Preventing the transmission of HIV from mothers to their children (PMTCT) has been recognised internationally and nationally as an essential intervention in efforts to reduce new infections. One of the aims in the 2001 UNGASS Declaration of Commitment on HIV/AIDS was to reduce the proportion of infants infected with HIV by 20% by 2005, and by 50% by 2010.

The importance of PMTCT in the response to paediatric HIV and AIDS was echoed in South Africa’s 2007–2011 National Strategic Plan on HIV, STIs and TB (NSP) in the strategies to prevent HIV infection in children under 14 years old. This prioritised the scaling-up of PMTCT coverage to reduce MTCT to less than 5% by 2011.

During the ten years of implementing the national PMTCT programme, South Africa has been successfully scaling up the provision of these services – such that PMTCT interventions are now offered in more than 95% of antenatal clinics and maternity institutions country-wide. In 2010, the national Department of Health updated its PMTCT policy to align with the WHO PMTCT ‘Option A’. This entails including routine HIV testing and counselling for pregnant women, dual therapy to prevent MTCT from 14 weeks of pregnancy, highly active antiretroviral treatment (HAART) for pregnant women with CD4 cell counts under 350, and to integrate PMTCT services into routine maternal and child health services.

Despite these significant efforts however, no system had been established to monitor MTCT or to track progress towards these targets. In addition, the national operational effectiveness and impact of the South African PMTCT programme on the MTCT rate of HIV was not known. Evaluations that had been undertaken had been restricted to a few selected sites. Not only were there therefore no data for local reporting, but there was also no way of reporting progress towards meeting international targets - like UNGASS’ reduction of vertical transmission to less than 5% by 2015. We also could not identify the contribution this was making to the 4th and 6th Millennium Development Goals, namely to ‘reduce by two thirds, between 1990 and 2015, the under-five mortality rate’ and ‘have halted by 2015 and begun to reverse the spread of HIV/AIDS’. Evaluating the effectiveness of the national PMTCT programme, and tracking this over time, was therefore crucial.

The objectives of the national PMTCT evaluation study undertaken from 2010-2013 were, therefore,

- to periodically estimate coverage of key PMTCT interventions and services (e.g. HIV testing, CD4 cell count testing, infant ARV prophylaxis, counselling on infant feeding);
- to estimate the proportion of women and infants who receive other selected interventions and services in the comprehensive PMTCT programme cascade; and
- to estimate the association between MTCT rate and ARV regimen, maternal background characteristics including CD4 cell count, maternal health care services and maternal and infant health status.

The 2010 and 2011 surveys enrolled over 10,000 mother-infant pairs in 580 primary health care clinics in all nine provinces and all 52 health districts in the country, providing a valid national sample to estimate mother-to-child transmission of HIV in infants aged 4-8 weeks of age.

The 2010 survey found an early MTCT rate of 3.5%, which reduced further to 2.7% in 2011. The 2012-2013 survey was conducted from November 2012 to May 2013 and results are expected in late 2013.

Prof Debra Jackson from the School of Public Health is one of three co-principal investigators on this important South African study, along with Dr Ameena Goga from South African Medical Research Council (lead agency) and Dr Thu-Ha Dinh from the US Centers for Disease Control and Prevention/PEPFAR (study funding agency). Other collaborators are the South African national Department of Health and UNICEF, who also provided funding for the project, along with the National Health Laboratory System and Wits University.