, A. Perfil clínico e epidemiológico de gestantes com HIV positivo atendidas em um hospital municipal de Niterói. *Saúde Coletiva (Barueri)* 10, 2280–2295 (2020).
11. Falkenbach da Costa, L. et al. Fatores psicossociais envolvidos na adesão ao tratamento do HIV/AIDS em adultos: revisão integrativa da literatura. *Saúde Coletiva (Barueri)* 11, 4990–5005 (2021).
12. Mendes, K. D. S., Silveira, R. C. de C. P. & Galvão, C. M. Revisão integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. *Texto Context. - Enferm.* 17, 758–764 (2008).
13. Brasil. Prevenção Combinada do HIV - Bases conceituais para profissionais trabalhadores(as) e gestores (as) de saúde | Departamento de Doenças de Condições Crônicas e Infecções Sexualmente Transmissíveis. <http://www.aids.gov.br/pt-br/pub/2017/prevencao-combinada-do-hiv-bases-conceituais-para-profissionais-trabalhadores-as-e-gestores>.
14. TEIXEIRA, L. B. SAÚDE SEXUAL E REPRODUTIVA DE MULHERES VIVENDO COM HIV/AIDS NO SUL DO BRASIL. <https://lume.ufrgs.br/handle/10183/142803> (2012).
15. CALVO, K. D. S. CONTEXTOS DE OCORRÊNCIA DE DISCRIMINAÇÃO ENTRE MULHERES VIVENDO COM HIV EM PORTO ALEGRE. (2018).
16. Costa, A. M. S. da et al. Cuidado de enfermagem às puérperas soropositivas para o HIV diante da impossibilidade de amamentação natural. *Rev. Pesqui. (Univ. Fed. Estado Rio J., Online)* 2310–2322 (2015).
17. Costa, R. H. S., Silva, R. A. R. da & Medeiros, S. M. de. Cuidado de enfermagem diante da prevenção da transmissão vertical do HIV. *Rev. Pesqui. (Univ. Fed. Estado Rio J., Online)* 2147–2158 (2015).
18. Carvalho, R. L. de et al. Teste rápido para diagnóstico da infecção pelo HIV em parturientes. *Rev. Bras. Ginecol. e Obs.* 26, 325–328 (2004).
19. Secretaria Municipal de Saúde de Curitiba. Notificação de Doenças e Agravos. <https://saude.curitiba.pr.gov.br/vigilancia/epidemiologica/notificacao-de-doencas-e-agravos.html>.
20. Domingues, R. M. S. M., Saraceni, V. & Leal, M. do C. Reporting of HIV-infected pregnant women: Estimates from a Brazilian study. *Rev. Saude Publica* 52, (2018).
21. McCarthy, C. F. et al. Nursing and midwifery regulation and HIV scale-up: Establishing a baseline in east, central and southern Africa. *J. Int. AIDS Soc.* 16, (2013).
22. Fatti, G. et al. An innovative approach to improve the quality of prevention of mother-to-child transmission of HIV programs through nurse clinical mentoring in South Africa. *Journal of Acquired Immune Deficiency Syndromes* vol. 63 (2013).
23. Sevalho, G. O conceito de vulnerabilidade e a educação em saúde fundamentada em Paulo Freire. *Interface Commun. Heal. Educ.* 22, 177–188 (2018).
24. Brasil. Recomendações para profilaxia da transmissão vertical do HIV e terapia antirretroviral em gestantes - 2010 | Departamento de Doenças de Condições Crônicas e Infecções Sexualmente Transmissíveis. <http://www.aids.gov.br/pt-br/pub/2010/recomendacoes-para-profilaxia-da-transmissao-vertical-do-hiv-e-terapia-antirretroviral-em>.