

PRIORITIES FOR CHILDREN EXPOSED TO HIV LINHAS DE CUIDADOS EM SAÚDE ÀS CRIANÇAS EXPOSTAS AO HIV HEALTH CARE PRIORIDADES DE ATENCIÓN MÉDICA PARA NIÑOS EXPUESTOS AL VIH

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ABSTRAT

Objective: to identify the main health care actions for children exposed to HIV, in the literature.

Method: a bibliographic, descriptive, and integrative review study was conducted with the following guiding question: what are the main health care actions for children exposed to HIV? The search took place in the Scielo library and at the Lilacs and BDEnf databases. Studies published from 2013 to 2017 were selected based on selection criteria and evaluated according to the levels of evidence proposed by the Agency for Healthcare Research and Quality (AHRQ). The studies were analyzed descriptively, and results were presented in figures. **Results:** the final sample consisted of thirteen articles from which nine (69.2%) had a qualitative approach and four (30.8%) had a quantitative approach. The main health care actions were divided in four groups: Prevention of vertical transmission, Drug therapy, Management of environmental and family factors, and Nutrition. **Conclusion:** the study contributes to understanding the health care priorities for children exposed to HIV and expands ideas for new research in this perspective.

Descriptors: Vertical Infectious Disease Transmission; Child; Pregnant women; Public health; Pharmacological treatment; Health promotion.

RESUMO

Objetivo: identificar na literatura os principais cuidados às crianças expostas ao HIV. **Método:** estudo bibliográfico, descritivo, tipo revisão integrativa, cuja questão norteadora foi: quais os principais cuidados às crianças expostas ao HIV? A busca ocorreu na biblioteca Scielo e nas bases Lilacs e BDEnf, em que se selecionaram estudos publicados entre 2013 e 2017, de acordo com os critérios de seleção, e avaliados conforme os critérios *Agency for Healthcare Research and Quality* (AHRQ) para os níveis de evidência, analisando-os de forma descritiva e apresentando-os em forma de figuras. **Resultados:** amostra final foi composta por treze artigos, constituída por nove (69,2%)

estudos com abordagem qualitativa e quatro (30,8%) com enfoque quantitativo. Os principais cuidados se concentraram em quatro grupos norteadores: Cuidados com a prevenção da transmissão vertical; Cuidados relacionados à terapia medicamentosa; Cuidados relacionados aos fatores ambientais e familiar; e Cuidados com a alimentação. **Conclusão:** o estudo contribui para o entendimento das linhas de cuidados prioritários às crianças expostas ao HIV e expande ideias para novas pesquisas nessa perspectiva.

Descritores: Transmissão Vertical de Doença Infecciosa; Crianças; Gestantes; Saúde Pública; Tratamento Farmacológico; Promoção da Saúde.

RESUMEN

Objetivo: identificar las principales acciones de atención a la salud de niños expuestos al VIH, en la literatura. **Método:** se realizó un estudio de revisión bibliográfica, descriptiva e integradora con la siguiente pregunta orientadora: ¿Cuáles son las principales acciones de atención a salud de niños expuestos al VIH? La búsqueda se realizó en la biblioteca Scielo y en las bases de datos Lilacs y BDeinf. Fueron seleccionados estudios publicados de 2013 a 2017 en base a criterios de selección y estos fueron evaluados de acuerdo con los niveles de evidencia propuestos por la *Agency for Healthcare Research and Quality* (AHRQ). Los estudios se analizaron de forma descriptiva y los resultados se presentaron en figuras. **Resultados:** la muestra final constó de trece estudios de los cuales nueve (69,2%) tenían un enfoque cualitativo y cuatro (30,8%) tenían un enfoque cuantitativo. Las principales acciones asistenciales se dividieron en cuatro grupos: Prevención de la transmisión vertical, Farmacoterapia, Manejo de factores ambientales y familiares y Nutrición. **Conclusión:** el estudio contribuye a comprender las prioridades de atención a la salud de niños expuestos al VIH y amplía las ideas para nuevas investigaciones en esta perspectiva.

Descriptores: Transmisión Vertical de Enfermedad Infecciosa; Niño; Mujeres embarazadas; Salud Pública; Quimioterapia; Promoción de la Salud.

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INTRODUCTION

It is known that the Acquired Immunodeficiency Syndrome (AIDS) is a challenge in public health due to its epidemic power and severity. Transmission occurs in several ways, including unprotected sex, contact with infected blood, from mother to son (vertical transmission), and through occupational accidents.¹

The reduction of new HIV infections through Vertical Transmission has become one of the strategies of the World Health Organization (WHO) to achieve the United Nations Millennium Development Goals.²

It is observed that mother-to-child transmission is a cause for concern in HIV-infected women. In Brazil, 86.2% of individuals under 13 years of age with HIV had vertical transmission as an infection route. In other words, mother-to-child transmission is the major means of HIV infection in children.³

In Brazil, it is recommended that women with HIV start antiretroviral therapy (ART) while still in prenatal care and continue in the puerperium, together with the contraindication to breastfeeding, prophylaxis for children, and the provision of infant formula. It is reported that, according to WHO guidelines, ART should be started within seven days after the diagnosis of HIV.⁴⁻⁵

A Chinese study showed that health care started early (at the prenatal care) is fundamental to reduce vertical transmission. The study showed that children fed with formula instead of breast feeding had a 74% reduction in the rate of HIV infection; also, the same study showed that children born with low weight (<2500g) had a higher risk for vertical transmission.⁶

It is understood that, despite advances in health policies for vertical transmission prevention, in recent years, there are still gaps that prevent or hinder the elimination of vertical

transmission. It was evidenced, in a Brazilian study, that the inefficiency of prenatal care, the late HIV diagnosis, and the abandonment or non-adherence to ART (only 86% of the diagnosed pregnant women completed ART) are some factors that prevent the vertical transmission prevention success in the country.

Thus, the present study emerged from the perspective that the necessary care for children exposed to HIV goes beyond the prevention of vertical transmission through ART but requires the search for strategies that promote mothers' behavior changes concerning self-care, availability of services, and training of health teams. Nowadays, living with HIV is still surrounded by stigmas, insecurities, and ignorance, whether by family members or professional caregivers, which negatively impact the care provided to children exposed to HIV since vertical transmission prevention involves prenatal, perinatal, and postnatal care.

This study is justified given the need to draw attention to the theme and establish strategies for child health care. Thus, this work will point out the causal factors that interfere with vertical transmission prevention and the strategies for the care of children exposed to the virus, highlighting the challenges for comprehensiveness and promotion.

Studies of this nature become vital as they collect published data and materials, facilitating the transposition of evidence into clinical practice. Thus, the following research question emerged: what are the main health care actions for children exposed to HIV?

OBJECTIVE

To identify the main health care actions for children exposed to HIV, in the literature.

METHOD

This is a bibliographic, descriptive, and integrative literature review study that followed six steps: 1) Definition of the problem; 2) Establishment of study selection criteria; 3) Extraction of data; 4) Evaluation of the studies; 5) Interpretation of results, and 6) Presentation/summary of the review.⁸

The PICo,⁹ strategy was used to define the research question (P: children exposed to HIV; I: health care; Co: vertical transmission), namely: what are the main health care actions for children exposed to HIV?

Inclusion criteria were: original Brazilian articles, fully available and free of charge; written in Portuguese, English, or Spanish; published in the period from 2013 to 2017; and studies

addressing the theme investigated. Dissertations, review studies, abstracts, and articles that did not answer the research question were excluded.

The articles were searched in two databases - the Latin American and Caribbean Health Sciences Literature (LILACS) and the Brazilian Nursing Database (BDENF in Portuguese); and in one virtual library - the Scientific Electronic Library Online (SciELO), using the following Health Sciences Descriptors (DeCS in Portuguese) and the Boolean operator AND: Comprehensive Health Care, Child, Vertical Infectious Disease Transmission, and Nursing.

The selected studies were evaluated for the level of evidence, according to the Agency for Healthcare Research and Quality (AHRQ) criteria, which classifies evidence from studies into six levels: 1 - meta-analysis of multiple studies; 2 - individual study with experimental design; 3 - studies with a quasi-experimental design, such as a study without randomization with a single pre- and post-test group, time series or case-control; 4 - studies with non-experimental design, such as descriptive correlational and qualitative research or case studies; 5 - case reports or data obtained systematically with verifiable quality or program evaluation; 6 - opinion of respected authorities based on clinical competence.¹⁰

By using the descriptors in an articulated manner, 60 articles were identified in LILACS, 32 in BDENf, and 50 in SciELO. Then, the established criteria were applied and, after a full reading of titles and abstracts, a sample of 13 articles was achieved. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)¹¹ flow diagram was used to present the results, as shown in Figure 1.

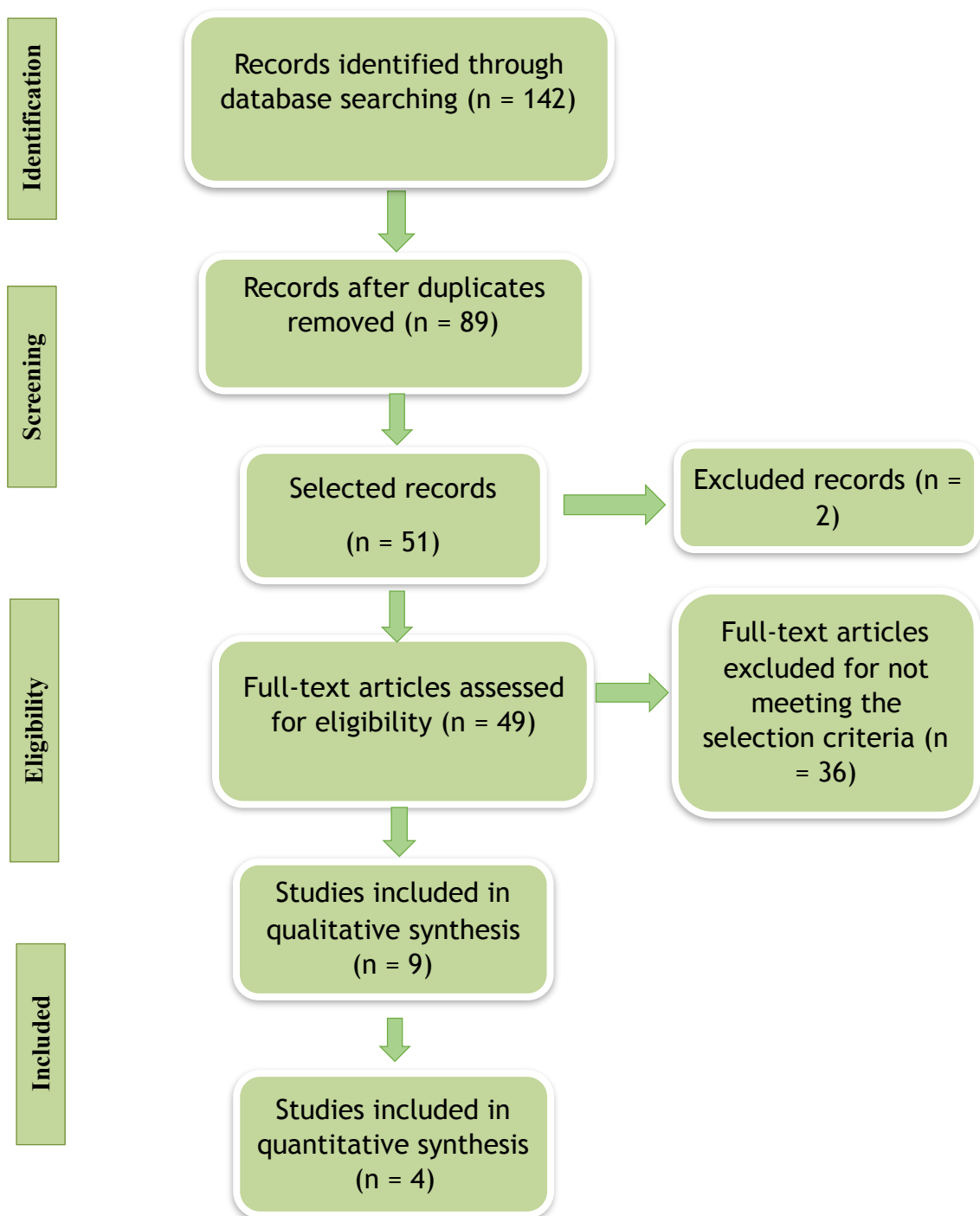


Figure 1. Preferred Reporting Items for Systematic Reviews and Metanalyses (PRISMA 2009) flow diagram of studies.

Afterward, thirteen articles that answered the review's guiding question were interpreted and analyzed, and an attempt was made to identify the main health care actions for children exposed to HIV. The articles named as A1 to A13 were identified, and the main information was highlighted in tables to facilitate the results presentation.

RESULTS

Thirteen articles were obtained to compose this integrative review. Nine (69.2%) studies adopted a qualitative approach and four (30.8%) had a quantitative approach, as shown in Figure 2.

Identification	Year	Authors	Titles	Study design	Levels of evidence
A1	2017	Ziebell NS, Feil AC, Renner FW	Epidemiological profile of HIV positive pregnant women and their newborns in a reference hospital in the interior of Rio Grande do Sul in the 2012-2013 period	Quantitative, descriptive-exploratory	4
A2	2016	Langendorf TF, Padoin SMM, Paula CC, Souza IEO, Aldrighi JD	Prevention of vertical mother-to-child transmission of HIV: care and adherence provided by couples	Qualitative	4
A3	2016	Alvarenga WA, Borges DCS, Zacarin CFL, Souza ROD, Dupas G	Vulnerability of children exposed to family human immunodeficiency virus	Qualitative	4
A4	2015	Aires APP, Wunsch DS, Bosa VL	Implementation of the infant formula distribution program for children born to HIV-positive mothers in Porto Alegre, RS	Qualitative, exploratory	4
A5	2015	Costa AMS, Vieira BDG, Alves VH, Rodrigues DP, Leão DCMR, Pereira AV	Nursing care postpartum women seropositive for HIV before the inability to natural breastfeeding	Qualitative, descriptive-exploratory	4
A6	2015	Paula MG, Agnolo CMD, Carvalho MDB, Pelloso SM	Coping of HIV-positive postpartum women as regards not breastfeeding	Qualitative	4
A7	2014	Lima ACMAC, Costa CC Teles LM R, Damasceno AKC, Oriá MOB	Epidemiologic assessment of prevention of vertical transmission of HIV	Epidemiological and documentary study	5
A8	2014	Alvarenga WA, Dupas G	Experience of taking care of children exposed to HIV: a trajectory of expectations	Qualitative	4
A9	2014	Silva MR, Alvarenga WA, Dupas G	Caregiver experience in preventive treatment for children exposed to Human Immunodeficiency Virus	Qualitative	4
A10	2013	Fiuza MLT, Lopes EM, Alexandre HO, Dantas PB, Galvão MTG Pinheiro AKB	Adherence to antiretroviral treatment: comprehensive care based on the care model for chronic conditions	Quantitative, observational cross-sectional	4
A11	2013	Freitas JG, Cunha GH, Barroso LMM, Galvão MTG.	Administration of medications for children born exposed to human immune deficiency virus	Transverse quantitative	4
A12	2013	Lima ICV, Pedrosa NL, Aguiar LFP, Galvão MTG.	Demands of home care of children born exposed to HIV in the perspective of the environmental theory	Exploratory qualitative	4
A13	2013	Teixeira SVB, Silva GB, Silva CS, Moura MAV.	Women living with HIV: the decision to become pregnant	Qualitative, descriptive-exploratory	4

Figure 2. Distribution of articles included in the sample, according to year, authors, titles, study design, and levels of evidence.

The analysis of the studies included in the integrative review led to the identification of the main findings shown in Figure 3.

Identification	Main results
A1	For the control of transmission to be effective, it is essential that neonates receive prophylaxis with antiretrovirals up to 48 hours after delivery and that they are not breastfed with breast milk, which offers an additional risk of 7% to 22% of transmission.
A2	The couple should follow the guidelines of health professionals, as indicated. The professionals should point out that even though HIV mothers cannot breastfeed, the woman is still a mother. Professionals must provide a dialogical space in which the couple's needs may emerge, which are not always addressed in regular care.
A3	Families should seek to regain control of the situation, minimize vulnerability, avoid the stigma of the disease and the fear of transmission to children, and family conflicts.
A4	Infant formula derived from milk is made available to all newborns exposed to HIV. The child receives two to four cans of infant formula at the time of hospital discharge and then the distribution of up to 60 cans per child is guaranteed until the sixth month age, with a view to the proper promotion of weight and height development.
A5	It is pointed out that HIV diagnosis during the prenatal period is a facilitator for the continuity of orientations and intensification of the awareness regarding the breastfeeding suppression issues during the puerperium. The nurses' interaction must be based on the importance of immediate guidance on non-breastfeeding to pregnant women in labor/delivery who are unaware of being HIV positive and ratified when they already had information about it since the prenatal period.
A6	It is vital to promote these women and children health, not only focusing on preventing vertical transmission, but also on developing their physical, social and emotional balance. Not breastfeeding goes far beyond physiological issues. It also affects the emotional and physical issues to which these mothers are exposed.
A7	From the massive and universal implementation of the recommended preventative actions, there was a progressive reduction over the years of the expected cases of AIDS due to vertical transmission. One of the main factors that contribute to reducing HIV vertical transmission is the use of antiretrovirals, as recommended, during pregnancy and childbirth in exposed children.
A8	Professionals must be attentive to health care actions, including prophylaxis for pneumonia, vaccines, and other actions concerning mother/child interaction. The child's antiretroviral therapy (ART) should be started in the maternity hospital, shortly after birth, preferably in the first four hours of life and, upon discharge, the mother or other caregiver must leave with the medications and be able to continue the therapy at home in the dose corresponding to the number of gestational weeks of the newborn, every twelve hours and for four weeks.
A9	After birth, mothers and family members of children exposed to the virus begin to provide care, according to guidelines received by health professionals, administering medications such as zidovudine (AZT), sulfamethoxazole + trimethoprim (Bactrim), ferrous sulfate, and vitamins.
A10	The use of adequate and straightforward therapeutic regimens, considering the biopsychosocial profile of the individual and the routines, has great significance to minimize inappropriate adherence. Another important aspect that tends to favor adequate adherence is the simplification and adequacy of the chosen scheme whenever possible. The motivational interview is also seen as an essential tool in the treatment adherence process to contemplate the physical and biological aspects among the interventions suggested in the MACC.
A11	Postpartum care involves, among other things, the administration of AZT and prophylaxis with SMZ-TMP. The administration of these drugs is essential for the child to be protected from HIV and pneumonia, which is the most frequent opportunistic infection in HIV-infected children in the first year of life.
A12	Particular attention should be paid to home conditions as health determinants. The main risks associated with the home environment are allergies, respiratory infections, domestic accidents, asthma, diarrhea, parasites, dengue, and other diseases carried by rodents and insects.
A13	Care actions provided during pregnancy, childbirth, and postpartum must be understood as a possibility to avoid vertical transmission. The Ministry of Health recommends the diagnostic testing of HIV in the first and third trimesters of pregnancy; this testing must be offered voluntarily and confidentially for pregnant women and partners.

Figure 3. Summary of the main findings from the studies included in the integrative review.

DISCUSSION

After analyzing the texts, four groups emerged concerning health care actions for children exposed to HIV: Prevention of vertical transmission, Drug therapy, Management of environmental and family factors, and Nutrition.

■ Prevention of vertical transmission

The studies showed that the prevention of HIV vertical transmission requires the use of antiretroviral drugs in the first hours after birth, together with the suppression of breastfeeding with breast milk. It was revealed, at A1, that breastfeeding carries an additional risk of 7% to 22% of transmission.

In A7, it was reported that prophylaxis should occur during pregnancy and that such measures promote a progressive reduction in vertical transmission. Other studies showed that such measures are responsible for the reduction of up to 95% of the vertical transmission rate in rich countries, reaching rates below 2%.²

However, it is estimated that in countries like Brazil, the frequency of vertical transmission ranges between 15% and 24%. In 2018, 8,621 cases of HIV-infected pregnant women were reported, with an increase of 38.1% in ten years.^{3,12} Through this increase, the need to implement strategies for vertical transmission prevention is evident.

It was observed, in A13, that HIV diagnosis often occurs during prenatal care and that health care actions provided during pregnancy, childbirth, and postpartum must include strategies for preventing the vertical transmission. A study conducted in northern Brazil showed that 48.9% of pregnant women were diagnosed during prenatal care.¹³

■ Drug therapy

In the article A8, it was revealed that among the care for children exposed to HIV, the use of prophylaxis for pneumonia is included. In A11, it is reiterated that pneumonia is one of the most common opportunistic infections in HIV-positive children. A Brazilian study shown that 73.5% of hospitalizations of HIV-infected children were caused by opportunistic infections (OIs), with pneumonia being the most common of them.¹⁴

In A9, it is mentioned that mothers and family members receive guidance on drug therapy while still in the maternity ward. In addition to antiretrovirals, such as Zidovudine (AZT), medications such as sulfamethoxazole + trimethoprim may also be prescribed after the sixth week of life to prevent OIs.

According to the Brazilian Ministry of Health, the use of ART is recommended as prophylaxis of HIV transmission in newborns, with AZT being indicated for four weeks in cases in which ART was performed during pregnancy; when not performed during pregnancy, AZT associated with Nevirapine (NVP) is used for the same period; and the use of prophylaxis for OI is recommended for specific cases.⁴

In the care practice, according to A10, it is required that the therapeutic schemes are appropriate to the biopsychosocial profile of family members and their routine. It is also reinforced, in A10, the importance of the health professional in guiding these family members, suggesting the motivational interview as a tool for treatment adherence.

It was shown, in a comprehensive systematic review in the African continent, that nursing professionals provided high-quality psychosocial support, counseling and had positive interactions since prenatal care, becoming a facilitator for therapeutic adherence.¹⁵

- **Management of environmental and family factors**

It is emphasized, in A6, that health promotion is limited to the prevention of vertical transmission and the physical, social, and emotional balance of women and children. Thus, in A3, it is stated that family members should minimize vulnerabilities, avoiding the stigma of the disease, fear of transmission, and family conflicts.

In a study in the USA, it is advised that after delivery, HIV-positive women receive support both in antiretroviral prophylaxis and to maintain their health, requiring effective care through interconnection with primary health services, counseling and family planning.¹⁶

In this sense, it is pointed out, in A2, that the professional approach should value comprehensive care for the couple providing a dialogical space for expressing needs. It was revealed in a study in Tanzania that partner involvement increases the effectiveness of vertical transmission prevention and that partners with knowledge related to this measure are 24 times more likely to be involved in prevention than those who are unaware of it.¹⁷

Still in the context of health promotion, in A12, it was shown that home conditions are health conditions for children exposed to HIV; the article mentions the main risks associated with the home environment highlighting allergies, respiratory infections, parasites, and others.

Based on the assumptions defended in A6, health promotion encompasses social dimensions. Caregivers must consider this factor when planning care. Other authors defend the importance of knowing the environment in which these children live in order to define the epidemiological profile and make decisions.¹⁸

- **Nutrition**

According to A3, children exposed to HIV, infected or not, must be fed exclusively with infant formula until the age of six months. In Brazil, this right is guaranteed for all children exposed to HIV at least until the age of six months, and this period may be extended in specific cases.⁴

Thus, in A5, the importance of raising awareness about non-breastfeeding and vertical transmission prevention (even during childbirth) was mentioned. Also, in A5, it is stated that this awareness process is facilitated when the woman is guided since the prenatal period. The Brazilian Ministry of Health recommends that at hospital discharge, in addition to the other guidelines, women and children should have appointments scheduled in a Specialized Care Service to monitor children exposed to HIV.⁴

In short, it was noticed that most of the studies focused on the care related with ART and, despite pointing out the factors that can contribute to vertical transmission and, consequently, child care, did not present defined strategies to overcome the challenges that interfere in this care, thus becoming a limitation of the present study.

CONCLUSION

Assistance to children exposed to HIV involves care that must be started in prenatal care, with early diagnosis and initiation of ART, including perinatal and postnatal care that involves using ART in the first hours of life, suppression of breastfeeding, and ensuring the use of infant formula, at least, up to six months. In this way, it is understood that the health care priorities for children exposed to HIV are not limited to ART but encompasses a series of strategies that involve familiar, emotional, social, environmental, and nutritional aspects.

Implications for the clinical practice of health professionals were also made explicit, especially in nursing, whose care practice can become a facilitator in the adherence and effectiveness of vertical transmission prevention strategies through counseling, psychosocial support, and positive relationships with the family, which requires the training of these professionals to promote the vertical transmission prevention and, consequently, to guide the care provided to children exposed to the virus.

It is hoped that, with these findings, the health care priorities for children exposed to HIV have been clarified, contributing to the establishment of strategies involving this issue. Thus, further studies on this topic are required especially concerning comprehensive care for children and their families to establish vertical transmission prevention strategies.

CONTRIBUTIONS

All authors also contributed in the conception, analysis and interpretation of the research, in the writing and critical review with intellectual contribution, and, in the approval of the final version.

CONFLICTS OF INTERESTS

There is no conflict of interest.

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