Challenges with using estimates when calculating ART need among adults in South Africa

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Background. The Foundation for Professional Development (FPD) collects information annually on HIV/AIDS service provision and estimates service needs in the City of Tshwane Metropolitan Municipality (CTMM). Antiretroviral therapy (ART) data from the Department of Health and Statistics South Africa (SSA) mid-year population estimates were used to approximate the ART need among adults in the CTMM.

Results. According to SSA data, ART need decreased dramatically from 2010 to 2011 and was lower than the number of adults receiving ART. Although the noted difference was probably due to changes in the calculations by SSA, no detailed or confirmed explanation could be offered.

Conclusions. We provide a constructive contribution to the discussion regarding the use of model-derived estimates of ART need.

Methods. Antiretroviral therapy (ART) data from the Department of Health and Statistics South Africa (SSA) mid-year population estimates were used to approximate the ART need among adults in the CTMM.

Results and discussion

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must be clarified, especially in light of the possibility that others may solely rely on the latest SSA report figures.

ART need change: possible explanations

The drastic change in ART need suggests a fundamental change in inclusion criteria and/or calculation methodology. This was probably supported by the subtle label change from ‘number of persons in need for ART, 2005 - 2010’ to ‘number of persons in need of ART, 2005 - 2011’. The latter could imply that it only reflects persons requiring ART initiation. However, SSA indicated that there was no change in definition (SSA, personal communication) and when looking at the data for children provided in the SSA mid-year population estimates this indeed does not seem to be the case (the number of children in need showed a large increase as expected).

The UNAIDS Reference Group on Estimates, Models and Projections regularly reviews new data, hence, the methodology and assumptions used in the Spectrum programme are updated continuously. According to the WHO/UNICEF/UNAIDS 2011 Global HIV/AIDS response report, the 2011 Spectrum model accounts for HIV-positive adults according to CD4 count (to capture threshold changes). Furthermore, defining ART need depends on national criteria of ART eligibility. In 2010 SA partly adopted the revised WHO guidelines (threshold altered from a CD4 count of 200 to 350). Based on this, an increase in ART need would be expected.

The Global HIV/AIDS response report highlights that the time from acquiring HIV until progression to ART eligibility is slower than previously estimated. As a result, ART need estimates from the 2011 Spectrum model are lower than from the 2009 Spectrum model (for 2010, a 12% decrease). The comparison of coverage rates using different criteria for the denominator should therefore be avoided. SSA indicated that new calculations are performed each year, based on the latest information available, therefore calculations should not be compared with those of previous years (SSA, personal communication).

SSA could not identify what caused the vast difference in their 2010 and 2011 calculations. Furthermore, it is unclear whether SSA already used the 2011 Spectrum model, because the methodology documents that accompany each mid-year population estimates report, do not provide information on the need for ART estimates. This is possibly because, according to SSA, ‘the HIV data are not the main focus of the report’. However, the decrease reported in the 2011 Global HIV/AIDS response report is much less than that of the SSA mid-year estimates report. An explanation for this should be sought.

Conclusion

We provide a constructive contribution to the discussion concerning the use of model-derived estimates of ART need. It is critical that those providing estimates (in this case, SSA) clearly indicate whether any significant changes exist compared with earlier reports and, if so, the cause and implications of these changes.

References


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