Key messages

- Provision of antiretroviral (ARV) drugs to HIV-infected mothers and their newborn babies is a critical component of prevention of mother-to-child transmission (PMTCT) of HIV, and is key to changing the trajectory of the HIV epidemic in sub-Saharan Africa.

- Uptake of ARV drugs for PMTCT remains unacceptably low in many countries across sub-Saharan Africa.

The main challenges faced by HIV-infected mothers and health care providers in accessing or delivering ARV drugs for PMTCT include:

- HIV stigma, which leads pregnant women to fear disclosing their HIV status to their partners and relatives. As a result, most women have limited partner and peer support to help them take ARV drugs appropriately

- inadequate numbers of health care providers and poor accessibility of HIV services

- the psychological impact of an HIV-positive diagnosis, which can delay or prevent uptake of services

- poor knowledge of HIV transmission and antiretroviral therapy (ART).

PMTCT programmes need to overcome these challenges through solutions that engage communities and by investments in strengthening health systems.
Background

PMTCT programmes were introduced to sub-Saharan Africa over ten years ago with the aim of reducing new childhood HIV infections. PMTCT programmes comprise four different aspects that focus on:

1. preventing HIV infection among women of childbearing age;
2. preventing unintended pregnancies among women living with HIV;
3. preventing HIV transmission from infected mothers to their babies; and
4. lifelong care and treatment for these women and their families.

A key element of the third programme ‘prong’ is the provision of ARV drugs to the mother and child. This medical intervention can reduce the chance of HIV transmission from mother to child from 15–45% (in the absence of treatment) to less than 5%.

Global guidelines for PMTCT have evolved rapidly and now encourage initiation of ARV drugs for PMTCT earlier in pregnancy, including starting women on lifelong combination ART for their own health when diagnosed during pregnancy. However, over ten years on since the introduction of PMTCT programmes to the region, and despite international commitments to eliminate new infections in children, the numbers of women and infants accessing and using these lifesaving treatments within the context of PMTCT programmes remains well below target in most sub-Saharan African countries.

The purpose of this brief is to highlight key reasons for this poor access to, and low uptake and use of, ARV drugs for PMTCT, based on a systematic literature review, and to make recommendations for how these challenges can be overcome. The brief will be relevant to policymakers, programme planners, clinicians and research scientists working in the field of HIV and maternal and child health.
How the research was conducted

The research was a systematic review of published studies that looked at factors impeding or facilitating the use of ARV drugs for PMTCT. A total of 44 studies from sub-Saharan Africa were analysed, conducted between 2000 and 2012. Some of these studies incorporated the perspectives of mothers, other community members and health care providers on the main barriers to using ARVs in PMTCT.
The main findings from the research

Research showed that factors impeding or facilitating the uptake of ARV drugs for PMTCT exist at a number of levels: individual, family and community, and health systems (see Figure 1).

At the individual level, psychological difficulties following an HIV diagnosis, such as shock, denial of disease, depression, or fear of handling side effects and a lifelong commitment to treatment, were common among mothers and hindered uptake. Poor knowledge of HIV transmission and ART, together with a limited formal education, was also associated with low uptake among mothers. For example, women were sometimes sceptical about the effectiveness of ART for PMTCT, or believed the drugs could harm their unborn child. Lack of visible symptoms of HIV infection could also have contributed to poor uptake of treatment by pregnant women.

Family and community-level barriers most frequently identified in the review were stigma regarding HIV status and fear of status disclosure to partners and family members. These factors deterred women from attending HIV/PMTCT clinics to receive ARV drugs for themselves and their infants, or from starting or continuing to take the treatment prescribed. Lack of partner support was also a major hindrance, and women anticipated or experienced negative reactions from partners, including violence and separation after sharing their HIV test results. Although male partners were often invited for HIV testing, they frequently refused. However, some women did receive support from partners and others, and this was an important positive factor in improving uptake of PMTCT ARV drugs. Cultural traditions such as preferences for traditional healers and traditional birth attendants, especially among elders, were also common community-level factors limiting attendance at modern facilities and use of ARV drugs.

Basic health systems issues, including distance to health clinics and associated travel costs, and staffing issues, were also key barriers to attendance at antenatal and ART clinics, limiting the opportunity to receive ARV drugs. Service accessibility issues (alongside cultural traditions) also influenced the place of delivery for many women, with home births presenting a barrier to receiving maternal and infant ARV drugs. Delayed first antenatal care attendance was identified as a problem affecting timely access to ARV drugs during pregnancy. Staffing issues included a shortage of health care providers, particularly those with sufficient training, and poor behaviour among staff, including scolding or discriminating against HIV-positive clients. However, health care providers also assisted women in persevering with their treatment. Resource issues, such as stock-outs of ARV drugs or HIV test kits, were also reported in some settings, where they seriously impaired the functioning of the PMTCT programme. Poor referral links and tracking systems hampered linkage between antenatal and ART services, while better integration of these services was generally found to improve linkage.
In conclusion, basic health systems issues of staffing and service accessibility, together with community-level factors such as stigma and fear of disclosure to partners and others, emerged consistently over time and across different settings in sub-Saharan Africa. This suggests that little progress has been made in addressing these long-standing challenges.

**Figure 1. Factors impeding or facilitating uptake of ARVs for prevention of mother-to-child transmission and recommended interventions at each level**

### Barriers and facilitating factors

#### Health policy
- National protocols

#### Health systems
- Staff–client interactions
- Staff shortages and training
- Regimen type
- Access to facilities (distance, cost, and service cost)
- Privacy issues
- Service integration
- Resource availability
- Poor coordination
- Poor record-keeping
- Delays
- Late presentation to ANC
- Place of delivery

#### Partner and community
- HIV stigma
- Disclosure
- Married/living with partner
- Support and involvement
- Cultural traditions and beliefs

#### Individual
- Knowledge and education
- Religion
- Ethnicity
- Socio-economic factors/income
- Maternal age
- Obstetric factors
- Pregnancy history
- Psychological factors
- Disease progression
- Infant health
- Personal management and supply of treatment

### Recommended interventions

- Provision of nevirapine (NVP) prophylaxis at ANC (antenatal care).
- Investments in health infrastructure.
- Improved integration of ANC and HIV treatment and care clinics.
- Strengthen referral links and tracking systems.
- Accelerate decentralisation of services.
- Encourage institutional deliveries.
- Financing schemes (e.g., transport vouchers, conditional cash transfers) and social protection.
- Birth reporting and delivery of infant dose.
- Provision of NVP during ANC.
- Improving interactions between mothers and providers through training and supervision.
- Strengthen linkages between health and community systems.
- Participatory education.
- Community engagement and involvement.
- Task-shifting.
- Couples HIV testing and counselling.
- Encourage male involvement (e.g., through education, male-friendly clinic environment, invitation letters).
- Family-centered approaches.
- Education and enhanced counselling (e.g., reassurance of no harm caused to baby and how ART reduces transmission, importance of treatment when asymptomatic).
- Support tailored to young mothers.
- Community support and communication (e.g., peer-to-peer support from HIV-infected mothers and networks).
- Mobile phone reminders.
What can be done to address these barriers

Based on our findings, a number of recommendations can help to overcome these barriers and improve the uptake of ARV drugs for PMTCT.

Recommendations

Recommendations for policymakers

- Further investment in health infrastructure and resources should be made, while continuing to accelerate service decentralisation, particularly to rural locations.
- Ensuring adequate stock and distribution of commodities, including HIV test kits and ARV drugs, is critical.
- Provision of enough sufficiently trained staff is essential. Regular formal training courses for staff and task-shifting should be considered where feasible.

Recommendations for community-based organisations implementing PMTCT programmes

Community-based organisations should design programmes that engage communities and implement solutions tailored to the setting, including:

- sensitisation and participatory education for community members, particularly mothers, men, elders and community leaders, to reduce stigma and improve disclosure and knowledge of HIV transmission and ART
- addressing preferences for traditional healers and birth attendants by promoting antenatal care and institutional and assisted delivery
- strategies to improve male participation in PMTCT programmes, including couple counselling when desired by women; for example, invitation letters to male partners or ‘male-friendly’ clinics with flexible opening times
- involving other family members in PMTCT services, particularly for single women or women who do not wish to involve their partner but want extra support
- improving counselling and support to women living with HIV and their partners, other family members and peers. Counselling messages should include reassurance that ARV drugs will not harm the baby, and simple explanations of how the drugs work to reduce transmission of the virus, as well as reinforcing the importance of continuing to take medication even if physical symptoms decrease. Careful distribution of any printed educational information is needed to ensure confidentiality is not breached
- providing transport services by members of the community, transport and service vouchers, and conditional cash transfers to overcome financial barriers and access issues.
Recommendations for PMTCT programmes in health facilities

- Clinicians or other health care providers in charge of health facilities should set up structures for supervising and mentoring staff, provide on-job training and toolkits, and establish procedures for improving performance and staff-client interaction.
- The physical layout of services within clinics should be optimised to ensure privacy for clients.
- Improving integration of services, referrals and linkage to other support, together with systems for tracking patients, can help linkage between antenatal and HIV care and treatment services.

Recommendations for researchers

- Further research is needed on barriers to PMTCT ARV use in key, and as yet unreached, vulnerable populations such as sex workers.
- Rigorous implementation/evaluation of research is needed on how to optimise men’s involvement in PMTCT programmes, including from the perspective of men themselves.

Amon Banda and his daughter Taonga at the Bwafwano Community Care Association clinic, Zambia. His wife Mwenzi has had two children at the clinic within the PMTCT programme © The Alliance

I went with Mwenzi to the clinic, I always go. I want to know and care that my child will be born safely.

Amon Banda, Zambia
About the International HIV/AIDS Alliance

We are an innovative alliance of nationally-based, independent, civil society organisations united by our vision of a world without AIDS.

We are committed to joint action, working with communities through local, national and global action on HIV, health and human rights.

Our actions are guided by our values: the lives of all human beings are of equal value, and everyone has the right to access the HIV information and services they need for a healthy life.

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