

Children and HIV: Monitoring equitable access to services

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In 2010, South Africa had an estimated 518,000 HIV-infected children aged 0 – 14 years,ⁱ the highest number of children living with HIV of any country in the world.¹ The paediatric HIV pandemic in South Africa is driven primarily by the transmission of HIV from an HIV-positive mother to her child during pregnancy, birth or through breastfeeding.

Without intervention, the risk of infection in infants born to HIV-positive mothers ranges from 15 – 50%, depending on breastfeeding practices.² HIV-transmission rates can be significantly reduced with intervention to less than 3% by eight weeks post-delivery.³

HIV infection follows a more aggressive course among infants and children than it does among adults. Without access to early diagnosis and antiretroviral treatment (ART), an estimated 50% of HIV-positive infants die within two years.⁴ With early intervention the risk of death can be reduced by 76%.⁵

Given the efficacy of these HIV-prevention and -treatment interventions, and the consequences of not intervening, efforts to ensure service access for all mothers and infants are critical. These efforts fall within the national Prevention of Mother-to-Child Transmission (PMTCT) programme. It is also important to note that, in 2003, Cabinet approved a comprehensive care, management and

treatment plan for the country which enabled the government to provide free antiretroviral treatment for people living with HIV and AIDS.

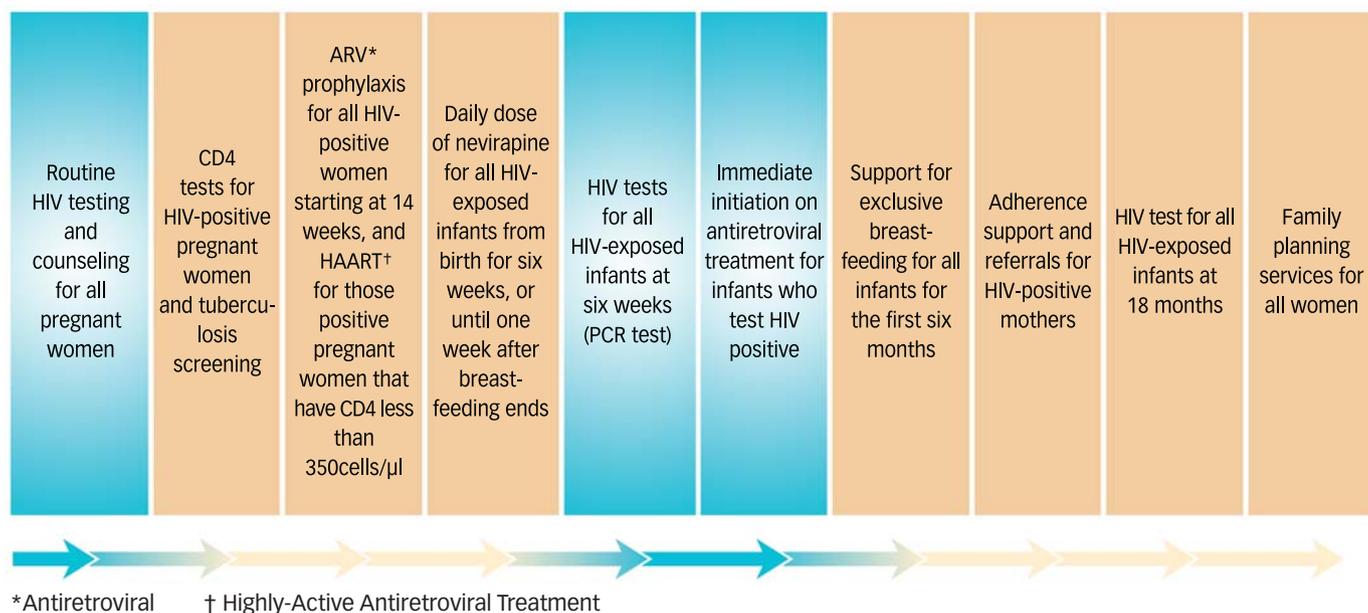
This essay looks at progress in achieving equity in the prevention and treatment of HIV in infants, with a focus on three service points along the PMTCT continuum. The essay explores the following questions:

- What is the PMTCT continuum?
- Has equity been achieved in HIV testing for pregnant women?
- Has equity in testing for HIV-exposed infants been achieved?
- Has equity in treatment access for HIV-positive infants been achieved?
- What needs to be done to address remaining inequities?

What is the PMTCT continuum?

The package of PMTCT services in South Africa has evolved substantially since the programme was piloted in 2001. It now encompasses a sequence, or continuum, of services beginning in the early stages of pregnancy and continuing well after the baby is born (outlined in figure 24).

Figure 24: The PMTCT continuum



ⁱ In terms of official health statistics, children are defined as younger than 15 years. This is not in line with the Constitution's definition of a child as aged 0 – 17 years, and places 15 – 17-year-old children in the same category as adults.

The progress that has been made over the past decade in the implementation of the national PMTCT programme has enabled South Africa to reduce mother-to-child transmission of HIV to an estimated 2.7% at six weeks after birth. Yet this national figure masks significant differences across provinces, from 1.98% in the Western Cape to 3.8% in the Eastern Cape and Free State.⁶

In order for the PMTCT programme to be most effective, each service intervention along the PMTCT continuum of care must be available to *all* pregnant women and their infants – 100% of pregnant women should be counselled and tested for HIV and receive their results ... 100% of HIV-infected pregnant women should receive appropriate ARV prophylaxis or treatment ... 100% of HIV-exposed babies should be tested at six weeks of age ... and 100% of those who test HIV positive should be initiated on treatment.

This essay examines the extent to which all those who need these services are being reached and focuses on three critical points on the continuum (highlighted in blue in figure 24):

- Routine HIV testing and counseling for all pregnant women.
- HIV tests for all HIV-exposed infants at six weeks.
- Immediate initiation on antiretroviral treatment for infants who test HIV positive.

Has equity in HIV testing for pregnant women been achieved?

HIV prevalence amongst pregnant women who are attending public sector health facilities increased from less than 1% in 1990 to over 30% in 2010, with rates as high as 40% in KwaZulu-Natal.⁷

Given these exceptionally high HIV-prevalence rates, routine HIV testing of all pregnant women is essential.

A recent national evaluation⁸ of the PMTCT programme reports PMTCT interventions in more than 95% of public antenatal and maternity facilities. The percentage of pregnant women with unknown HIV status prior to their first antenatal booking who had an HIV test during pregnancy was 98.8%, with very little variation across provinces. This figure exceeds the national target of 95% for 2011⁹ and suggests that maternal HIV testing has become a routine part of antenatal care.

Less progress has however been made with infant testing.

Has equity in testing for HIV-exposed infants been achieved?

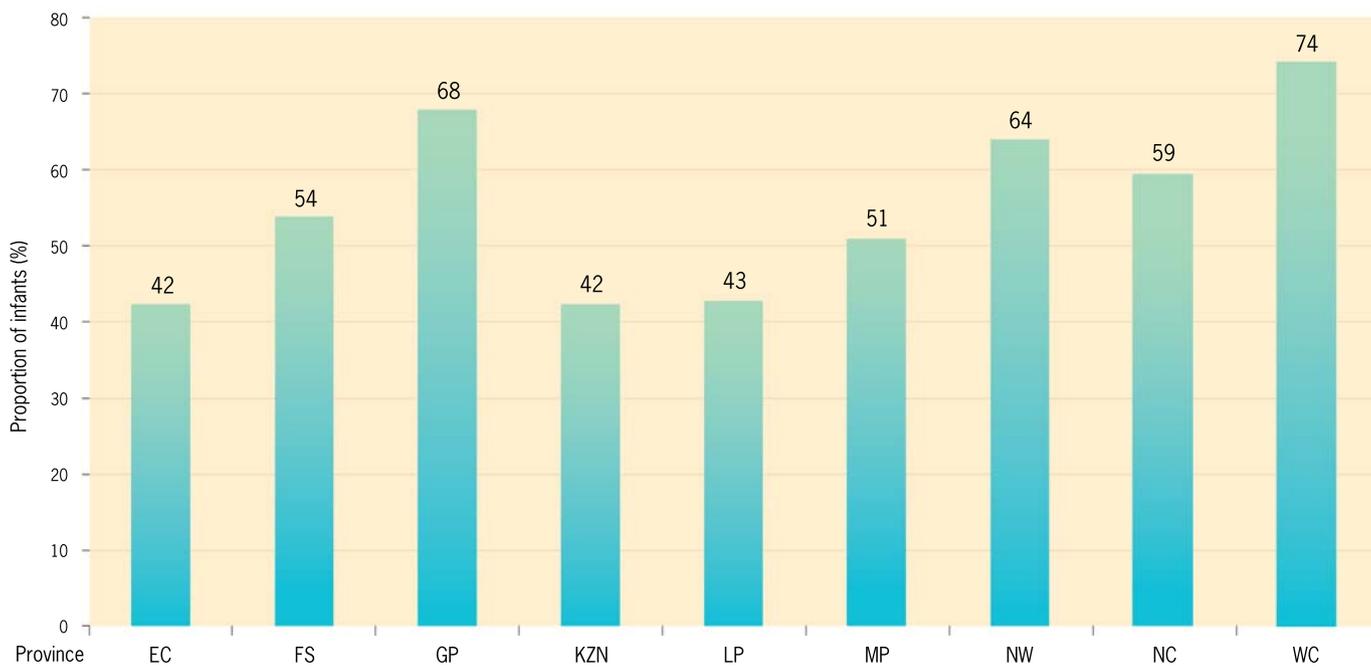
Early diagnosis and management of children with HIV is key to reducing mortality and improving long-term child outcomes. Early diagnosis in children is facilitated by a polymerase chain reaction (PCR) test administered to the infant at the six-week immunisation visit.

South Africa has made considerable progress in increasing the coverage of PCR testing but access to PCR testing is not available to all infants. There are lower levels of infant testing than HIV testing for pregnant women, and greater variation across provinces.

Data from the National Laboratory Information System indicate that the proportion of HIV-exposed infants who receive a PCR test before two months of age has increased dramatically over the past four years – from 36.6% in 2008 to 70.4% in 2011.¹⁰ This however remains below the national target of 85% for 2011.¹¹

Figure 25: Proportion of HIV-exposed infants who receive a PCR test within two months of birth, by province, 2010/11

(Y-axis reduced to 80%)



Source: Day C, Barron P, Massyn N, Padarath A & English R (2012) *District Health Barometer 2010/11*. Durban: Health Systems Trust.

Notes: Numerator = number of PCR tests done in infants under two months as recorded by the National Health Laboratory Service; denominator = current birth registrations from Stats SA x HIV prevalence (with 95% confidence interval) from the Antenatal Care Survey to calculate the estimated number of HIV-exposed infants.

The District Health Barometer includes a comparable indicator for PCR testing which points to significant variations across provinces (see figure 25). The provinces of the Western Cape (74%) and Gauteng (68%) have the highest coverage whilst rates of PCR testing are lowest in the Eastern Cape, KwaZulu-Natal and Limpopo. Children in urban centres are far more likely to get tested (60%) than those living in deprived rural districts (41%).¹²

High levels of HIV exposure combined with relatively low levels of service coverage in some provinces and districts create stark spatial inequities for infants. An infant born in Kwazulu-Natal for example has the greatest chance of being HIV-exposed (almost 40%) but only 42% are likely to be tested for HIV within the first two months after birth.

Without testing, these children will not have access to life-saving treatment.

More than half (51%) of childhood deaths in South Africa are HIV related with the majority of these occurring before the age of five years.¹³ In 2009 alone 30,000 children aged 0 – 14 years died as a result of AIDS.¹⁴ Many of these deaths could have been prevented with early infant diagnosis.

Has equity been achieved in treatment access for HIV-positive infants?

The presidential announcements on World AIDS Day 2009 revitalised HIV, AIDS and tuberculosis (TB) management. Since then, efforts to improve access to HIV treatment have included nurse-initiated antiretroviral treatment; treatment for children and adults at all health facilities; the revision of eligibility criteria for ART initiation; and a directive that all HIV-infected children younger than one year should start ART as soon as possible after diagnosis irrespective of CD4 count and World Health Organisation (WHO) clinical staging.¹⁵

Significant progress has been made since 2004 in increasing the number of children under 15 years on treatment (from approximately 4,200 in 2004 to over 150,000 in 2011¹⁶), with a paediatric coverage of 58% in 2010.¹⁷ While it is difficult to compare adult and paediatric measures of ART access directly,ⁱⁱ adult treatment coverage was close to 80% in mid-2011,¹⁸ highlighting substantial differences between adults and children in access to treatment relative to need. In addition, there remain challenges in determining the proportion of HIV-positive infants less than one year old who are initiated on treatment as per the paediatric guidelines. Ongoing effort is therefore required to strengthen data management systems to track and monitor paediatric treatment.

The effective implementation of policy guidelines for paediatric ARVs also requires a more equitable share of resources between adult and paediatric programmes and greater support on the ground for the implementation of policies, such as nurse-initiated ART for children.¹⁹

What needs to be done to improve equity?

Efforts to address inequities within the PMTCT continuum must include:

- Routine screening of all mothers and infants for HIV exposure as a core component of immunisation visits. Immunisation coverage for 2010/11 was 86.7%,²⁰ significantly higher than PCR-test coverage, pointing to missed opportunities within routine child health visits. A universal screening approach would dramatically increase the coverage of early infant diagnosis, an entry point to life-saving treatment.
- Reduced delays in obtaining infant HIV-test results as well as delays in communicating results to caregivers.²¹
- Improved tracing data to enable better follow-up of pregnant women and HIV-exposed infants, including those who do not return for PCR testing or results and those referred to other facilities.
- More effective supportive supervision and mentoring of nurses at primary health care level to initiate ART in children.
- Improved information management systems to track mothers and infants across the continuum of services and to monitor equity in service access and child outcomes. Data that are collected must be used more regularly and effectively to address service delivery challenges at facility level.
- Better understanding of the caregiver-related barriers to PMTCT, and what support is needed to help caregivers access prevention and treatment services, including information about the value of early infant diagnosis, testing and treatment.
- Strengthened links with social support structures and other potential entry points for early infant diagnosis and testing beyond health settings.

Given existing inequalities, unequal effort may be needed to ensure equal service access. In districts and provinces with high mother-to-child transmission rates, additional efforts are required to improve systems so that reduced transmission rates and improved access to care for mothers and infants will result in outcomes comparable with other areas.

What are the conclusions?

South Africa has achieved marked success in ensuring almost universal access to HIV testing of pregnant women. Further along the continuum of PMTCT interventions, however, two issues become apparent: coverage across the board reduces as service users “drop out” of the system, and there is greater variability in access across provinces.

Remaining inequities in access to and coverage of HIV-related services for children in South Africa are evidenced in the fact that HIV remains a risk factor in 50% of under-five deaths.²² Furthermore, while HIV infection in children is driven by the adult pandemic, children’s access to testing and treatment lags behind adults.

ii Since paediatric ART guidelines recommend that all HIV-infected children under 12 months are placed on ART, regardless of their immunological or clinical status, the annual number of new paediatric HIV infections is used to approximate the annual number of children newly eligible for ART (the denominator in the ART-enrolment ratio).

By 2016, the recently launched National Strategic Plan on HIV, STIs and TB (2012 – 2016) aims to reduce HIV transmission in infants to less than 2% at six weeks after birth and less than 5% at 18 months of age. The plan also aims to initiate and maintain on ART 90% of children in need.²³ As we strive towards these ambitious targets, greater efforts are needed to ensure and monitor equity in service access and quality of care across provinces and districts for the full spectrum of PMTCT services, and to ensure that infants and children who test HIV positive have access to early diagnosis, TB screening, treatment and care services to reduce infant and child mortality.

Towards this end, a directive was issued by the Department of Health in August 2012 stating that all children under five years of age were eligible for treatment regardless of CD4 count and/or WHO clinical staging.²⁴ The Department of Health is also in the process of developing a comprehensive action plan for paediatric and adolescent HIV and TB which addresses early infant diagnosis, treatment, care and support and includes a review of paediatric monitoring and evaluation systems.

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