

ART Success Leads to New Challenges for Education in Botswana: Implications for a Growing African Cohort of Surviving Children and Teachers

E. Cooper¹, C. Risley¹, D. Bundy².

¹Partnership for Child Development, Department of Infectious Disease Epidemiology, Imperial College, London, UK ²The World Bank, Washington DC, USA.

Description of the problem: Botswana's adult (15-49) HIV prevalence in 2005 was 24%. However, Botswana has been highly successful in treating its HIV positive population: in 2005, of 84,000 who were estimated to need treatment 55,829 people received it. Schools not only have a primary role in keeping the uninfected from infection, but now also a secondary essential contribution in supporting the increased numbers of infected young people of school age. This will apply throughout Africa as perinatally infected, treated children grow older, while an increasing proportion of their teachers are also on ART.

Activities carried out and results obtained: Mathematical models were used to generate projections: a new model for the size of the expected HIV positive and treated school-age cohort, allowing for the effects of PMTCT and ART uptake, and the Ed-SIDA model to estimate the financial benefit of teacher ART, where all requiring it are assumed to take it from 2007.

The number of HIV positive children is expected to increase then decline over the next 15 years (fig 1), beyond which there will be very few infected children if PMTCT is maintained near 100%. We estimate that from 2007 to 2025 the education sector in Botswana will have to serve around 19,000 HIV positive school age children. An increasing proportion of their teachers will also be HIV positive and taking ARTs. We estimated a cumulative cost (through death and illness) of \$34M if no teachers are tested or treated 2005-2015, versus \$5M if all teachers who need ART are treated. Allowing for the cost of VCT over the ten year period, the net saving associated with VCT and ART provision is \$29M.

Lessons learned and next steps: The Ministry of Education has created a "Think Tank", with members from other sectors and other agencies, to consider the questions raised, e.g. How can HIV positive children be best prepared for the challenges of adolescence? How can the education and health sectors improve coordination to better facilitate access to VCT for staff? Specific policies and actions are planned at the level of Government, School and Community.

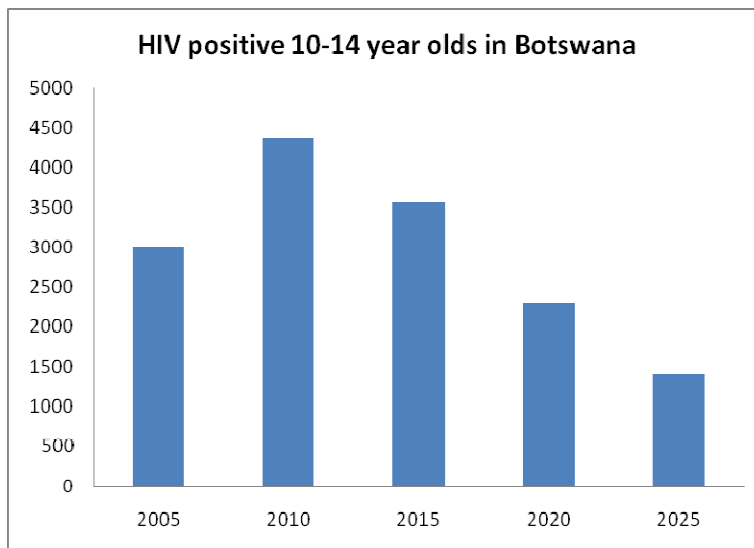


Figure 1: Expected numbers of HIV positive children in Botswana from 2005-2025.