

# Technical notes

## Technical notes on the indicators

**The number and proportion of children living in South Africa** (Tables 1a – 1d): This indicator refers to the number and proportion of children under the age of 18 years who were living in South Africa at the time of the *General Household Survey (GHS)* in 2004 and 2005. The proportions are calculated by dividing the number of children per category (e.g. male) by the total number of children in the population. The provincial proportions are calculated by dividing the number of children per category (e.g. male) in a province by the total number of children in the population.

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**The number and proportion of orphans** (Table 2): An orphan is defined as a child under the age of 18 years whose biological mother, biological father or both parents have died. This indicator measures the number and percentage of children younger than 18 years whose parent(s) had died by July 2004 and July 2005 respectively.

For the purpose of this indicator, different kinds of orphans are defined as follows: a maternal orphan is a child whose mother has died, or whose living status is not known, but whose father is alive; a paternal orphan is a child whose father has died, or whose living status is not known, but whose mother is alive; a double orphan is a child whose mother and father have both died, or whereabouts are unknown.

Orphans as a proportion of the child population is calculated by aggregating the number of children whose mother, father or both parents are dead or whose living status is unknown, and dividing this by the total child population.

The proportion of orphans by type is calculated by dividing the number of orphans for each category (maternal, paternal, double) by the total orphan population. This indicator does not include the numbers of double orphans when calculating the numbers of maternal and paternal orphans.

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**The number and proportion of children living in child-headed households** (Table 3): A child-headed household is defined as a household where everyone who lives there is under 18 years old, i.e. a child-headed household is a household consisting only of children. This indicator reflects the number and proportion of children who were living in child-headed households in South Africa in 2004 and in 2005.

The proportion of children living in child-headed households in South Africa is calculated by identifying the number of children living in households where the oldest resident is younger than 18 years, and dividing this figure by the total child population in South Africa.

The proportion of child-headed households is calculated by dividing the number of households where the oldest resident is younger than 18 years by the total number of households in South Africa. The calculations in the previous edition of the *South African Child Gauge* used the recorded age of the household head to determine child-headed households. However, it subsequently emerged that some of these households included persons aged 18 years or older. It was therefore decided to calculate child-headed households on the basis of the ages of all members. On this basis, the proportion of child-headed households presented in this edition decreased by 17%.

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**The number and proportion of children living in income poverty** (Table 4): One way of identifying how many children live without enough resources to meet their needs is to use a poverty line and measure how many children live under this poverty line. In this indicator, children (aged 0 – 17 years) are identified as poor when they live in households with an income of less than R1,200 per month for all the household members combined.

The income data in the GHS is collected in question 4.71 which asks, "What was the total household expenditure in the last month?" The bands break at R399, R799 and R1,199. Children living in households in these three bands were included as poor for the purposes of this indicator. The R1,200 per month poverty line is used because it is as close as the GHS data gets to R1,100 per month which is used by the Treasury and the Department of Provincial and Local Government in determining funding for poverty alleviation programmes.

An assumption has also been made that households pool their income. All sources of income, including social grants income, were therefore included when making the calculations for this indicator.

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**The number and proportion of eligible children (0 – 13 years) receiving the Child Support Grant (CSG)** (Table 5): This indicator is defined as the number and proportion of eligible children under 14 years old who were receiving the CSG at the end of June 2005 and July 2006 respectively.

**Sources:** Department of Social Development (2005) *SOCPEN database*; Department of Social Development (2006) *SOCPEN database*. (These figures are taken from the daily reports for June 2005 and July 2006). The take-up rates were calculated using the eligibility figures calculated by Budlender based on the 2004 GHS (Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa). The eligibility calculations were sourced from: Budlender D, Rosa S & Hall K (2005) *At all costs? Applying the means test for the Child Support Grant*. Cape Town: Children's Institute and the Centre for Actuarial Research, University of Cape Town.

**The number of children receiving the Care Dependency Grant (CDG)** (Table 6): This indicator reflects the number of children (aged 0 – 17 years) who are accessing the CDG. The Department of Social Development's SOCPEN database records the CDGs paid out per month according to the number of children and their caregivers (beneficiaries). Figures are taken from the SOCPEN daily reports for the last working day in June 2004, June 2005 and July 2006.

**Sources:** Department of Social Development (2004) *SOCPEN database*; Department of Social Development (2005) *SOCPEN database*; Department of Social Development (2006) *SOCPEN database*.

**The number of children receiving the Foster Child Grant (FCG)** (Table 7): This indicator reflects the number of children (aged 0 – 17 years) receiving the FCG as of the end of June 2004, June 2005 and July 2006. The SOCPEN database records the FCGs paid out per month according to the number of children and their caregivers (beneficiaries). Figures are taken from the SOCPEN daily reports for the last working day in June of 2004 and 2005, and in July 2006.

**Sources:** Department of Social Development (2004) *SOCPEN database*; Department of Social Development (2005) *SOCPEN database*; Department of Social Development (2006) *SOCPEN database*.

**The number and proportion of children attending an educational institution** (Table 8): This indicator reflects the number and proportion of children attending a school or educational institution as at July 2004 and July 2005. The data reflects the attendance of children aged 7 – 17 years at a public or private educational facility. The *General Household Survey* (2004:8<sup>1</sup>) asks, "Is ... (name) ... currently attending school or any other educational institution?" A simple 'yes' or 'no' reply is required.

Younger children's attendance at an educational facility (e.g. pre-school or early childhood development centre) was also analysed, specifically children younger than six years of age.

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**The learner-to-educator ratio for children enrolled in public schools** (Table 9): The learner-to-educator ratio is the number of learners per educator for a specific type of school, in a given school year.<sup>2</sup> This ratio is calculated by dividing the number of learners by the number of educators at public schools.

**Source:** Department of Education (2005) *Education statistics in South Africa at a glance in 2004*. Pretoria: Department of Education.

**The number and proportion of children relative to the distance travelled to school** (Tables 10a – 10b): This indicator reflects the distance that children (aged 6 – 17 years) travel from their homes to the school that they attend. The distance is regarded as far if children travel more than 30 minutes to reach the school. This indicator is defined by school-going age and not by school attendance. Children are therefore categorised according to their ages and corresponding level of schooling – primary or secondary school.

The indicator is based on the *General Household Survey* (2004:8<sup>3</sup>) question, "How long does it take ... (name) ... to get to the school/educational institution where he/she attends?" Where

respondents indicated that children spent more than 30 minutes travelling to their school, the distance to school was categorised as 'far'. Where children spent 30 minutes or less travelling to their school, the distance was categorised as 'not far'.

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**Infant mortality rate (IMR)** (Table 11): The IMR is defined as the number of children younger than one year who have died in a year, per 1,000 live births during that year. This indicator presents data on the probability of a child dying in the first year of his/her life, for every 1,000 live births within that given year. The ASSA2000 model was used to determine overall mortality, the population size and the number of deaths due to HIV/AIDS for each province. Estimates of the number of deaths refer to the 12-month period that started in mid-2000 and are referred to as 2000. The national estimates are from the *South African National Burden of Disease Study 2000* and differ slightly from the sum of the provincial estimates.

**Sources:** Bradshaw D, Nannan N, Laubscher R, Groenewald P, Joubert J, Nojilana B, Norman R, Pieterse D & Schneider M (2004) *South African National Burden of Disease Study 2000 – Estimates of Provincial Mortality*. Cape Town: South African Medical Research Council, Burden of Disease Unit.

**Under-five mortality rate (U5MR)** (Table 11): The U5MR is defined as the number of children younger than five years old who have died in a year, per 1,000 live births during that year. It is a combination of the infant mortality rate, plus the 1 – 4 years mortality rate.

This indicator presents data on the probability of a child dying before reaching five years of age. The ASSA2000 model was used to determine overall mortality, the population size and the number of deaths due to HIV/AIDS for each province. Estimates of the number of deaths refer to the 12-month period that started in mid-2000 and are referred to as 2000. The estimates for South Africa are from the *South African National Burden of Disease Study 2000* and differ slightly from the sum of the provincial estimates.

**Sources:** Bradshaw D, Nannan N, Laubscher R, Groenewald P, Joubert J, Nojilana B, Norman R, Pieterse D & Schneider M (2004) *South African National Burden of Disease Study 2000 – Estimates of Provincial Mortality*. Cape Town: South African Medical Research Council, Burden of Disease Unit.

**The proportion of children aged 1 – 9 years who are underweight and severely underweight** (Table 12): This indicator refers to children aged 1 – 9 years whose weight is below a cut-off weight (i.e. the third percentile or Z-score < -2SD) for their age. A child whose weight falls below this cut-off is referred to as being underweight for age. The third percentile represents a 60% of expected weight-for-age growth curve. If the child's weight is below 60% of expected weight (Z-score < -3SD) the child is considered to be severely underweight.<sup>4</sup>

Weight was determined for all children, using electronic scales. The average of two readings was used. If the two readings varied by more than 100g, the procedure was repeated.

**Source:** Labadarios D (ed) (1999) *The National Food Consumption Survey (NFCS): Children aged 1 – 9 years, South Africa, 1999*. Pretoria: Department of Health, Directorate: Nutrition.

1 Statistics South Africa (2004) *General Household Survey Questionnaire 2004*. Pretoria, Cape Town: Statistics South Africa.

2 UNESCO Institute for Statistics (2005) *Interpreting the Country Profiles*. Accessed 27 October 2006: [www.uis.unesco.org/profiles/selectCountry\\_en.aspx](http://www.uis.unesco.org/profiles/selectCountry_en.aspx).

3 Statistics South Africa (2004) *General Household Survey Questionnaire 2004*. Pretoria, Cape Town: Statistics South Africa.

4 Hendricks M & Hussey G (2004) The field assessment of nutrition. In: Gershwin M, Nestel P & Keen C (eds) (2004) *Handbook of nutrition and immunity*. Tottowa: Humana Press.

**The proportion of leading causes of deaths among children under-five years of age** (Table 13): This indicator shows the leading causes of death among children younger than five years old. The ASSA2000 model was used to determine overall mortality, the population size and the number of deaths due to HIV/AIDS for each province. Estimates of the number of deaths refer to the 12-month period that started in mid-2000 and is referred to as 2000. The estimates for South Africa are from the *South African National Burden of Disease Study 2000* and differ slightly from the sum of the provincial estimates.

**Source:** Bradshaw D, Nannan N, Laubscher R, Groenewald P, Joubert J, Nojilana B, Norman R, Pieterse D & Schneider M (2004) *South African National Burden of Disease Study 2000 – Estimates of Provincial Mortality*. Cape Town: South African Medical Research Council, Burden of Disease Unit.

**The HIV-prevalence rate among children** (Table 14): This indicator shows the proportion of children, at a given period, who have HIV infection. It is calculated by dividing the number of children from age 0 – 17 years with proven HIV infection in a given time period by the total number of children in the child population (0 – 17 years) during that same time period.

By its very nature, updated prevalence data can only be obtained through surveys. The difficulty with doing these surveys on children is that taking blood in young children is a very difficult task, and other diagnostic procedures such as tests using saliva are not effective in young children. Hence the necessity of continued reliance on modelled estimates, such as those produced by the ASSA, and the need to ensure that the underlying model assumptions are adapted according to changes in the pandemic.

**Source:** Actuarial Society of South Africa (2005) *ASSA2003 AIDS and Demographic Model*. Available: [www.assa.org.za](http://www.assa.org.za).

**The proportion of children starting antiretroviral therapy (ART)** (Table 15): This indicator reflects the number of new cases of children in any given year who are progressing to AIDS and receiving antiretroviral therapy as a proportion of the total number of new cases of children in the same year who are progressing to AIDS. This indicator is calculated by dividing the number of new cases of children progressing to AIDS who are receiving antiretroviral (ARV) treatment by the number of new cases of children who are progressing to AIDS (it includes all HIV-positive children, namely those who are on antiretroviral therapy and those who are not).

The difficulty with this data is that the denominator is not known. The actual number of children that are HIV positive, as well as the number of those children who are in need of ARV treatment, are not known nationally. Thus all the figures, both prevalence and need, are based on modelled estimates.

**Source:** Actuarial Society of South Africa (2005) *ASSA2003 AIDS and Demographic Model*. Available: [www.assa.org.za](http://www.assa.org.za).

**The number and proportion of children living in households with basic sanitation** (Table 16): This indicator includes the number and proportion of children (aged 0 – 17 years) living in households with basic sanitation. Basic or adequate sanitation includes facilities that are safe, reduce odours and are within or near a house. Inadequate sanitation includes a wide range of poor toilet facilities including pit latrines that are not ventilated, chemical toilets, buckets, or no facilities at all.

The *General Household Survey* asks about each household's sanitation facilities. The following facilities are included in the category of adequate sanitation: 'flush off-site', 'flush on-site', and 'VIP', standing for ventilated improved pit toilet. Inadequate sanitation includes the following: 'chemical' toilets, 'other pit', 'bucket', 'none' and a small number of 'unspecified'.

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**The number and proportion of children with access to drinking water on site** (Table 17): For the purposes of this indicator, children (aged 0 – 17 years) have access to adequate drinking water if they have access to a clean and reliable water supply that is at their house. All other water supplies, including rivers and communal taps, are considered inadequate.

The *General Household Survey* asks what the household's main source of water is – a specific response is required with respect to drinking water. There are 13 options. The first four water sources are considered adequate in this indicator and include a piped tap in the dwelling or on the site or yard, a borehole on site or a rain-water tank on site. The remaining water sources are considered inadequate because of their distance from the house or the likelihood that the water is of poor quality. These inadequate water sources include public taps or those at other houses, rivers, dams, and springs.

**Source:** Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**The number and proportion of children living in households with an electricity connection** (Table 18): The number and proportion of children (aged 0 – 17 years) that live in households that are connected to the mains electricity supply. The *General Household Survey* asks, "Does this household have a connection to the mains electricity supply?" This indicator is calculated according to the number and proportion of children in households that answered 'yes' (connected) and 'no' (not connected).

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**The number and proportion of children living in rural or urban areas** (Table 19): This indicator shows the number and proportion of children (aged 0 – 17 years) living in urban and rural areas. The classification between urban and rural is described by Statistics South Africa as 'rather fluid', and some areas have been reclassified in the past few years. This is mostly because the 'semi-urban' category was removed in the 2001 Census, resulting in a slightly more inclusive 'urban' classification. Unfortunately, this variable was not available in the 2005 *General Household Survey*, hence only 2004 data is presented here.

**Source:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa.

**The number and proportion of children living in formal or informal housing or traditional dwellings** (Tables 20a – 20c): This indicator shows how many children (aged 0 – 17 years) live in formal housing, which is used as a proxy for adequate housing. It also reflects how many children live in inadequate or informal housing – this includes informal dwellings in informal settlements and backyard dwellings. 'Traditional' housing in rural areas is a third category, which is not necessarily adequate, but is not always defined as 'inadequate' in official estimates of the housing need.

South African housing policy has no clear or consistent definition of adequate housing since 'adequate' includes a range of attributes. Some of these are very technical, for instance relating to the quality and size of the dwelling. There are also qualitative descriptors of 'adequate' housing. However, the main attribute used to determine the housing backlog is the type of dwelling. This indicator provides a fairly crude measurement of adequacy, calculated purely on the basis of housing type.

For the purposes of this indicator, 'formal' housing is made up of the following housing types: dwelling or brick structure on separate stand, flat or apartment, town/cluster/semi-detached house, unit in retirement village, room or flatlet on a larger property. 'Informal' housing consists of the following housing types: informal dwelling or shack in backyard, informal dwelling or shack in informal settlement, dwelling or house/flat/room in backyard, caravan or tent. (These housing types are listed as options in response to the housing question in the GHS.)

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

**The number and proportion of children living in overcrowded dwellings** (Table 21): Children (aged 0 – 17 years) are defined as living in overcrowded dwellings when there is a ratio of more than two people per room (excluding bathrooms but including kitchen and living room).

There is no standard measure of overcrowding in South Africa, but there are many international definitions. The definition used here is derived from the United Nations Human Settlement Programme (UN-HABITAT) definition, which is a maximum of two people per habitable room. 'Habitable' excludes bathroom and toilet. The data is taken from the *General Household Survey*: number of rooms occupied (excluding bathrooms and toilets). The overcrowding ratio is obtained by dividing the total number of household members by the total number of rooms occupied by the household.

**Sources:** Statistics South Africa (2005) *General Household Survey 2004*. Pretoria, Cape Town: Statistics South Africa; Statistics South Africa (2006) *General Household Survey 2005*. Pretoria, Cape Town: Statistics South Africa.

## Technical notes on the data sources

**General Household Survey:** The *General Household Survey* is an annual survey conducted by the national statistics body, Statistics South Africa ([www.statssa.gov.za](http://www.statssa.gov.za)). The sample used is based on the enumeration areas established during the Census demarcation phase and therefore covers all parts of the country. The sample of 30,000 dwelling units ensures as much representivity as possible by stratifying by province, and then by urban and rural area. The resulting estimates should be representative of the total population of South Africa. A weighting process is also applied to improve the representivity of the estimates. These weighted results are used for the *Children Count – Abantwana Babalulekile Project*.

However, over- and under-estimation appears to have occurred in the weighting process. In the 2004 results, it seems that the numbers of children aged 7 – 12 has been over-estimated by 6%, as well as the numbers of persons aged 13 – 22 years. The number of very young children appears to be under-estimated. The patterns of over- and under-estimation appear to differ across population groups. For example, the number of white children appears to be over-estimated by 14%, while the number of coloured persons within the 13 – 22 years age group appears to be 9% too low.<sup>5</sup>

In 2005, the GHS weights seem to have produced an over-estimate of the number of males within each five-year age group. The extent of the over-estimation is particularly severe for the 10 – 14 years age group. In contrast, the weights produce an under-estimate of the number of girls – the error seems greatest in respect of the younger age groups. These patterns result in

male-to-female ratios of 1.06, 1.13, 1.10 and 1.09 respectively for the four age groups covering children. It is highly unlikely that the ratios suggested by the GHS weights are accurate. The apparent discrepancies will affect the accuracy of the *Children Count – Abantwana Babalulekile* data. Where, for example, the male and female patterns in respect of a particular characteristic vary, the total estimate for this characteristic will be somewhat slanted toward the male pattern. A similar slanting will occur where the pattern for 10 – 14-year-olds differs from that of other age groups. Furthermore, there are likely to be different patterns across population groups.

Further error may be present due to methodology, i.e. the questionnaire is administered to only one respondent in the household who is expected to provide information about all other members of the household. Not all respondents will have accurate information about all children in the household. In instances where the respondent could not provide an answer, this was recorded as 'unspecified' (no response) or 'don't know' (the respondent stated that they didn't know the answer).

The survey does not cover other collective living-quarters such as students' hostels, old-age homes, hospitals, prisons and military barracks. It does cover workers' hostels. The exclusions should not have a noticeable impact on the findings in respect of children.

The survey is conducted annually, and datasets are therefore available on a yearly basis. Confidence intervals<sup>6</sup> for the two years of data presented in this publication are not available. Differences between the two years of data should therefore be treated with caution as apparent trends in the data have not been proven to be reliable.

### **SOCPEN database, Department of Social Development:**

There has never been a published, systematic review of the SOCPEN database, and the extent of the limitations of validity or reliability of the data has not been quantified. However, it is regularly used by the department and other government bodies to monitor grant take-up. This administrative dataset is constantly updated by Department of Social Development employees when entering application and payment data. Take-up data and selected reports are available from the department on request throughout the year. Grants data will be updated regularly for the *Children Count – Abantwana Babalulekile Project*.

### **Education statistics in South Africa at a glance, Department of Education:**

This data is based on the department's annual survey and SNAP ('snap-shot') survey, taken on the tenth day of the school year. The data capturing and processing of this survey are known to be problematic and erroneous. The accuracy and reliability of this data is therefore questionable.

As this survey is conducted annually, data should be available on a yearly basis. However, data processing systems differ across the provinces, and some are more efficient than others. The most recent dataset that has been released is for 2004. The department's current information management system, known as the Education Management Information System (EMIS), is presently under review.

### **South African National Burden of Disease Study,**

**Medical Research Council:** This study makes use of vital registration data (number of official births and deaths) but adjusts for under-registration, as large numbers of births and deaths of younger children in particular are unreported. A modelling approach, developed by the Actuarial Society of South Africa (ASSA), was thus used to estimate the total number of deaths since vital statistics are incomplete. The ASSA2000 model was used to determine overall mortality, the population size, and the number of deaths due to HIV/AIDS for each province.

<sup>5</sup> Dorrington R & Kramer S (2004) *The 2004 mid-year estimates: Method, reliability and implications*. Paper presented at a Centre for Actuarial Research seminar, University of Cape Town.  
<sup>6</sup> A confidence interval is a statistical term that gives a level of confidence in the accuracy of the data.

The basic mortality assumptions for children were as follows: "Child mortality estimates from the 1996 Census and the 1998 *Demographic Health Survey (SADHS)* both show a reversal of the downward trend, although there are differences in the estimated levels (Nannan et al, 2000). Adjustments are made to both sets of estimates due to differences and inherent biases in the different methodologies. A small upward adjustment is made to the DHS and a downward adjustment to the Census data which appear too high due to the inclusion of stillbirths incorrectly classified as live births who have died (Moultrie and Timæus, 2002)."

The ASSA-modelled estimates are made available on a yearly basis.

**National Food Consumption Survey (NFCS):** This was a cross-sectional survey in children aged 1 – 9 years in South Africa. A nationally representative sample with provincial representation was drawn using the Census 1996 data. The number of children included in the study was 3,120, allowing for over-representation of children from high-risk areas.

A total of 156 randomly selected Enumerator Areas (EA) were included in the survey. A qualifying household was defined as any household with at least one child aged between 1 – 9 years. A snowball sampling technique was used to establish a sampling frame in each EA of households with children in the prescribed age group. From the list of qualifying households, the required number of households for the survey in a given area was randomly selected. Five questionnaires were used in the study, and anthropometric assessments were carried out on each child in the study by trained fieldworkers. Standardised and internationally recognised methods were used for these assessments.

The results of the survey appear to be accurate, within the sampling framework used, at national and at provincial levels.

**ASSA2003 AIDS and Demographic Model:** Currently the only available data on HIV-related indicators are estimates based on modelling. The underlying assumptions of the model, however, are well accepted nationally and these are thus the best estimates that we have at present.

Estimates are obtained by using mathematical models. These models give an indication of the proportion of adults and children affected by HIV/AIDS. The demographic model is based on a wide range of available empirical evidence, for example, regular survey data and vital statistics, such as the antenatal clinic survey results and number of deaths from the population register (Dorrington, Bradshaw, Johnson & Budlender 2004). Data and modelled results are available at [www.assa.org.za](http://www.assa.org.za).

## Sources

Dorrington RE, Bradshaw D, Johnson L & Budlender D (2004) *The Demographic Impact of HIV/AIDS in South Africa. National Indicators for 2004*. Cape Town: Centre for Actuarial Research, South African Medical Research Council and Actuarial Society of South Africa.

Moultrie T & Timæus I (2002) *Trends in South African fertility between 1970 and 1998*. Cape Town: South African Medical Research Council, Burden of Disease Unit.

Nannan N, Bradshaw D, Timæus I & Dorrington R (2000) *The impact of HIV/AIDS on infant and child mortality in South Africa*. Abstract of poster MoPeD2507. XIIIth International AIDS Conference, Durban, South Africa, 8 – 13 July 2000.

