

# PMTCT: Multifaceted Challenges, Integrated Care Needs

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## Introduction

A global systematic review and meta-analysis highlights the persistent challenge of HIV mother-to-child transmission where key maternal factors contribute to ongoing rates. It emphasizes the critical need for strengthened Prevention of Mother-to-Child Transmission (PMTCT) programs, improved access to Antiretroviral Therapy (ART) for pregnant women, and addressing socioeconomic determinants of health to achieve elimination goals[1].

This systematic review evaluates current antiretroviral drug regimen choices for pregnant women with HIV in resource-limited settings. The study identifies optimal drug combinations essential for both maternal health and effective PMTCT, underlining the importance of balancing efficacy, safety, and drug resistance profiles[2].

A systematic review and meta-analysis examines maternal and child health outcomes among HIV-exposed uninfected children in the era of universal ART access. Findings show that despite reduced transmission, these children still face higher risks of adverse health outcomes, warranting continued monitoring and targeted interventions[3].

This systematic review investigates factors influencing adherence to Antiretroviral Therapy among pregnant and breastfeeding women living with HIV in sub-Saharan Africa. It identifies a complex interplay of individual, social, and health system factors affecting adherence, which is vital for effective PMTCT and maternal health[4].

Exploring the facilitators and barriers to integrating HIV and maternal, newborn, and child health services, this systematic review notes that successful integration can improve outcomes. However, challenges in policy, resource allocation, and healthcare worker training persist[5].

A systematic review and meta-analysis reveals a high prevalence of mental health disorders like depression and anxiety among pregnant and postpartum women living with HIV in sub-Saharan Africa. It emphasizes the critical need for integrated mental health services within maternal HIV care to improve well-being and treatment adherence[6].

This systematic review and meta-analysis explores the prevalence and determinants of HIV among pregnant women in Ethiopia from 2000 to 2018. It pinpoints specific geographical and demographic factors associated with higher HIV rates, thereby informing targeted prevention strategies for maternal health services[7].

Retention in care and viral suppression among pregnant and postpartum women living with HIV in low- and middle-income countries are assessed by this systematic review and meta-analysis. It highlights persistent gaps in optimal outcomes, stressing the need for enhanced strategies to support women throughout

the PMTCT cascade, improving maternal and infant health[8].

Exploring the experiences of women living with HIV accessing maternal healthcare services in sub-Saharan Africa, this systematic review uncovers recurring themes of stigma, discrimination, and inadequate healthcare provider attitudes. These issues significantly impede access and quality of care, necessitating targeted interventions[9].

This systematic review examines the impact of the COVID-19 pandemic on maternal and child health services for women living with HIV. It identifies significant disruptions in service delivery, reduced access to care, and increased risks for mothers and infants, emphasizing the crucial need for resilient health systems during global health crises[10].

## Description

The ongoing global challenge of HIV mother-to-child transmission (PMTCT) is a critical public health concern. Systematic reviews highlight the persistent maternal factors contributing to current transmission rates, underscoring an urgent need for strengthened PMTCT programs and significantly improved access to Antiretroviral Therapy (ART) for pregnant women [1]. Addressing socioeconomic determinants of health is also paramount to achieving the ambitious goals of eliminating HIV transmission [1]. Complementing this, research evaluates optimal antiretroviral drug regimen choices for pregnant women living with HIV, particularly in resource-limited settings. This work is essential for identifying drug combinations that effectively balance efficacy, safety, and drug resistance profiles, thus optimizing both maternal health and the prevention of mother-to-child transmission [2].

Even with the success of universal access to Antiretroviral Therapy, maternal and child health outcomes among HIV-exposed uninfected children present a continuing concern. Findings reveal these children still face higher risks of adverse health outcomes, necessitating consistent monitoring and targeted interventions to ensure their long-term well-being [3]. Furthermore, the effectiveness of PMTCT strategies heavily relies on adherence to ART among pregnant and breastfeeding women living with HIV. A systematic review identifies a complex interplay of individual, social, and health system factors that significantly influence adherence in sub-Saharan Africa. Addressing these multifaceted influences is fundamental for successful PMTCT and overall maternal health improvements [4].

Integrating HIV services with maternal, newborn, and child health services is a promising approach to improve outcomes for mothers and children. However, a review identifies both facilitators and persistent barriers to this integration, including challenges in policy implementation, resource allocation, and crucial healthcare worker training [5]. Beyond physical health, a significant prevalence of men-

tal health disorders, such as depression and anxiety, exists among pregnant and postpartum women living with HIV in sub-Saharan Africa. This highlights the critical need for integrating mental health services within existing maternal HIV care frameworks to improve overall well-being and enhance treatment adherence, ensuring a holistic approach to care [6].

Understanding regional epidemiology is crucial for targeted interventions. For example, a systematic review synthesizing data from 2000 to 2018 in Ethiopia explored the prevalence and determinants of HIV among pregnant women, revealing specific geographical and demographic factors associated with higher rates. This knowledge is vital for informing and refining prevention strategies within maternal health services [7]. Additionally, retention in care and achieving viral suppression among pregnant and postpartum women living with HIV in low- and middle-income countries remain areas with persistent gaps. Comprehensive reviews stress the need for enhanced strategies to support women throughout the entire PMTCT cascade, which is essential for optimizing maternal and infant health outcomes [8].

The lived experiences of women with HIV accessing maternal healthcare services in sub-Saharan Africa often reveal profound challenges. Recurring themes include stigma, discrimination, and inadequate attitudes from healthcare providers, which significantly impede both access to and the quality of care received [9]. Targeted interventions are thus vital to improve their maternal health journey and ensure dignified care [9]. Furthermore, external shocks like the COVID-19 pandemic have had a significant impact. A review highlights that the pandemic caused major disruptions in service delivery for women living with HIV, reducing access to care and increasing risks for both mothers and infants. This situation underscores the critical need for building resilient health systems capable of maintaining continuity of vital services during global health crises [10].

## Conclusion

Research consistently highlights the global challenge of HIV mother-to-child transmission (PMTCT), emphasizing the need for stronger programs, better access to antiretroviral therapy (ART) for pregnant women, and addressing socioeconomic factors. Studies evaluate optimal ART regimens in resource-limited settings, balancing efficacy, safety, and drug resistance. Even with universal ART access, HIV-exposed uninfected children face higher risks of adverse health outcomes, calling for ongoing monitoring and targeted interventions. Adherence to ART among pregnant and breastfeeding women in sub-Saharan Africa is influenced by complex individual, social, and health system factors, critical for effective PMTCT. Integrating HIV with maternal, newborn, and child health services shows promise, though implementation challenges persist regarding policy, resources, and training. A high prevalence of mental health disorders, like depression and anxiety, affects pregnant and postpartum women with HIV in sub-Saharan Africa, underscoring the need for integrated mental health support. Investigations into HIV prevalence and its determinants among pregnant women, particularly in Ethiopia, inform targeted prevention strategies. Retention in care and viral suppression among pregnant and postpartum women in low- and middle-income countries remain critical areas needing enhanced strategies. Women living with HIV often face stigma, discrimination, and inadequate healthcare provider attitudes when accessing maternal healthcare in sub-Saharan Africa, impeding quality of care. The COVID-19 pandemic also significantly disrupted maternal and child health services for women with HIV, increasing risks for mothers and infants. These findings collectively emphasize the multifaceted challenges and the continuous need for comprehensive, integrated, and equitable healthcare approaches to improve outcomes for women and children affected by HIV.

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## Conflict of Interest

None.

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