Policy Brief: HIV Infection in Children Aged 5-14 Years

Now Is the Time to Act
BACKGROUND

Southern Africa is the epicentre of the HIV and AIDS pandemic, accounting for almost one-third of all new HIV infections and AIDS deaths globally in 2007\(^i\). Although the number of new infections among children less than 15 years of age declined globally from 460,000 in 2001 to 420,000 in 2007\(^i\), evidence from Botswana, South Africa, Swaziland and Zimbabwe suggests a high burden of HIV infection among children aged 2-14 years who are not yet sexually active. There is concern that these infections may not always be linked with mother-to-child transmission, and this has received growing, but still insufficient, attention.

WHY IS THIS ISSUE IMPORTANT?

• HIV prevalence in older children aged 5-14 years is estimated at around 3-6% in the four countries, and the burden of the disease in terms of the number of children (aged 0-14 years) living with HIV (estimated at 280,000 in South Africa alone) is a great concern\(^ii\). This sub-epidemic is largely unnoticed, and the group affected is often overlooked in current intervention programmes. There should be greater efforts in countries to ensure that those children infected with HIV receive adequate care and support.

• Literature has proven conclusively that paediatric HIV affects children cognitively, developmentally, emotionally, psychologically, behaviorally and educationally, with substantial implications for national economic development. HIV-infected children may not perform to their full educational potential, and may also face stigma, discrimination, and social isolation in school.

WHAT DOES THE RESEARCH TELL US?

EVIDENCE FROM BOTSWANA: According to the 2004 Botswana AIDS Impact Survey, the 2004 national HIV prevalence was 6.3% among children 1.5-4 years old, 6.0% among those aged 5-9 years, and 3.9% among those aged 10-14 years\(^iii\).

EVIDENCE FROM SOUTH AFRICA: The 2002 HIV Prevalence, Behavioral Risks and Mass Media Household Survey in South Africa, which was the first study to assess the HIV status of children at the national level, showed an unexpected HIV prevalence of 6.2% in children aged 2-9 years and 5.6% among children aged 2-14 years\(^iv\). A repeat Household Survey conducted in 2005 found that the HIV prevalence among children aged 2-4 years was 4.9% for males and 5.3% for females\(^v\). For children aged 5-9 years, it was 4.2% for males and 4.8% for females; while for children 10-14 years old, it was 1.6% for males and 1.8% for females.

A follow-up survey\(^vi\) of about 3,500 mother-child pairs in the Free State province of South Africa found that 0.28% of HIV-negative mothers had HIV-positive children, while 1.4% of HIV-positive children (seven in all) had HIV-negative mothers. Although the numbers are small, they suggest that the HIV positive status of the children was not associated with the status of their mothers, thus pointing to other sources of infection.
The study also attempted to identify potential sources of infection among HIV positive children whose mothers were HIV-negative. It found that breastfeeding by an HIV-positive non-biological caregiver was the single most important risk factor associated with HIV infection in children besides the most obvious route of mother-to-child transmission of HIV. It also found that in the 25 public hospitals, 54 primary health care clinics, and three community health care centres examined, there was inadequate attention to infection control practices.

**EVIDENCE FROM SWAZILAND:** Information from the Swazi Demographic and Health Survey (SDHS), which interviewed residents and obtained blood samples for anaemia and HIV testing in a representative national sample of households between July 2006 and February 2007, showed that national HIV prevalence was 4.2% among children aged 5-9 years, and 2.6% among those 10-14 years oldvii.

**EVIDENCE FROM ZIMBABWE:** In a study undertaken by the Social Aspects of HIV/AIDS Research Alliance (SAHARA) in the Chimanimani district in Zimbabwe, the overall HIV prevalence among 2-11 year olds was 3.3%c. Disaggregated by age groups, it was 2.5% among children 2-5 years old, increased to 5.8% among those aged 6-8 years, and dropped to 1.3% among those aged 9-11 years.

**WHAT ARE THE IMPLICATIONS OF THE RESEARCH?**

- Data on HIV prevalence in children is now available from representative national household surveys in South Africa, Botswana and Swaziland, and confirms that it is feasible to measure HIV prevalence in young children, and possibly to link data on children with that on their mothers.

- Available data from the four countries confirms the assumption that the majority of HIV infections in children below 15 years of age resulted from mother to child (vertical) transmission. It is, however, not clear what proportion is due to non-vertical transmission (i.e. transmission other than from mother to child).

- In the Zimbabwe community survey, the patterns of prevalence were different from what one would expect in vertical transmission. They suggest that there are other possible routes of transmission among children aged 5-9 years, and that vertical transmission may not be the only source of infection in young children. However, patterns of prevalence in the three countries with national surveys (Botswana, Swaziland and South Africa) were consistent (albeit at slightly higher levels) with what would be expected from vertical transmission. The observed higher prevalence could either be related to test specificity or to infections from other causes.

- The risk factors associated with non-vertical transmission have not been identified conclusively, and further empirical research is needed to identify them, including: hygiene practices and safety of medical equipment in health and dental facilities; breastfeeding of children by non-biological mothers; safety of blood supplies; factors effecting vulnerable groups such as street-children and child labourers; scarification; child sexual abuse in the family and neighbourhood context, or in relation to sex tourism; and some traditional medical practices.
POLICY AND PROGRAMMATIC RECOMMENDATIONS

Concern that HIV infection in children may not always be linked to mother-to-child transmission was the motivation for an Expert Meeting, which was hosted in Pretoria, South Africa on 18-19 March 2008 by SAHARA, in collaboration with UNAIDS, UNICEF, WHO and the South African Human Sciences Research Council (HSRC). The salient recommendations include:

• In view of the high burden of paediatric infections in countries in Southern Africa, national AIDS plans and strategies need to recognise and address the specific needs of HIV-infected children, and ensure access to treatment, care and support.

• All efforts to increase coverage of preventative measures and treatment, and their uptake and efficiency, need to be given the greatest possible support. The majority of child infections occur as a result of mother-to-child transmission, and there should be greater efforts in countries to provide high-quality PMTCT services to prevent pediatric infections.

• More work is required to determine prevalence and incidence in school-age children – perhaps through school-based surveys.

• National registers should be established in countries with a high burden of child infections to assess the levels of mother/child HIV discordance. Information should be entered in these registers routinely, and discordant cases followed up individually.

• Promising research approaches (e.g. the Free State study) should be replicated in local and multi-country studies. Existing partners in South Africa, such as the HSRC and other local and regional actors, particularly the SAHARA network partners in the region as a whole, could collaborate in such studies.

• Prevention of infection in young women (the future mothers), pregnant women, and breastfeeding women must be a priority.

• The dangers of non-vertical transmission should be given attention, through:
  o reinforcement and reinvigoration of universal precautions in health care, including dentistry;
  o more awareness of the dangers of careless management of expressed breast milk in health care settings;
  o ensuring safe blood supplies;
  o discouraging of ‘wet nursing’. There is a need for more research on its prevalence and the reasons for it, but it is already clear from South Africa that it is a problem.
  o prevention of child sexual abuse for various reasons, including the risk of HIV transmission. There should be a search for opportunities of linking legal efforts to eliminate abuse with greater awareness of the associated risks and prevention of HIV infection.
• There should be clear guidance to countries on ways of measuring HIV incidence in adults and in children, with support for innovative approaches as well as technical solutions.

• Better understanding of the longer-term natural history of HIV-related disease in children in the sub-region is required.

• Clarity is required on the sensitivity and specificity of HIV tests used in child-related surveillance.

• The reliability of the BED assay for measuring incidence among children needs to be investigated. As research teams in various countries are embarking on research on HIV in children using this method, the CDC/WHO Working Group on HIV Incidence Assays is urged to reach a conclusion as rapidly as possible, and inform the research community about their findings.

For further details, please contact:

Dr. Vincent U. Agu
Director, Social Aspects of HIV/AIDS Research Alliance
14th Floor, Plein Park Building
69-83 Plein Street
Cape Town 8001, South Africa
Phone: +27 21 466 7944
Email: vagu@hsrc.ac.za
www.sahara.org.za
List of participants

Human Sciences Research Council (HSRC)

Dr Olive Shisana, President & CEO
Dr Leickness Simbayi, Acting Executive Director, SAHA
Dr Vincent Agu, Director, SAHARA
Dr Geoffrey Setswe Acting Director, SAHARA Southern Africa
Mr Gerard Boyce, Chief Researcher, Child, Youth, Family and Social Development (CYFSD)
Ms Katherine de Tolly, Information Dissemination Manager, SAHARA
Mr Edgar Joshua, Finance Manager, SAHARA
Ms Lee-Ann Fritz, Project Administrator, SAHARA

United Nations agencies

Dr Eleanour Gouws, UNAIDS, Geneva
Dr Susan Kasedde, UNAIDS Regional Support Team, Johannesburg
Dr David Alnwick, Senior Adviser, HIV and AIDS, UNICEF Regional Office, Nairobi
Roeland Monasch, Deputy Representative, UNICEF, Harare, Zimbabwe
Dr Jama Gulaid, UNICEF Representative, Swaziland
Dr Ngashi Ngongo, Chief, Health, UNICEF Country Office, South Africa
Dr Francis Onyango, WHO sub-Regional Office, Harare

Other participants

Dr G. Nnunu Tsheko, Botswana
Ms Rachel Masuku, Swaziland
Dr Heather B. Jaspan, Assistant Professor, University of Cape Town
Nigel Rollins, University of Kwazulu-Natal
Dr M. Ali Dhansay, Vice President: Research, South African Medical Research Council
Dr Sean Morrow, Rapporteur

References