

## Note to users of the ASSA2008 AIDS and Demographic model

### 27 August 2012

Users of the ASSA2008 model should be aware that the model is likely to be overstating the extent of recent AIDS mortality and mother-to-child transmission of HIV in South Africa. The model was released in March of 2011, and since that time, several new analyses have pointed to significant changes needed to the model assumptions. Most importantly:

- Research presented at the 5<sup>th</sup> South African AIDS Conference (Boulle *et al.* 2011) has shown that the rates of survival in South African adults receiving antiretroviral treatment (ART) are substantially higher than those assumed in the ASSA2008 model.
- Research on ART coverage in South Africa (Johnson 2012) has shown that the number of patients starting ART in South Africa in recent years has exceeded the numbers estimated by the ASSA2008 model.
- A recent national survey of infants aged 4-8 weeks has estimated that the mother-to-child transmission rate at birth has been reduced to 3.5% (Goga *et al.* 2012). This contrasts with the ASSA2008 model assumption of 9.4% in 2010.

In addition to this, the guidelines for ART initiation were changed in August of 2011 to recommend ART initiation in all adults with CD4 counts below 350/ $\mu$ l. This should lead to ART initiation at earlier disease stages in future, with important implications for mortality and HIV incidence. The ASSA2008 model currently assumes that patients start ART at the time of their first AIDS-defining illness, and significant structural changes to the model would be required to allow for ART initiation in earlier stages of disease.

A new model is currently under development, and it is expected that the new model will address these problems. In the interim, individuals may continue to use the ASSA2008 model, but should avoid using or quoting the model forecasts of AIDS mortality and mother-to-child transmission beyond 2008. The projected HIV incidence rates for the adult population are however considered to be reasonable estimates.

## References

Boulle A, Schomaker M, Hoffmann C et al. (2011) *Survival on antiretroviral treatment in South Africa corrected for loss to follow-up through linkage to the national death registry*. 5th South African AIDS Conference. Durban, South Africa, 7-10 June 2011.

Goga AE, Dinh TH and Jackson DJ (2012) *Evaluation of the Effectiveness of the National Prevention of Mother-to-Child Transmission (PMTCT) Programme Measured at Six Weeks Postpartum in South Africa, 2010*. South African Medical Research Council, National Department of Health of South Africa and PEPFAR/US Centers for Disease Control and Prevention. Available: <http://www.doh.gov.za/docs/reports/2012/pmtcteffectiveness.pdf>. Accessed 12 June 2012

Johnson LF (2012) Access to antiretroviral treatment in South Africa, 2004-2011. *Southern African Journal of HIV Medicine* 13, 22-7.