Children's access to HIV treatment in Malawi, Uganda and Zimbabwe

Introduction

Antiretroviral therapy (ART) coverage of children lags behind that of adults, and needs to be urgently improved. In the 22 Global Plan priority countries, only 34% of children in need of ART were receiving it by the end of 2012, according to the WHO 2010 definitions of eligibility. The new WHO guidelines, released in 2013, have further expanded the number of children deemed to be in need of treatment.

Approximately 10% of children living with HIV globally live in Malawi, Uganda and Zimbabwe. ART coverage for children (based on 2010 eligibility) was 36% of those in need in Malawi, 33% in Uganda, and 45% in Zimbabwe by end of 2012. This compares to coverage of 76%, 70% and 85% of adults eligible for ART in these countries respectively. Importantly whereas children make up approximately 16% of those in need of treatment in these three countries, they constitute only ~8% of those on treatment.

This brief examines children's access to ART in Malawi, Uganda and Zimbabwe, based on a cross sectional survey of 81 health facilities representing different geographical regions and different stages of ART provision.

Availability of early infant diagnosis

The ability to diagnose infants early is important, as without treatment around half of children with HIV die before their second birthday. However, diagnosing infants requires access to specialised virus DNA PCR tests, rather than the antibody tests that are used to diagnose older children and adults. Our survey found that DNA-PCR testing for infant diagnosis was available (through samples being sent off-site for testing) at 82% of Malawian primary facilities, 67% of Ugandan primary facilities, and 100% of Zimbabwean primary facilities. It was also available at 81% of Ugandan secondary health facilities, all secondary facilities in Malawi and Zimbabwe, and all tertiary facilities surveyed. However, it was mostly confined to infants born in PMTCT programmes.

About the baseline survey

As part of the Lablite project, a baseline survey was carried out of 81 purposively selected health facilities in Malawi, Uganda and Zimbabwe. These facilities were from different geographical regions and facility levels, and were at different stages of ART provision. Detailed questionnaires were administered to the in-charge nurse or clinician of the facility, or a representative. They included questions on the services provided by the facility and human resources. It was carried out between September 2011 and July 2012.

Key Points

- ART coverage for children is disproportionately low
- Testing availability for infants is mostly via referral from small centres and generally confined to babies born to HIV+ mothers in PMTCT programmes
- Increased awareness and testing of children in families with HIV-infected adults is needed, as well as getting infants on cotrimoxazole prophylaxis and HIV-infected children on treatment.

Paediatric ART services

ART services were available in all the secondary and tertiary facilities included in the survey in all three countries. However, at the time the survey was conducted, ART was available at only around half of primary health facilities in Malawi, a third in Uganda and, although available in nearly all the primary health facilities in Zimbabwe, it was only via outreach from a referral centre about once a fortnight. Of those facilities that had ART services on-site, all those in Malawi and Uganda were able to initiate and follow-up children. In Zimbabwe 3 of the 15 primary facilities did not initiate children on ART, and 1 of the 15 did no paediatric follow-up.

Table 1: Percentage of people initiating treatment each month who are children, in health facilities surveyed

Malawi			Uganda			Zimbabwe	
Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	Primary	Secondary
9%	6%	4%*	15%	12%	5%	16%	13%

* NB. Many children in the catchment area for the tertiary facility surveyed in Malawi would travel to a nearby specialist paediatric centre instead, which was not included in the survey, so proportion of children is an underestimate.

Proportion of ART patients who are children

In the facilities surveyed in Uganda, children made up around 7% of people on ART in primary health facilities, 7% in secondary facilities, and 10% in tertiary facilities; by comparison, ~16% of those in need of ART are children. In the facilities surveyed in Zimbabwe, children made up 10% of people on ART in primary health facilities, and 7% in secondary facilities; by comparison, ~14% of those in need of ART are children. Age-disaggregated data are not available for Malawi.

In order to correct the under-representation of children on ART, the proportion of new initiations who are children would need to be higher than the proportion of people in need of ART who are children. However, in the facilities surveyed this was not the case, except in primary facilities in Zimbabwe, as table 1 shows.

Paediatric ART regimens

The 2013 WHO ART guidelines recommend the following as preferred first-line ART regimens:

- Abacavir or zidovudine + lamivudine + lopinavir/ritonavir for children <3 years old
- Abacavir + lamivudine + efavirenz for children 3 years to less than 10 years, and adolescents <35kg
- Tenofovir + lamivudine (or emtricitabine) + efavirenz for adolescents >35kg

In Malawi and Uganda, most health facilities used zidovudine-based regimens for children, with a small number using stavudine, which is no longer recommended by WHO, and is not used for adults in Uganda. In Zimbabwe, all secondary facilities were using zidovudine-based regimens, while 3 out of 5 primary facilities were still using stavudine for children. Regimens with abacavir were only available in some facilities in Uganda, and lopinavir/ritonavir was only available as a standard first-line regimen in 6% of facilities giving paediatric ART. The most common second-line ART regimens were lopinavir/ritonavir based. Almost all primary and secondary facilities in Zimbabwe have to refer children to other facilities for second-line ART.

Stockouts of paediatric ART

Stockouts of paediatric ART were a significant problem in Uganda, with half of primary health facilities and 19% of secondary facilities reporting having had stockouts over the last 3 months These stockouts lasted for periods ranging from 2 weeks to the entire 3 months. 22% of primary health facilities in Malawi also reported paediatric ART stockouts, although these lasted for a week at most. A third of secondary facilities in Zimbabwe reported stockouts of paediatric ART in the previous 3 months, lasting for between 14-40 days. Stockouts of paediatric ART are more frequent than stockouts of adult ART in Uganda. It is unclear whether children always receive adult formulations when paediatric ones are not available.

Stockouts of cotrimoxazole prophylaxis for HIV-infected patients are even more common. 73% of primary health facilities in Malawi, and 42% of primary and 25% of secondary facilities in Uganda reported stockouts in the previous 3 months, lasting for periods from 2 weeks to the full 3 months. 6% of primary and 16% of secondary facilities in Zimbabwe also had cotrimoxazole stockouts. This is a serious problem, as the ARROW trial has shown how important cotrimoxazole is for reducing illness among children on ART, even among those with high CD4 counts.

Conclusions and recommendations

We urgently need to increase children's access to ART in Malawi, Uganda and Zimbabwe. The impressive scale-up of ART in each of the three countries in recent years seems to have left children behind, with disproportionately few children on ART.

The first step towards getting children onto treatment is to diagnose them. While early infant diagnosis was available (via sending samples off-site for testing) from most facilities, a significant third of primary health facilities in Uganda did not offer this. Healthworkers need to be encouraged to test not just those children who come through the PMTCT system, but also those who come into contact with the health system in other ways, such as sick children presenting to primary healthcare facilities and, in bigger centres, to inpatient or malnutrition wards.

Most facilities that offer adult ART also offer paediatric ART. Where this is not the case (some of the primary health facilities in Zimbabwe), efforts should be made to ensure that children can access ART, which, according to WHO 2013 guidelines, should be offered to all HIV-infected children <5 years of age. The increasing roll-out of ART to primary health facilities in all three countries, driven by the move to option B+ PMTCT, provides an opportunity to increase coverage of ART for children, if health workers are given the necessary training. While in the medium term expanded PMTCT will reduce the number of new infections in children, there are large numbers of children already infected who will need access to paediatric ART for years to come.

Healthworkers need to be encouraged to get more children onto treatment. The ARROW trial has demonstrated that children do really well on treatment, even without routine laboratory monitoring.

The issue of stockouts also needs to be tackled urgently. Measures need to be put in place to ensure children do not have to go without treatment or cotrimoxazole prophylaxis, both by preventing stockouts, and by having a plan for what to do when they happen (such as using split tablets of adult formulations of ART).

The scale-up of ART in adults has led to an impressive increase in the proportion of adults receiving treatment, leading to huge reductions in illness and deaths. We now need to make sure that children are also able to access this life-saving treatment.

Recommended reading

Chan, A. K., D. Ford, et al. (2014). "The Lablite project: a cross-sectional mapping survey of decentralized HIV service provision in Malawi, Uganda and Zimbabwe." BMC Health Serv Res 14: 352.

Bwakura-Dangarembizi, M., L. Kendall, et al. (2014). "A randomized trial of prolonged co-trimoxazole in HIV-infected children in Africa." N Engl J Med 370(1): 41-53.

Kekitiinwa, A., A. Cook, et al. (2013). "Routine versus clinically driven laboratory monitoring and first-line antiretroviral therapy strategies in African children with HIV (ARROW): a 5-year open-label randomised factorial trial." Lancet 381(9875): 1391-1403.

Penazzato, M., P. Revill, et al. (2014). "Early infant diagnosis of HIV infection in low-income and middle-income countries: does one size fit all?" Lancet Infect Dis 14(7): 650-655.

UNAIDS (2013). Global Report: UNAIDS report on the global AIDS epidemic 2013. Geneva, UNAIDS.

World Health Organisation (2013). Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. Geneva, World Health Organisation.

UKaid
from the British people

About Lablite

Lablite is an implementation project investigating strategies to roll out HIV treatment safely and cost-effectively in sub-Saharan Africa. The project is working closely with ministries of health in three countries in Africa (Malawi, Zimbabwe and Uganda). It aims to inform national and international policy on how best to use the limited funds available to increase coverage of HIV treatment. Lablite is funded by the UK Department for International Development.

See more at: www.lablite.org