

The first policy brief, produced in April 2009, dealt with the population of South Africa and used the ASSA2003 population projection model from the Actuarial Society of South Africa. All subsequent NHI and disease modelling work has been done using that projection but with the recommendation to use the revised ASSA model then under development. The ASSA2008 model was released in March 2011. This policy brief updates the earlier work and highlights the major changes in the projected population and projected HIV/AIDS epidemic.

The graph overleaf compares the StatsSA population estimates for South Africa, the ASSA2003 projection and the new ASSA2008 projection for the total population to 2025. The NDoH/HISP projection is a set of future projections of the population used by the National Department of Health, National Treasury and provincial health departments for planning. ASSA2008 is projecting a larger and growing population compared to ASSA2003. There is a significant difference by 2025, with ASSA2008 now projecting 56.256 million people, an increase of 8.6% from ASSA2003 with 51.818 million people.

The most substantial change to previously published estimates is a decline in AIDS mortality in recent years: from the ASSA2003 estimate of 388,000 deaths in 2010 to the ASSA2008 estimate of 194,000 deaths in 2010. ASSA explains that the "change in mortality estimates is partly due to revised assumptions about mortality rates in untreated HIV-infected individuals ... However, the more substantial reduction ... is largely due to the rapid expansion of the South African antiretroviral treatment programme. ... The new model has also factored in substantial increases in condom use over the last decade."

The increase in condom usage results in a decrease in HIV prevalence in the younger groups. However there is an increase in HIV prevalence in older adults which "can be partly attributed to HIV-infected adults surviving for longer due to antiretroviral treatment." The survival times of adults and children are longer in ASSA2008 than in ASSA2003, as shown overleaf.

Using ASSA2008, the total cost in 2025 for PMBs is higher at an index of 127.0 or 9.9% higher than before. There are two effects at work: the slightly older population projected in 2025 and the much larger population in the new projections. When applied to a comprehensive benefit package, the index becomes 267.3. This forward planning for demographic change is critical for assessing the future cost of any National Health Insurance proposal.

There is a very significant change from ASSA2003 to ASSA2008 in the numbers expected to be on anti-retroviral treatment, with a doubling of the numbers by 2025. This has the effect of substantially increasing the numbers living with AIDS. The improved survival times and greater numbers living on ARV treatment also mean a substantial reduction in the number of orphans.

There are substantial differences in the age and gender profile between provinces which affect price or the capitated amount needed for healthcare. A caution is that different population projections can have very different projections at provincial level. KwaZulu-Natal continues to have the highest HIV prevalence and Western Cape the lowest. This means there is a wide disparity in the need for treatment by province and this confirms the need for a risk-adjusted payment to the provinces which includes age, gender and HIV/AIDS as risk factors.

It is strongly recommended that any costings of healthcare for a future National Health System (NHS) or National Health Insurance (NHI) be updated to include the revised population projections from the ASSA2008 model. Where possible, researchers should include the NDoH/HISP projections as well in order to be able to illustrate differences between ASSA2008 and the projections in use by Government departments.

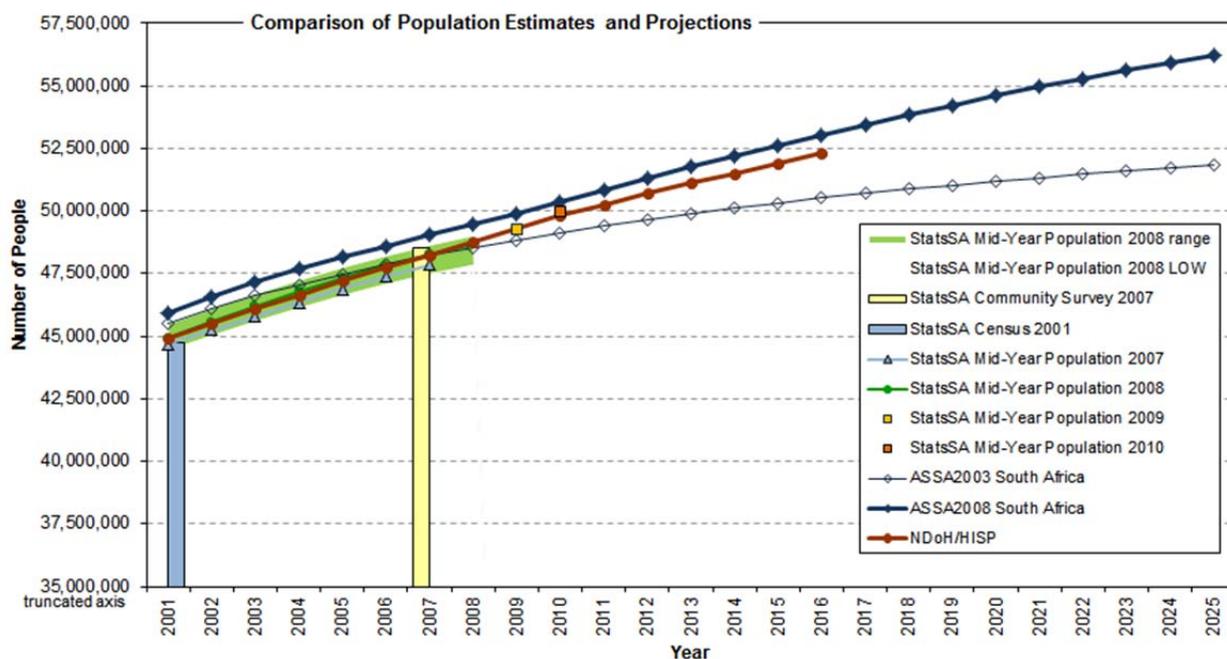


Figure 1: Comparison of Population Estimates and Projections for South Africa to 2025

Table 1: Impact on Mean Survival Time from Infection to Death

Mean survival time in years from infection to death (excluding non-ADS mortality)		
Model	ASSA2003	ASSA2008 in 2010
Adults infected under the age of 25	11	13.81
Adults infected between ages 25 and 34	10.25	12.11
Adults infected over the age of 34	9.5	10.42
Children infected perinatally	1	7.29
Children infected through breast milk	9	14.65

Note: figures from ASSA User Guides. Not all decimals given.

Summarised for IMSA by **Heather McLeod**
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Further resources on the IMSA NHI web-site

http://www.innovativemedicines.co.za/national_health_insurance.html

- The full policy brief and slides (including historic slides for comparison).
- Spreadsheets for South Africa and the nine provinces, showing age-gender and age-gender-HIV staging, from 1985 to 2025.

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