

Access to antiretroviral treatment in adults

Leigh Johnson¹

HIV & AIDS and STI National Strategic Plan 2007-2011

“Households experience the immediate impact of HIV and AIDS, because families are the main caregivers for the sick and suffer AIDS-related financial hardships. During the long period of illness caused by AIDS, the loss of income and cost of caring for a dying family member can impoverish households [39]. The target is to provide an appropriate package of treatment, care and support services to 80% of people living with HIV and their families by 2011 in order to reduce morbidity and mortality as well as other impacts of HIV [64].”

Indicator

The proportion of HIV-infected adults progressing to AIDS in a particular year who initiate antiretroviral treatment

Definition

This indicator is calculated as the number of adults starting antiretroviral treatment (ART) in a particular year, divided by the number of new adult AIDS cases over the same year.

Percent of adults newly eligible for antiretroviral treatment (ART), who initiate treatment

Province	2002/3	2003/4	2004/5	2005/6	2006/7	2007/2008
Eastern Cape	4.3%	7.0%	19.1%	31.8%	36.4%	43.8%
Free State	3.0%	3.2%	8.7%	13.2%	21.5%	27.5%
Gauteng	3.7%	8.3%	16.7%	28.1%	29.3%	36.6%
KwaZulu-Natal	4.0%	4.6%	15.3%	30.1%	36.3%	46.6%
Limpopo	3.0%	3.8%	11.7%	26.9%	33.2%	40.4%
Mpumalanga	3.1%	4.1%	7.9%	18.5%	33.3%	42.6%
Northern Cape	4.0%	6.6%	28.9%	43.2%	74.4%	90.4%
North West	2.7%	3.5%	17.6%	33.4%	33.8%	42.6%
Western Cape	9.0%	33.1%	43.0%	57.6%	56.5%	68.2%
South Africa	3.8%	6.6%	16.1%	28.9%	34.0%	42.8%

Sources National Comprehensive HIV and AIDS Plan statistics (Department of Health 2008)
ASSA2003 AIDS and Demographic model (Dorrington, Johnson, Bradshaw & Daniel 2006)

Note Reporting periods run from mid-year to mid-year.

¹ Centre for Actuarial Research, University of Cape Town

Commentary

Adult access to ART is important for children because it has a direct impact on the health and survival of parents and other caregivers. The challenges for children of living with AIDS-ill caregivers and of orphanhood are well documented by research from across sub-Saharan Africa.

Prior to 2004, access to antiretroviral treatment in South Africa was mainly limited to beneficiaries of medical schemes and individuals receiving treatment through workplace treatment programmes. Towards the end of 2003, the Department of Health announced its Comprehensive HIV/AIDS care, management and treatment plan, which included the provision of antiretroviral treatment to all patients attending public health facilities with a CD4+ count $<200/\mu\text{l}$ or an AIDS-defining illness.¹

The implementation of the comprehensive HIV/AIDS plan has led to a sharp increase in the proportion of newly eligible adults initiating treatment, from 3.8% in 2002/3, to 42.8% in 2007/8 (or roughly 200,000 individuals). The speed and extent of scale-up of the ART programme is unprecedented in the history of the health system in South Africa.

However, despite progress in making antiretroviral treatment available in the public health sector, there remains a vast unmet need for treatment: 760,000 eligible adults were still not receiving treatment by mid-2008.

There are substantial differences in access to antiretroviral treatment across the provinces. Following the national Department of Health announcement in 2003, the Western Cape introduced antiretroviral treatment much more rapidly than other provinces, and an estimated 68.2% of newly eligible adults started treatment between mid-2007 and mid-2008. Over the same period, an even higher rate of coverage (90.4%) was achieved in the Northern Cape. Free State has had the lowest rate of antiretroviral coverage in recent years (27.5%).²

There are several barriers to the expansion of the antiretroviral treatment programme. Most critical is the lack of infrastructure and shortage of trained health workers in many public health facilities, which makes it difficult to devolve the provision of antiretroviral treatment to the primary care level. It is also likely that a large proportion of individuals who are eligible for antiretroviral treatment are either not aware of their HIV status or have not received a recent CD4 assessment. Stigma and confusion regarding the effectiveness of antiretroviral treatment are likely to result in individuals avoiding diagnosis and treatment.

Technical notes

The method used to calculate the antiretroviral treatment coverage in adults differs from that used by UNAIDS and the WHO.³ While this Children Count – *Abantwana Babalulekile* indicator is a measure of the proportion of newly eligible individuals who start antiretroviral treatment, over a period of time, the UNAIDS/WHO indicator is a measure of the proportion of eligible individuals who are receiving antiretroviral treatment at a point in time. In our

calculation, the numerator is the number of adults (aged 15 years up) initiating antiretroviral treatment in a particular year. This is estimated from data on numbers of patients receiving antiretroviral treatment in the public health sector⁴ and data collected from private sector disease management programmes, and programmes run by non-governmental organisations⁵. The rationale for using this method is that it provides a better indicator of recent programme performance than the UNAIDS/WHO definition, which is an indicator of past programme performance.

The Department of Health data collection system defines children as 0 – 14 year olds. All people over 15 are classified as adults. Adult data is only disaggregated in 5 year age-bands, which makes it impossible to report in this indicator on adults as defined in the South African constitution (over the age of 18).

The denominator is the number of new adult AIDS cases over the same year, as estimated by the ASSA2003 AIDS and Demographic model.⁶ In the ASSA2003 model, antiretroviral treatment is assumed to start at the time of the first AIDS-defining illness, and the calculation of the number of new adult AIDS cases in a particular period is therefore unaffected by the level of antiretroviral provision. Since the ASSA2003 model estimates of annual numbers of new AIDS cases are published over intervals from mid-year to mid-year, the rates of adult antiretroviral coverage are calculated for the same periods.

Strengths and limitations of the data

Antiretroviral coverage in South Africa is difficult to estimate because private sector data are very limited. A strength of this analysis is that it draws on previously unpublished data from disease management programmes and non-governmental organisations that are involved in the provision of antiretroviral treatment.

There is however substantial uncertainty regarding the accuracy of provincial estimates. Data on the provincial distribution of treatment in the private sector are out of date, with the most recent data relating to 2003. There appear to be anomalies in the public health sector data published by the Department of Health. There is also substantial uncertainty around the ASSA2003 estimates of the annual numbers of adults progressing to AIDS in each province (the denominator in the calculation of antiretroviral treatment coverage). Caution is therefore required when analysing the relative levels of antiretroviral coverage in the different provinces.

A further limitation is that the ASSA2003 model estimates the number of new AIDS cases rather than the number of individuals who are newly eligible for antiretroviral treatment. The latter includes individuals whose CD4+ counts have dropped below the threshold of 200/ μ l, while the former does not. This is likely to result in some under-estimation of treatment need – and because of the under-estimation of the denominator, there is likely to be over-estimation of adult antiretroviral treatment coverage.

It is unfortunately not possible to analyse antiretroviral coverage at a district level, since numbers of patients on antiretroviral treatment are not published at a district level, either for the public sector or the private sector. In addition, the ASSA2003 model that is used in the denominator of the antiretroviral coverage calculation has not been applied at a district level.

References

- ¹ Department of Health (2003) *Operational plan for comprehensive HIV and AIDS care, management and treatment for South Africa*. Available: <http://www.info.gov.za/issues/hiv/aidsqa19nov03.pdf>
- ² Adam MA & Johnson LF (2009) Estimation of adult antiretroviral treatment coverage in South Africa. *South African Medical Journal*. 99: 661-667.
- ³ Boerma JT, Stanecki KA, Newell MI, Luo C, Beusenbergh M, Garnett GP, Little K, Calleja JG, Crowley S, Yong Kim, J, Zaniewski E, Walker N, Stover J & Gys PD (2006) Monitoring the scale-up of antiretroviral therapy programmes: methods to estimate coverage. *Bulletin of the World Health Organization*, 84(2): 145-150; UNAIDS (2008) *2008 Report on the global AIDS epidemic*. Available: http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2008/2008_Global_report.asp
- ⁴ Department of Health (2008) National Comprehensive HIV and AIDS Plan Statistics. Unpublished.
- ⁵ Johnson LF & McLeod HD (2007) Steady growth in antiretroviral treatment provision by disease management and community treatment programmes. *South African Medical Journal*. 97(5): 358-359.
- ⁶ Dorrington RE, Johnson LF, Bradshaw D & Daniel T (2006) *The Demographic Impact of HIV/AIDS in South Africa. National and Provincial Indicators for 2006*. Rondebosch: Centre for Actuarial Research (UCT), South African Medical Research Council and Actuarial Society of South Africa. Available: http://www.commerce.uct.ac.za/Research_Units/CARE/RESEARCH/PAPERS/ASSA2003Indicators.pdf

September 2009
