

In order to determine the cost of the proposed National Health Insurance (NHI) scheme in South Africa, it is necessary to understand the population to be covered and the cost of delivering healthcare. This policy brief deals with the population and how it is expected to evolve over time. In addition, the provinces are shown to have major demographic differences which would impact the amount to be transferred to each province.

Age and gender are the two most important factors by which the prevalence of disease and the cost of healthcare vary. There is a predictable pattern of healthcare cost by age and gender as follows:

- By age: children under one year of age are much more expensive than older children since complications, while few in number, have very high associated costs (usually premature births). In the early years of adulthood, costs increase due to the rise in maternity needs, vehicle accidents, substance-abuse and violent behaviour. After age 40, chronic diseases begin to take effect increasing healthcare costs.
- By gender: male babies are more expensive than females as they tend to be sicker and there may be costs of circumcision shortly after birth. Young women are more costly than young men due to maternity needs in the child-bearing years. At age 40, healthcare costs are about equal for men and women, but thereafter men incur higher costs than women of the same age for the rest of life.

Estimates of the age-gender profile of South Africa were obtained from the Actuarial Society ASSA2003 AIDS and Demographic Model since it is the most consistent and useful projection available. It is the recommended source until the revised version, ASSA2008, is released (expected in mid-2010). The model generates estimates of the expected total population, the population structure by age and gender, the numbers who are HIV-positive and expected total births, for South Africa and for each province. A particularly useful feature of this model for the purpose of costing a future mandatory system is the ability to project these estimates into the future, in this case to the year 2025.

Key features of the demographic profile of South Africa are as follows:

- There is expected to be a substantial aging of the population over time (see Figure 1 overleaf) with a decrease in children, an increase in individuals of working age and an increase in those near retirement age. The change is not identical for men and women with a substantial increase predicted in the number of older women. For example, the number of females aged 65-69 is predicted to increase from 521,000 in 2009 to 865,000 in 2025, an increase of 66%.
- Provincially, the model shows that age and gender profiles differ substantially between the provinces. For example, the Western Cape and Gauteng have more working-age adults whereas the provinces with fewer economic opportunities have many more children.
- The provinces will also each have a different experience of aging. The Western Cape and Gauteng are expected to have the greatest growth in older people relative to children. Thus, the impact of increased chronic disease (excluding HIV) will be highest in these provinces.

These changes will affect the future need for specialists, hospitals and particular categories of medicines, with resulting implications for the future price of healthcare. The Prescribed Minimum Benefits package (PMBs) in 2009 was used as a proxy for a health benefits package to be costed to illustrate the effects. Due to the aging effect, the cost of healthcare is expected to rise relative to the 2009 price by an additional 3.5% by 2015, 6.7% by 2020 and 10.2% by 2025.

It was demonstrated that the cost of healthcare per person would vary considerably across the provinces as a result of age and gender differences alone; from 9.2% less than the average for the country in Limpopo to 9.4% more in the Western Cape. This policy brief has demonstrated that age and gender is crucial to preparing future costings of healthcare in any setting.

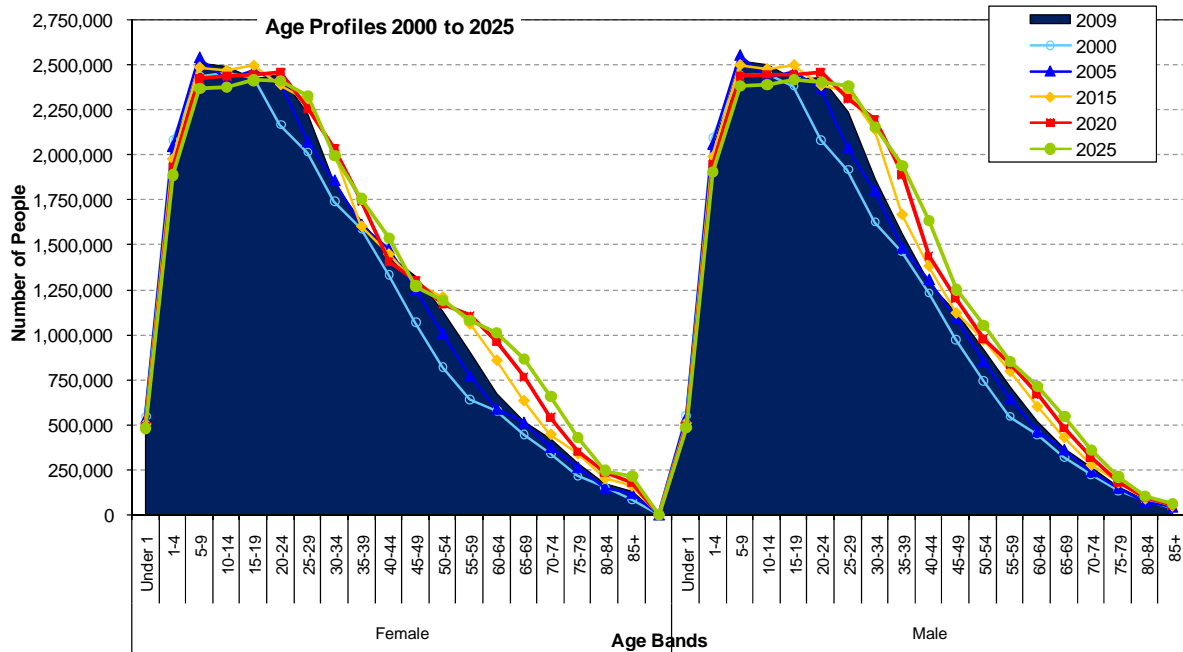


Figure 1: Age Profiles for South Africa from 2000 to 2025 using ASSA2003

Summarised for IMSA by Jessica Nurick and Shivani Ramjee

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Further resources on the IMSA NHI web-site:

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

- The full policy brief, as well as the slides and tables used.
- A spreadsheet of tables of the population by age and gender for South Africa and the nine provinces, from 1985 to 2025.
- Spreadsheets of the PMB price for 2009 in formats with risk factors and by age, gender and service type (hospital, medicine and visits and related costs).
- A glossary of healthcare terms.

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