



AFRICAN STRATEGIES FOR HEALTH



Photo by TODD SHAPERA

REDUCING MATERNAL MORTALITY FOR HIV-INFECTED PREGNANT AND POSTPARTUM WOMEN

Despite global progress in the fight to reduce maternal mortality, HIV-related maternal deaths remain high in high-prevalence populations. Sub-Saharan Africa, the region bearing roughly 70 percent of the global HIV burden, is particularly affected.¹ Lifelong antiretroviral therapy (ART) appears to be the most effective way to prevent these deaths, but rates of ART initiation, long-term adherence, and retention in care remain low. Identifying effective strategies for expanding ART coverage and adherence and scaling up complementary patient-centered interventions is critical for keeping HIV-infected pregnant women and mothers alive and preventing new HIV infections among their children.

While measurement and attribution of maternal mortality is challenging, available evidence indicates that HIV-infected pregnant and postpartum women have an increased risk of death compared to their uninfected peers.²⁻⁴ Studies have shown that HIV is responsible for a large proportion of indirect maternal deaths in countries with high HIV prevalence⁵⁻⁷ and that in Africa, the relative risk of pregnancy-related death among HIV-infected women ranges from two to eight-times greater than in non-infected women.⁸ There is also evidence of increased risk of direct obstetric complications, such as sepsis, among HIV-infected pregnant women.^{9,10} Despite this evidence, understanding of the

contribution of ART and other interventions in reducing maternal mortality is limited.

To identify and better understand the evidence around efforts to reduce mortality among HIV-infected pregnant and postpartum women, USAID's Africa Bureau (USAID/AFR) and their project ASH, in collaboration with colleagues from USAID's Global Health Bureau (the Office of Health, Infectious Diseases and Nutrition [USAID/GH/HIDN] and the Office of HIV/AIDS [USAID/GH/OHA]), undertook three complementary systematic literature reviews:

- *A Systematic Review of Interventions to Reduce Mortality Among HIV Infected Pregnant and Postpartum Women;*¹¹
- *A Systematic Review of Individual and Contextual Factors Affecting ART Initiation, Adherence, and Retention for HIV-Infected Pregnant and Postpartum Women;*¹² and
- *A Systematic Review of Health System Barriers and Enablers for Antiretroviral Therapy (ART) for HIV-Infected Pregnant and Postpartum Women.*¹³

This brief is a summary of review findings and recommendations for policymakers and program managers. See the full articles for further details.



Select Key Findings

Select key findings from each systematic literature review are presented below.

Interventions to reduce maternal mortality

Identifying and scaling up safe, respectful, and effective interventions to reduce mortality among HIV-infected pregnant and postpartum women is critical to achieving rapid and sustained reductions in maternal deaths. Interventions applied to prevent death among HIV-infected women during pregnancy and up to one year postpartum identified through this review include antiretroviral therapy (ART), micronutrients (multivitamins, vitamin A and selenium), and antibiotics.

- ART reduces the risk of death among HIV-infected pregnant and postpartum women.
- The timing of ART initiation, duration of treatment, HIV disease status, and ART discontinuation after pregnancy influence mortality reduction.
- Incident pregnancy in women already on ART for their own health appears not to have adverse consequences for the mother.
- Multivitamin use was shown to reduce disease progression while other micronutrients and antibiotics had no beneficial effect on maternal mortality.
- The lack of published literature on the effect of interventions other than ART within this population is a notable gap in the evidence base.

Individual and contextual barriers and enablers for ART

Despite the proven effectiveness and increasing accessibility of ART, initiation, adherence, and retention among HIV-infected women remain problematically low. Improved understanding of the factors influencing HIV-infected women's access to and use of ART during and after pregnancy is critical to inform the design of patient-centered policies and programs. This review identified key individual and contextual barriers and enablers and categorized them thematically within individual, interpersonal, community, and structural levels of influence.

- Individual: Gaps in knowledge about HIV, ART, and prevention of mother-to-child transmission (PMTCT) continue to act as barriers to the use of critical health services. Issues such as forgetting to take ART, misplacing it, or not have access to it while travelling are commonly cited challenges.
- Interpersonal: Relationships with partners can have a substantial influence on ART initiation, adherence, and retention. In many cases, disclosure to a partner benefits adherence.
- Community: Stigma at the community level, both the experience of and fear of, persists as a significant barrier for HIV-infected pregnant and postpartum women.
- Structural: Interactions with health workers are valued and affect the quality of access and likelihood of ART initiation, adherence, and retention.

Health system barriers and enablers for ART

Pregnant and postpartum women are a sector of the population that is most consistently engaged with the health system. Yet in 2012, only 58 percent of pregnant women needing ART for their own health received treatment.¹ This review identified key health system barriers and enablers and categorized them into five descriptive themes: 1) models of care, 2) service delivery, 3) resource constraints, 4) patient/health system engagement, and 5) interventions to improve maternal ART outcomes.

- Models of Care: Maternal ART services struggle to retain women in care and involve their partners, especially during the postpartum period, and gaps between antenatal care (ANC)/PMTCT and HIV services persist, resulting in dropout along the maternal ART cascade.
- Service Delivery: Dropout from and delays in treatment are exacerbated by poor communication and coordination among health system actors, poor clinical practices, and gaps in provider training.
- Resource Constraints: System-wide constraints such as human resources shortage and turnover, long waiting times, and supply chain problems, inhibit access to critical health services.
- Patient/Health System Engagement: Many aspects of the patient-provider relationship affect use of services, including confidentiality, stigma, power dynamics, and perceptions about the healthiness of pregnant women.
- Interventions: The few studies that assessed maternal ART interventions demonstrated the importance of moving beyond integrating discrete elements of service delivery to provide multi-pronged, multi-levelled interventions.

Select Key Recommendations

The potential of scaling up access to ART to prevent maternal deaths among HIV-infected women is great. The success of this strategy, however, will depend on the careful design of clinical and non-clinical service delivery models and interventions, as well as broader health system reforms, which take into consideration the barriers and enablers outlined above. Key recommendations from the three reviews are presented below.

To leverage interventions to reduce maternal mortality	<ol style="list-style-type: none">1. Initiation of lifelong ART during early pregnancy and at an early stage of disease should be supported.2. Further research on interventions beyond ART that have an effect on the health of HIV-infected pregnant and postpartum women, as well as corresponding evaluation measures, is needed.
To address individual and contextual factors	<ol style="list-style-type: none">1. Improving the provision of information within and outside of health services to address gaps in knowledge about HIV, ART, and PMTCT is critical to enabling the uptake and use of services.2. Women must be supported in developing routines and approaches for self-monitoring and remembering to take their medication through interventions that use locally available and culturally appropriate systems, such as intensive counseling within health facilities or strengthened community-based support systems.3. ART programs that focus on the continuum of care for women must acknowledge the crucial influence of husbands or partners on ART initiation, adherence, and retention, and incorporate interventions that take into account the relevance of women's primary relationships. Maternal ART program staff can provide counseling for women to help them to disclose, or practical strategies for ART adherence if they are unwilling or unable to disclose to their partners.4. Raising knowledge and awareness about the effectiveness and value of ART and PMTCT, and the harmful effects of stigma, must be targeted at the both the community level and to health workers. Reductions in stigma may encourage women to access care and will help to ensure that the care they receive is respectful and confidential.5. HIV services should be integrated with other maternal and child health services to maximize confidentiality and efficiency for the client.
To address health system factors	<ol style="list-style-type: none">1. Policymakers and program managers should systematically evaluate maternal ART services in order to diagnose bottlenecks and drop-out points in detail, identify the barriers that contribute most to these problems, identify a set of interventions that could sustainably and effectively addresses these problems, and align these priority areas and intervention options with existing HIV and ANC/PMTCT services.2. Understanding and addressing delays in progression through the maternal ART cascade is critical. Both monitoring and evaluation processes should include measures of time and its effects more explicitly.3. Attention should be renewed on the range of women who never make it to ANC or HIV care or who drop out along the cascade. More information on who they are, why they never access care, or why they drop out needs to be collected. Interventions to recruit, retain, and trace those lost to follow-up should be prioritized.4. Health management information systems for maternal ART require both strengthening (to better identify and track patients as they move between different services and levels of care) and improved management and use (for better resource allocation, intervention design, and accountability).5. Potential 'quick wins' for addressing critical bottlenecks to maternal ART can sometimes be identified and acted on. These could include relaxing treatment protocols to enable initiation of ART at the time of testing regardless of CD4 level, enabling task shifting, queue prioritization, aligning ANC and ART visits, and point-of-care CD4 testing.6. Opportunities to increase the directness, intensity, frequency, and extension of the health system's engagement with pregnant HIV-infected women should be pursued. This includes both patient-provider engagement within the health system and strengthening of the facility/community continuum through the development of supportive interventions such as peer mentors, community health workers coordinators, and support groups.7. Effective and sustainable interventions to support maternal ART should be multi-pronged and multi-leveled and seek to make an impact across the maternal cascade at both facility and higher levels of the health system.

Translating these recommendations into practice is critical for keeping pregnant women and mothers alive and preventing new HIV infections among their children as we endeavor to achieve the global goals of an AIDS-free generation and ending preventable child and maternal deaths.

Conclusion

Tremendous progress has been made in reducing maternal mortality globally, particularly in the last decade.¹⁰ In order to sustain this momentum and achieve global targets, policymakers and program managers must ensure the availability of locally acceptable, respectful HIV and ANC service delivery models that are responsive to women's needs and perspectives and support them as they enter and move through the maternal ART cascade. It will also require better understanding of the ways women's lives outside of the clinic affect their chances of entering into, and staying adherent to and retained in care.

The recommendations outlined above may be effective in expanding the reach of ART among HIV-infected pregnant and postpartum women. Translating these recommendations into practice is critical for keeping pregnant women and mothers alive and preventing new HIV infections among their children as we endeavor to achieve the global goals of an AIDS-free generation and ending preventable child and maternal deaths. ■

ABOUT ASH

African Strategies for Health (ASH) is a five-year project funded by the U.S. Agency for International Development's (USAID) Bureau for Africa and implemented by Management Sciences for Health. ASH improves the health status of populations across Africa through identifying and advocating for best practices, enhancing technical capacity, and engaging African regional institutions to address health issues in a sustainable manner. ASH provides information on trends and developments on the continent to USAID and other development partners to enhance decision-making regarding investments in health.

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