

# A Multi-Pronged Approach to the Elimination of MTCT in South Africa

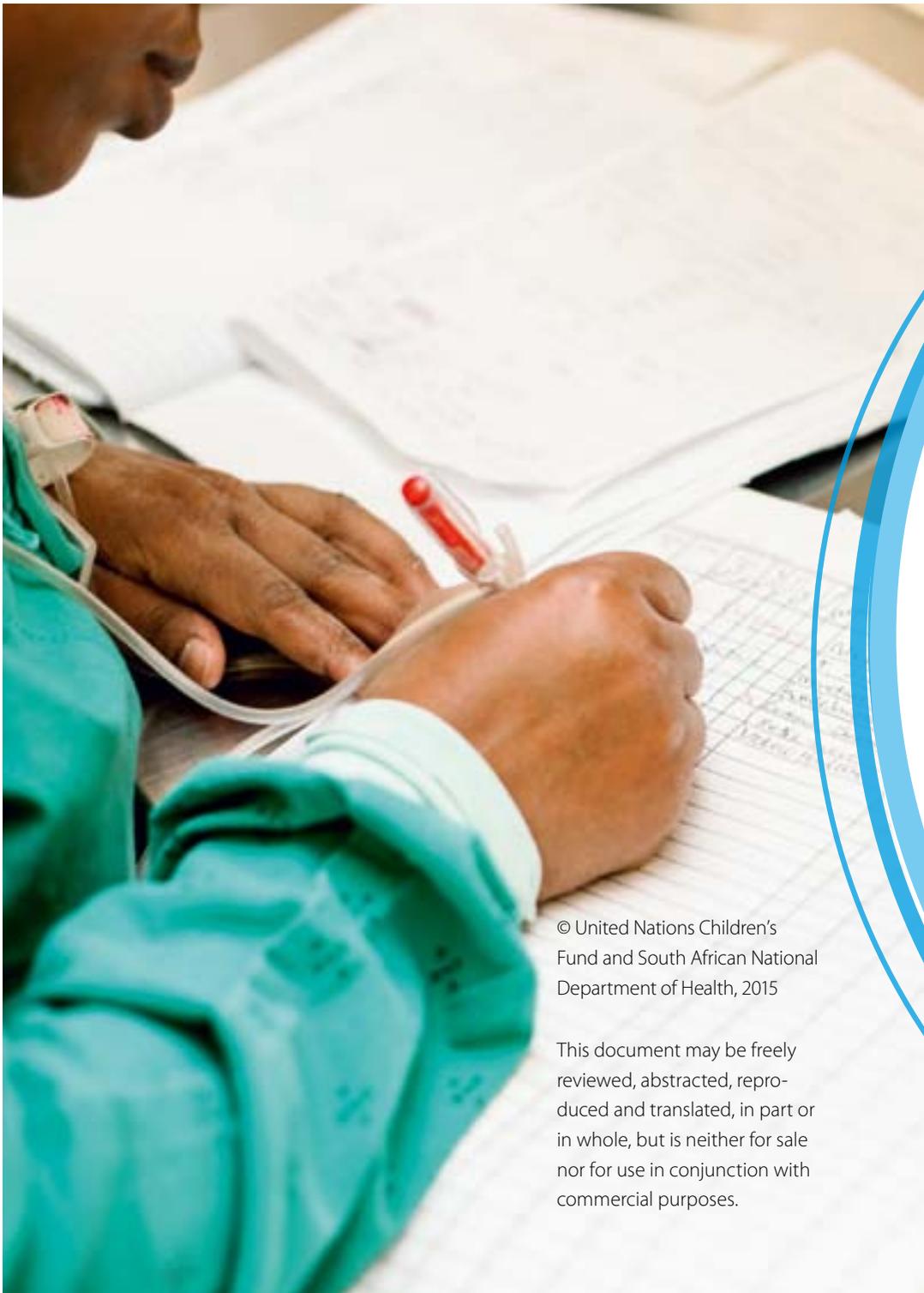


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# Summary

**South Africa has** the highest number of people living with HIV in the world, estimated at 6.4 million in 2012.<sup>1</sup> The overall HIV prevalence rate among antenatal women was 29.5% in 2011,<sup>2</sup> with the mother-to-child transmission rate estimated at 3.5% at 6 weeks in 2010.<sup>3</sup> In response to the *Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive* (Global Plan), the National Department of Health developed and implemented the national elimination of mother-to-child transmission (EMTCT) Action Framework entitled *No child born with HIV by 2015 and improving the health and wellbeing of mothers, partners and babies in South Africa*, and supported in all nine provinces and 52 districts to implement the framework.<sup>4</sup> The framework enabled evidence-based, accelerated, programme scale-up and delivery of quality services, with innovative data-driven action plans being developed and used for provincial and district-specific work planning, implementation and monitoring.

Five key strategic objectives or pillars were identified for scaling up quality integrated prevention of mother-to-child-transmission of HIV (PMTCT) services. These were designed to identify strategic challenges and determine relevant actions required for achieving the goals towards EMTCT. As a unit, these five pillars constitute best practice for EMTCT.

Political leadership and commitment at the highest level was crucial for accelerating the national HIV response, including EMTCT. Innovative responsive changes in policy – for example, the move



from single dose Niverapine to more efficacious triple antiretroviral (ART) regimens for PMTCT – coupled with quality improvement initiatives and shifting of tasks resulted in rapid scale-up of quality EMTCT services in the country. To maximise opportunities for access and uptake of services, PMTCT was integrated into the maternal, child and women's health programme. For example, early infant diagnosis (EID) was integrated into the immunisation schedule. The routine use of 'robot' dashboards and data for action reports ensured continuous monitoring of programme performance, and action planning and the reduction of bottlenecks at all levels, which resulted in increased accountability and better use of resources.

As a result, significant progress is seen towards the goals laid out by the Global Plan. The number of children newly infected with HIV in South Africa has declined by over 50% (33,000 in 2009 to 16,000 in 2012).<sup>6</sup> In 2013, 90% of HIV-positive women were receiving treatment for PMTCT, a significant increase from the 63% recorded in 2009.<sup>5</sup> Progress is evident across all indicators in the dashboard. The coverage of EID increased from 45% in 2009 to 87% in 2014.<sup>3,20</sup> Data on MTCT shows a transmission rate as low as 2.6% in 2012.<sup>26</sup> Routine data shows significant reduction in infant polymerase chain reaction (PCR) HIV positivity rates at around 6 weeks, from 5.8% in 2009 to 1.8% in 2014.<sup>20</sup>

An evidence-based multipronged approach was critical for the success seen in the journey towards the elimination of MTCT in South Africa.

# Background and justifications

**Access to more** efficacious ART for HIV-positive pregnant women was the major bottleneck that necessitated various policy and programme changes from 2001 to date.<sup>31</sup> The PMTCT programme provided single-dose Nevirapine to all pregnant women living with HIV in 2001. In 2003, the Government introduced a new treatment plan, which was extended to all pregnant women living with HIV, and their children.<sup>7</sup> Guidelines were further updated in 2004 with the introduction of comprehensive care management and the treatment of HIV-infected individuals. Pregnant women with a CD4 count of less than 200 became eligible for highly active antiretroviral therapy (HAART).<sup>7</sup>

The national PMTCT accelerated plan, or A-Plan, was implemented in 18 priority districts in 2008, with the aim of reducing MTCT from 8% in 2008 to less than 5% by 2011.<sup>8</sup> President Jacob Zuma's address on World Aids Day in 2009 marked yet another turning point.<sup>9</sup> The President announced new interventions for ART access for priority groups, and further modifications were made to the PMTCT programme, which included providing HIV testing and counselling for pregnant women, HAART for pregnant women and intensified efforts to integrate PMTCT services into routine maternal, newborn, child and women's health (MNCWH) services. In April 2013 new PMTCT guidelines were implemented, which saw single pill, fixed-dose combination (triple) ART being provided to all HIV-positive

pregnant and breastfeeding mothers regardless of their CD4 count until the end of breastfeeding, while those with a CD4 count of 350 or under were to continue for life with ART.<sup>11</sup> Life-long ART for all HIV-positive pregnant women and breastfeeding mothers, regardless of their CD4 count (Option B+), was implemented in January 2015.<sup>12</sup>

These policy and guideline changes were accompanied by programme changes, with the introduction of the PMTCT Operational Plan (2003), the Accelerated Plan (2008) and the National Action Framework (2011).



# Strategy and implementation

**The National Action Framework** 2011–2016 is currently being implemented and monitored through the five strategic pillars. Below is a brief description of the best practices for each pillar.

## **Pillar 1. Leadership, management and coordination:**

Political will and leadership from the President, the Minister of Health, and national, provincial and district leaders supported the EMTCT response.<sup>9,10</sup> Further momentum at field level is supported by the Minister of Health's focus to go from '30,000 to 3 feet', meaning that policy should be implemented at facility and community levels.<sup>12</sup> Various partners and coordinating mechanisms support the EMTCT response in the country, including the South African National AIDS Council (SANAC),<sup>13</sup> the United States President's Emergency Plan for Aids Relief (PEPFAR), the United Nations, research and academic institutions, civil society and implementing partners, by providing financial, technical and advocacy support.<sup>14,15,16</sup>

## **Pillar 2. Scaling up PMTCT coverage and improving the quality of care:**

Quality improvement teams with a focus on data management were established in all nine provinces and 52 districts. **Example 1:** Through the 20,000+ partnership in KwaZulu-Natal province,<sup>17,25</sup> using District Health Information System (DHIS) data, local staff were guided and enabled to monitor their performance for quality PMTCT service delivery. **Example 2:** The MomConnect programme



was piloted to close the gaps in the postnatal period by following up mothers and children.<sup>18</sup> KwaZulu-Natal noted a significant reduction of infant PCR HIV rates from 21% in 2005<sup>19</sup> to 1.4% in 2014.<sup>20</sup> **Example 3:** The North West province saw an increase in twelve-weekly antenatal retesting for early identification and linkage to care for newly HIV-infected women, reducing missed opportunities for counselling and retesting during pregnancy and breastfeeding through a quality improvement project. This involved allocating a counsellor to work with the professional antenatal check-up nurse to identify and test eligible patients, resulting in an increase in re-testing from 36% to 100% over a two-year period.<sup>21</sup> **Example 4:** Task-shifting, which led to nurse-initiated and -managed ART, was implemented to support large-scale implementation of the HIV treatment programme.<sup>22,23</sup>

### **Pillar 3. Integration of PMTCT programme components into MNCWH services:**

South Africa continues to integrate delivery of quality maternal and child health services with PMTCT. There is a focus on strengthening primary healthcare services, and on establishing district clinical specialist teams, ward-based outreach teams and school health programmes.<sup>24</sup> Laboratory support services for EID are available in more than 95% of public primary healthcare facilities<sup>33</sup> integrated within the national Expanded Programme on Immunisation (EPI) schedules.

### **Pillar 4. Strengthening monitoring and evaluation of the PMTCT programme:**

To facilitate the development of an early warning system to alert programme managers and facility staff to gaps in the PMTCT cascade, a colour-coded 'dashboard' monitoring

system was developed, comprising key indicators representing critical points in the PMTCT cascade.<sup>4</sup> This is monitored quarterly, along with steering committee and technical working group meetings, and annual stock-taking exercises that help identify and track progress with development of priority actions on identified bottlenecks.<sup>32</sup> This is supported by institutionalised quarterly provincial reviews to monitor performance of conditional grant business plans, including financial expenditure at country level and linked to regional stocktaking for the 21 priority countries identified by the Global Plan.<sup>6</sup> The Medical Research Council (MRC) supports the PMTCT impact study to understand population-level MTCT rates.<sup>3,26</sup> The National Health Laboratory Service (NHLS) provides monthly PCR testing reports.<sup>20,33</sup>

### **Pillar 5. Increase awareness and community involvement:**

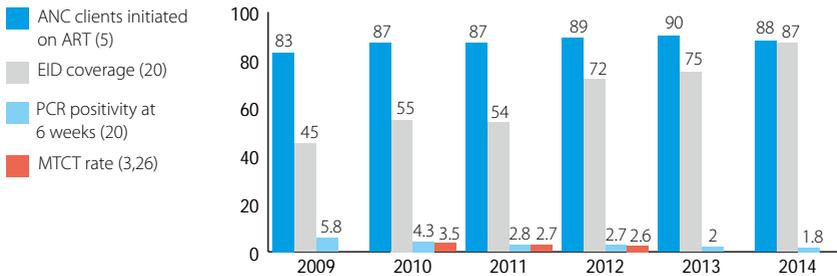
The National Department of Health's *Khomanani* campaign (meaning 'coming together') was set up to increase awareness and community involvement by mobilising communities for HIV and TB prevention, treatment and support, and the promotion of nutrition and health.<sup>8,27</sup> Examples of these initiatives have been implemented by Soul City, loveLife, Johns Hopkins Health and Education in South Africa (JHESA) and Community Media Trust to conduct HIV awareness campaigns, which educate target audiences, mostly in rural communities.<sup>28,29</sup> The Department of Health and mothers2mothers implemented a peer-based psychosocial and health education model involving the use of trained HIV-positive mentor mothers to work alongside doctors and nurses, which showed that facilities where mentor mothers are placed, the maternal ARV uptake improved from 93% in 2012 to 98% in 2014, PCR testing was 95% versus 85% recorded nationally, and the MTCT rate was 1.1%, well below the 2% national target.<sup>30</sup>



# Results

**There has been** significant progress with regard to the goals laid out by the Global Plan. The number of children newly infected by HIV in South Africa has declined by over 50%.<sup>6</sup> In 2013, 90% of HIV positive women were receiving treatment for PMTCT, a significant increase from 63% in 2009.<sup>5</sup>

Progress is also evident in critical dashboard indicators. EID coverage increased from 45% in 2009 to 87% in 2014.<sup>3,20</sup> Available data on MTCT shows a transmission rate as low as 2.6% in 2012.<sup>26</sup> Routine data shows significant reduction in infant PCR HIV positivity rates from 5.8% in 2009 to 1.8% in 2014.<sup>20</sup> See the graph below for progress on key indicators from 2009 to 2014.



A key enabling factor was the use of data for action to guide programme efforts. The dashboard indicators were used to effectively monitor results at district, provincial and national levels, allowing for accurate identification of problem areas in the cascade. The process also assisted in the identification of reporting gaps and the quality of data, and was effectively adopted as an accountability mechanism.





# Lessons learned

**High-level stewardship and** political leadership by the President, the Minister of Health, the National Department of Health and SANAC, strong partnerships with development and implementing organisations and the advocacy role of civil society have collectively played a pivotal role in the HIV response and EMTCT.

The use of standard data collection tools by all partners involved has been critical. The development of action plans at facility level has contributed to increased ownership by facility managers and staff. This is in tandem with the Health Minister's '30,000 to 3 feet' model to promote implementation of interventions with scale and quality at lower levels. Effective monitoring and evaluation collaboration resulted in the ability to triangulate data between the DHIS, the NHLS and the MRC's PMTCT impact evaluation results.

Continuous mentorship and supervision of healthcare workers was important for adoption and implementation of policy changes. Community health workers have been an important resource integral to the improvement of patients' access to services, follow-up and continuum of care in PMTCT and MNCWH services, resulting in bridging the gap between clinical and community-level care.

# Conclusion and recommendations

**It is critical** to have a common framework at all levels supporting the scale-up of the programme and involving all stakeholders with functioning mechanisms for continuous monitoring and feedback processes.

The South African experience shows the importance of political leadership at the highest level, government commitment, strong partnerships with development partners, implementing partners and civil society, quality improvement initiatives, continuous capacity-building and mentoring, programme monitoring and evaluation and community involvement. The combination of these efforts has resulted in significant reduction of new HIV infections in children and improved health outcomes for mothers and children.



# ANC REGISTER

Year: 2012

Month: Dec 2012

No.	Date of Visit (dd/mm/yy)	ANC Clinic No.	At entry		
			1st ANC Visit (Enter Gestational Age)	2nd ANC Visit	3rd ANC Visit
1					
2	01.8.12				
3	01.8.12	760614			
	01-08-12	90-02-19			
	01-08-12				

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