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Healthier mothers and babies through PMTCT

A decade of prevention of mother-to-child transmission of HIV

The Context

Limiting the vertical transmission of HIV from pregnant women to their infants has been a major focus of efforts to reduce the number of new HIV infections. Since the late 1990s, when clinical trials demonstrated the effectiveness of using antiretroviral (ARV) drugs during and after birth to reduce the likelihood of infection among infants born to HIV-positive mothers, programmes aimed at the prevention of mother-to-child transmission (PMTCT) of HIV have been established and scaled up worldwide.

These programmes are now available to more than half of the HIV-positive pregnant women in low- and middle-income countries and have brought about a significant reduction in the number of children newly infected with HIV. Despite this, however, UNAIDS estimates that 370,000 children under 15 years of age became newly infected with HIV in 2009, with over 90% of them acquiring the virus from their mothers during pregnancy, at birth or through breastfeeding. Much remains to be done to improve the quality, reach and effectiveness of PMTCT programmes, particularly in countries with the heaviest HIV burdens.

The World Health Organization (WHO) advocates a comprehensive four-pronged strategy, including HIV prevention services for women of reproductive age to prevent new HIV infections, family planning services for HIV-positive women to minimize unwanted pregnancies, drug-based prophylaxis to prevent HIV transmission to infants, and the provision of antiretroviral treatment to eligible HIV-positive mothers and other family members to promote healthy families. Greater attention is also being paid to maximizing the natural linkages which exist between HIV-related interventions, such as PMTCT, and sexual and reproductive health services.

German support for PMTCT programmes has enabled the provision of life-saving services to HIV-positive pregnant women, their infants and other family members.

The Approach

Germany's Federal Ministry for Economic Cooperation and Development (BMZ) has supported efforts to prevent the transmission of HIV from mothers to their babies since the earliest stages of the PMTCT era, providing technical support to policy formulation and programme implementation in partner countries. From the start, these efforts have been accompanied by sustained and systematic operational research on the results, supportive factors and challenges for PMTCT programmes.

German Health Practice Collection
Showcasing health and social protection for development

This Collection describes programmes supported by German Development Cooperation assessed as 'promising or good practice' by experts from German development organizations and two international peer reviewers with expertise in the particular field. Each report tells the story, in plain language, of a particular programme and is published in a short (four pages) and full version at our web site: www.german-practice-collection.org.

PMTCT and PMTCT-Plus programmes in East Africa, 2001 – 2009

At a time when PMTCT services were in the very initial stages of implementation worldwide, the BMZ, through its former implementing agency Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ; now GIZ), began an innovative eight-year project of technical assistance for a nevirapine-based PMTCT programme in three countries in sub-Saharan Africa. Coordinated by the Institute of Tropical Medicine at the Charité University Medicine, Berlin, the programme was rolled out in 2001 at selected health facilities offering antenatal care (ANC) services in Kenya, Tanzania and Uganda and provided voluntary antenatal HIV-counselling and testing, ARV prophylaxis to HIV-positive pregnant women and their infants, and counselling on safer methods of infant feeding.

In 2003 – 2004, the programme expanded the available services to include long-term antiretroviral therapy for pregnant women, their male partners and other family members eligible for treatment – an approach known as PMTCT-Plus. The programme was among the first in sub-Saharan Africa to provide treatment on a large-scale in an effort to preserve the health and well-being of entire families, not only children.

Results and lessons learnt

Key results of the programme include:

- **High uptake of antenatal care, HIV counselling and testing, and PMTCT services by pregnant women at project sites.** Between 2002 and 2009, 217,300 new ANC clients made use of health services at participating facilities. Of these, 170,750 women were counselled on PMTCT and related issues and 138,900 agreed to be tested for HIV. Ninety-five percent of the 19,800 pregnant women who tested positive for HIV were enrolled in PMTCT.
- **A reduction in the rates of mother-to-child transmission of HIV.** Among women who were breastfeeding exclusively, the HIV-transmission rate in children at six months was about 14% - roughly half of what could be expected without any interventions and the best result that could be anticipated using single-dose nevirapine.
- **Increased involvement of men in ANC and PMTCT services.** Efforts by programme staff to increase the involvement of men in the PMTCT programme yielded results: in Tanzania, only 3% of male partners were involved at the outset of the programme, rising to an average of 17% across sites by the end of the programme.
- **Findings from systematic operational and biomedical research shared internationally.** Throughout the programme, high-quality research was made possible through close collaboration with the Charité University Medicine in Berlin. On the basis of data generated by the programme, 18 peer-reviewed publications and multiple conference presentations have been prepared, bringing achievements and learnings to an international audience.

A group counselling session in Uganda. Through the German-supported PMTCT programme, women attending antenatal clinics had access to voluntary HIV counselling and testing, as well as counselling on infant feeding.

Among the lessons learnt:

- **Drop-out rates are high.** The number of women participating in the programme declined progressively with each stage; strategies are needed to address this problem, as high drop-out rates reduce the effectiveness of PMTCT measures. Experience suggests that women might remain in PMTCT programmes for longer, and benefit more from them, if their male partners were more supportive. Missing linkages between PMTCT, HIV care and treatment, mother and child health care, and sexual and reproductive health also contribute to high dropout rates.
- **The links between antenatal care and ART must be strengthened.** In order to improve uptake rates, the project identified the points at which women 'fell out of the system,' causing them either not to test for HIV, not to enrol in PMTCT, or not to see the programme through to completion. Calls for stronger ANC, PMTCT/ART and family planning services have become much more prominent in recent years, and the experience of the PMTCT programme demonstrated, at an early stage, why this is so important.

- **Male involvement improves PMTCT outcomes.** Increasing the involvement of male partners in ANC and PMTCT services is important for improving PMTCT outcomes, but men's participation rates are generally low. Research conducted during the project found that changes in the attitudes of health workers and specifically targeting the needs of male partners in ANC and PMTCT programmes can improve involvement rates, to positive effect.
- **Combination therapy regimes are complicated to implement under the conditions of an African rural hospital.** A study undertaken by Charité at a rural hospital in Tanzania found that combination therapy regimens (currently the WHO-recommended standard of care) are not easy to implement with the quality expected, and suffer from low levels of patient adherence. The involvement of male partners or other support persons, the quality of service provision, and patient behaviour are factors which can increase levels of patient adherence.

Four prongs of a comprehensive approach

Next to drug-based prevention of HIV transmission from mother to child (Prong 3), the German government has also invested in other elements of a comprehensive approach to PMTCT:

Prong 1: Preventing HIV infections among women of reproductive age

The simplest and most cost-effective strategy for eliminating the transmission of HIV from mothers to their infants is to prevent new HIV infections among girls and women of reproductive age. The comprehensive HIV programme in Mbeya has done this since 1995 through a large-scale social marketing of condoms promotion project as well as through the expansion of Voluntary Counselling and Testing (VCT) to more than 100 facilities in the region. More than 40,000 people were tested for HIV in 2005 alone.

In addition, the German health programme in Tanzania has supported the Ministry of Education's Prevention and Awareness at Schools of HIV and AIDS (PASHA) programme, which aims to improve young people's knowledge about sexual and reproductive health, including HIV, and to enable them to make informed decisions about sexual relationships. Approximately 800 counsellors and 3000 peer educators have been trained with German support in the four partner regions of Mbeya, Lindi, Mtwara and Tanga.

Prong 2: Family planning services for HIV-positive women

Women living with HIV require special information and services related to family planning, yet there remains a large unmet demand for such services. In Tanzania, German-supported health programmes have worked to strengthen and expand family planning services for HIV-positive women through Community Based Distributors, non-medical personnel who have been trained to provide the most popular family planning methods to clients, including injectable contraceptives, oral contraceptives and condoms, and to refer people to health facilities for services such as VCT, PMTCT and long-term family planning.

Students participating in a peer education session. Germany has supported efforts by the Tanzanian Ministry of Education to introduce peer education on sexual and reproductive health into primary school settings.

Prong 4: Integrated care, treatment and support services for HIV-positive women and their families

The final element of a comprehensive approach to PMCTC calls for the integration of HIV-related care, treatment and support services for HIV-positive women and their family members to ensure that families remain intact and all members of the household have access to treatment and support, as needed.

A large-scale counselling and home-based care programme supported thousands of people in the Mbeya Region with HIV-related psychosocial support services. Members of the non-governmental organization Kihumbe made home visits to HIV-positive patients, provided supportive counselling services and basic nursing care, promoted awareness about

HIV, encouraged people to undergo VCT, and mobilized support for orphaned children. By 2005, more than 6000 people in the region were benefitting from home-based care services.

Strengthening linkages between SRH and HIV services

PMTCT exemplifies the importance of linking HIV-related services with sexual and reproductive health-related interventions in order to better benefit the health of mothers, infants and children. While the idea of a comprehensive approach to PMTCT reflects this understanding, many PMTCT programmes have traditionally focused on one aspect – medical interventions to prevent transmission – without paying sufficient attention to other elements of an integrated approach.

Germany development cooperation (GDC)[1] has taken steps to ensure that all its health programmes pay greater attention to horizontal linkages between SRH and HIV services. A 2011 policy paper details ways in which linkages can be promoted at the level of policy, within GDC implementing organizations and at the country level, within programmes.

▶ To download the full version of this report and other publications in this collection, go to www.german-practice-collection.org.

Peer Review

To be included in the German Health Practice Collection, a project or programme must demonstrate that it comes close to meeting most if not all of the collection's selection criteria. When reviewing the German contribution to PMTCT in 2008, WHO's PMTCT experts concluded that it qualifies as a 'promising practice' in that it demonstrated:

- **effectiveness** in providing significant numbers of pregnant women and their family members with life-saving HIV prevention and treatment services;
- **transferability** in terms of its adherence to international and national guidelines and integration with national health structures;
- **a participatory and empowering approach** in the way in which it empowered women living with HIV and their family members with potentially life-saving services, both within and outside health facilities;
- **gender-awareness**, in its focus on young women and women of reproductive age and its commitment to exploring and addressing gender dimensions of PMTCT programmes;
- **innovation** in its use of what were then state-of-the-art HIV prevention methods to prevent HIV transmission between mothers and infants, and in extending treatment services to eligible pregnant women, their male partners and family members;
- **sustainability** in the sense that the PMTCT and PMTCT-Plus programmes, as well as other complementary activities, have been integrated into national health programmes; and
- **good quality monitoring and evaluation (M&E)**, through careful attention to the design of M&E systems and continuous operational and biomedical research.

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[1] GDC includes Germany's Federal Ministry for Economic Cooperation and Development (BMZ) and its two implementing organizations Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and KfW Development Bank (KfW).