

Child health: The general context

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Section 27 of the Constitution of South Africa¹ provides that everyone has the right to have access to health care services. In addition, section 28(1)(c) gives children “the right to basic nutrition and basic health care services”.

Article 14(1) of the African Charter on the Rights and Welfare of the Child² states that “every child shall have the right to enjoy the best attainable state of physical, mental and spiritual health”.

Article 24 of the UN Convention on the Rights of a Child³ says that State Parties should recognise “the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health”.

It obliges the State to take measures “to diminish infant and child mortality” and “to combat disease and malnutrition”.

The number and proportion of children living far from the nearest clinic

This indicator reflects the distance from a child's household to the nearest clinic. Distance is measured through a proxy indicator: length of time travelled to reach the nearest clinic, by whatever form of transport is usually used. The nearest clinic is regarded as ‘far’ if a child would have to travel more than 30 minutes to reach it, irrespective of mode of transport.

Primary health care clinics provide important preventative and curative services, and increased access to clinics could substantially reduce child illness and mortality. Children therefore need access to good and reliable health services in clinics to ensure that they receive their immunisations and other life-saving health interventions.

According to the UN Committee on Economic, Social and Cultural Rights, primary health care should be available (in sufficient supply); accessible (easily reached); affordable; and of good quality.⁴ In 1996, primary health care was made free to everyone in South Africa, but the availability and physical accessibility of public health care services remain a problem, particularly for people living in remote areas.

In South Africa, four in every 10 children live far from their

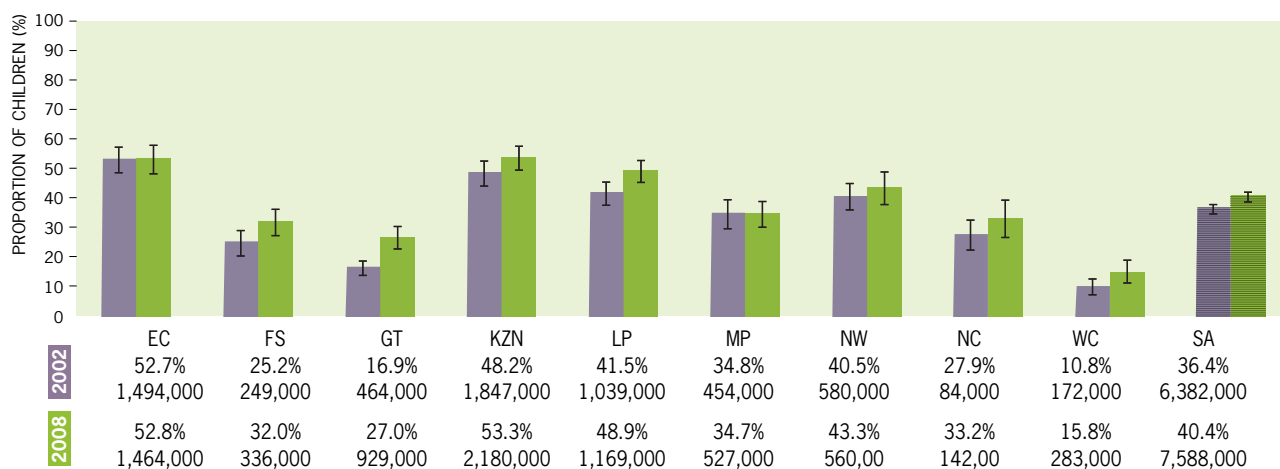
nearest primary health care facility. That means 7.6 million children need to travel more than 30 minutes to reach the nearest clinic.

There is considerable variation between provinces. While around 50% of children in the Eastern Cape, KwaZulu-Natal and Limpopo do not have a clinic within 30 minutes travel of their homes, this proportion is much lower for other provinces, and lowest in the largely metropolitan provinces of Gauteng (27%) and the Western Cape (16%).

There are also significant differences between population groups. A total of 44% of African children would have to travel far to the nearest clinic in comparison with only 16% – 19% of Coloured, Indian and White children.

Nationally, there has been little improvement in access to clinic services between 2002 and 2008. The situation has worsened across the country as a whole, and significantly in Gauteng. This may be related to in-migration of children, and a backlog in health infrastructure to provide services to an expanding population. While table 3a suggests undesirable shifts in other provinces such as the Free State, Limpopo and the Northern and Western Cape, these cannot be regarded as significant at present.

Table 3a: Number and proportion of children living far from the nearest clinic, 2002 & 2008



Sources: Statistics South Africa (2003; 2009) *General Household Survey 2002; General Household Survey 2008*. Pretoria: Stats SA. Analysis by Katharine Hall & Double-Hugh Marera, Children's Institute, UCT.

Notes: ① Children are defined as people aged 0 – 17 years. ② Population numbers are rounded off to the nearest thousand. ③ Strengths and limitations of the data are described on pp. 132 – 134. ④ The confidence intervals, shown on the graph as a vertical line at the top of each bar, represent the range into which the true value may fall. See p. 97 for more details on confidence intervals. ⑤ See www.childrencount.ci.org.za for more information.

The infant mortality rate and under-five mortality rate

South Africa relies on survey data to measure infant and child mortality because the vital registration and health information systems are not adequate for this purpose. The last empirical estimates of childhood mortality thought to be reliable were collected from the 1998 South African Demographic and Health Survey. The quality of the 2001 Census and the 2003 South African Demographic and Health Survey data were compromised to such an extent that it was not possible to derive a plausible trend consistent with the estimates from the previous enquiries. South Africa urgently needs nationally representative information that will inform provincial and population group child mortality indices. In the meantime, the Centre for Actuarial Research at the University of Cape Town is revising the Actuarial Society of South Africa (ASSA) model which, once finalised, will play a role in monitoring infant and child mortality trends.

Infant and under-five mortality rates are the most widely used indicators of health status and socio-economic development because they reflect not only child mortality levels but also the health status of the broader population. The infant mortality rate (IMR) is defined as the probability of dying within the first year of life and refers to the number of babies under 12 months old who die in a year, per 1,000 live births during the same year. In 1998 the IMR was 63 deaths per 1,000 live births.

The under-five mortality rate (U5MR) is defined as the probability of dying between birth and the fifth birthday. It is an overall measure of child mortality that encompasses the probability of dying during infancy and before the fifth birthday. The U5MR refers to the number of children under five years old who die in a year, per 1,000 live births in the same year. It was measured at 87 deaths per 1,000 live births in the 1998 South African Demographic and Health Survey.

A child's growth and development are heavily dependent on the living conditions of the family, and on the services and resources in the surrounding community. These conditions generate the biological risk factors that act directly on the child's health through the occurrence of disease and its prognosis, of which death is the most extreme outcome. The infant and under-five mortality rates in developing countries are therefore associated with a broad range of bio-demographic, health and related

social factors. These include maternal and child health care services such as the number of antenatal care visits; maternal nutrition status, breastfeeding and infant feeding; environmental health factors such as safe drinking water and hygiene and sanitation provision in households; socio-economic factors such as women's education and available energy sources for cooking and heating; social security and protection. The IMR and U5MR as indicators of health and overall societal development are therefore intrinsically linked to the right to a healthy and safe childhood.

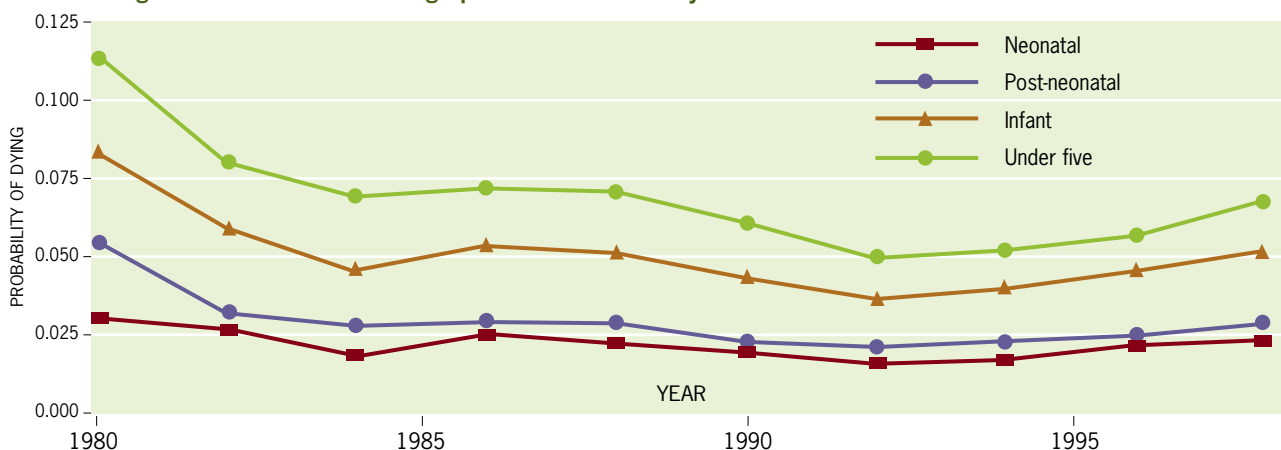
Reducing child mortality is one of the eight Millennium Development Goals (MDGs) for reducing poverty and inequality in the world. The target for MDG 4 is to reduce under-five mortality by two-thirds between 1990 and 2015. However measuring this indicator and monitoring progress towards this goal are proving a challenge for South Africa and other developing countries.

The most reliable estimates of child mortality in South Africa are for the mid-1990s – and in 2010 are extremely out of date. The trend in the age pattern of child mortality, illustrated in the figure below, shows a substantial drop in child mortality during the 1980s. But mortality rates started to rise from 1992, when infant mortality was about 32 per 1,000 live births, and increased to about 63 per 1,000 live births in 1998.

South Africa is one of the few countries in the world that has experienced an increase in infant mortality over this period. Over the same period (1992 – 1998) the HIV-prevalence rate in pregnant women increased from 7.6% to 22.8%. Given the limited treatment available to HIV-positive women during pregnancy during the 1990s, most of the actual rise in infant mortality can be attributed to AIDS.

South Africa's infant mortality has for decades been characterised by inequalities based on population group, urban/rural residence, province and socio-economic status. Estimates for the period 1988 – 1997 highlight perverse provincial and racial inequalities. This indicates a need to investigate and monitor inequalities in health status and socio-economic conditions. In light of the aggressive HIV pandemic that South Africa has experienced, the IMR takes on new meaning and importance in assessing the impact of vertical transmission and PMTCT programmes.

Figure 3a: Age pattern of child mortality trends in South Africa, 1980 – 1998 using 1998 South African Demographic and Health Survey



Source: Nannan N, Timæus I, Laubscher R & Bradshaw D (2006) Levels and differentials in childhood mortality in South Africa, 1977 – 1998. *Journal of Biosocial Science*, 39(4): 613-632.

Proportion of children under one year who have been fully immunised

This indicator shows the percentage of children under one year who are fully immunised. 'Full immunisation' refers to children having received all the required doses of vaccines given in the first year of life.

Immunisation is one of the most effective preventative health care interventions for young children. It involves giving injections or drops to young children that protect them against potentially life-threatening illnesses such as tuberculosis, polio, hepatitis and measles. Immunisation has a significant impact on morbidity and mortality rates and has a critical role in efforts to achieve Millennium Development Goal 4 and reduce child mortality rates by two-thirds between 1990 and 2015.

Effective immunisation requires high levels of coverage to achieve a certain level of immunity within the broader community. This is known as 'herd immunity' and it means that, if immunisation coverage has reached a high enough level, even children who have not been immunised in that community will also be protected.

Immunisation coverage serves as a good indicator of the extent to which young children utilise and access primary health care services. Immunisation coverage is also a proxy for the extent to which children access other preventative services, as the immunisation schedule provides the 'hook' for scheduling many other preventative child health interventions. Examples of these are the vitamin A supplementation programme, developmental screening, and prophylaxis for babies born to HIV-positive mothers.

South Africa has an up-to-date immunisation programme, in keeping with world standards. Three new vaccines were added to the schedule in the past year to improve the Expanded Programme for Immunisation. These are not yet included in calculating the immunisation compliance rate.

The 2008/09 District Health Information System statistics demonstrate good national immunisation coverage of 89.5% and an overall increase in coverage of 13 percentage points in the five years since 2003/04. The provincial coverage rates range from 72% in Mpumalanga to over 100% coverage in Gauteng and the Western Cape. Immunisation coverage rates have fluctuated in many of the provinces, with no plausible explanation.

The challenge of national and provincial aggregates is that they may mask differences between districts and hide areas with low coverage. District coverage is available in the latest District Health Barometer for 2008/09,⁵ where 30 of the 52 districts show coverage below the national average. Although coverage for all districts is above 60%, coverage for individual districts demonstrates a wide range – from 61% to 124%. This highlights two issues: significant inequities in service access for young children between districts, and poor quality data (as immunisation coverage exceeds 100% in some districts).

Clearly, great improvements have been made in the provision of immunisation to children. But inequities still persist, and coverage is the least in areas where poverty and health needs are greatest.

Table 3b: Proportion of children under one year who have been fully immunised, 2003/04 – 2008/09

Province	2003/04 %	2004/05 %	2005/06 %	2006/07 %	2007/08 %	2008/09 %
Eastern Cape	68.9	67.9	73.4	75.7	78.9	84.3
Free State	74.8	78.9	86.8	88.1	86.6	90.4
Gauteng	79.2	78.6	88.9	91.1	91.6	101.5
KwaZulu-Natal	76.9	77.0	82.6	84.5	82.1	85.3
Limpopo	74.9	74.4	79.5	84.9	78.6	84.3
Mpumalanga	73.9	79.2	83.4	81.4	78.5	72.4
North West	71.1	70.6	78.2	73.5	77.9	88.7
Northern Cape	83.2	87.5	92.9	96.2	82.6	93.2
Western Cape	91.2	90.0	91.6	101.8	100.5	103.9
South Africa	76.4	76.8	82.9	85.4	84.2	89.5

Sources: Department of Health (2009) District Health Information System database. In: Day C, Barron P, Monticelli F & Sello E (eds) *District Health Barometer 2008/09*. Durban: Health Systems Trust.

Notes: ① Reporting periods run from mid-year to mid-year. ② The immunisation rate is the percentage of all children in the target area under one year who complete their primary course of immunisation during the month (annualised). A primary course includes BCG, OPV 1, 2 & 3, DTP-Hib 1, 2 & 3, HepB 1, 2 & 3, and 1st measles. ③ Strengths and limitations of the data are described on pp. 132 – 134.

④ See www.childrencount.ci.org.za for more information.

Proportion of adolescents engaging in sexual risk behaviour

Heterosexual sex is the most common means of HIV transmission in South Africa.⁶ High HIV-prevalence rates among pregnant women mean that many babies are at risk of becoming infected, and their mothers may become sick as the virus progresses. Older children who are sexually active are also at risk of sexually transmitted diseases, including HIV. A strong focus of HIV campaigns has been to increase awareness and reduce risk behaviour. Youth have been particularly targeted by national campaigns such as LoveLife, Soul City and the Health Department's *Khomanani* campaign, and through life-skills programmes in schools. Programmes have sought to promote abstinence or delay of sexual debut, sexual monogamy, and condom use.

This section uses data from the South African Demographic and Health Survey (DHS), undertaken by Statistics South Africa in 2003. This followed an earlier DHS survey in 1998, and another is planned for 2010. The DHS was not restricted to youth, but this section on adolescent sexual behaviour refers only to the results for the 15 – 19 age group. In 2008 the Medical Research Council undertook its second Youth Risk Behaviour Survey,⁷ which was conducted in schools and included learners in grades 8 – 11, irrespective of age. Just over 10,000 learners in nearly 200 schools returned self-completed questionnaires. Although many of the questions in the MRC study are not directly comparable with the DHS, some of the results of this study are also cited.

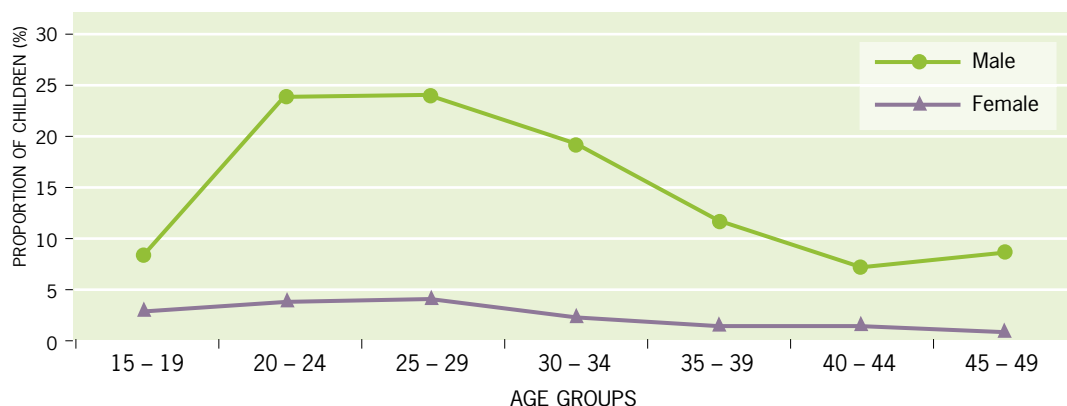
Sexual debut Early sexual debut increases young people's vulnerability to HIV infection, and females in particular are a high risk group.⁸ The age of sexual debut is therefore an important indicator of risky sexual behaviour. Seven percent of young women (15 – 19 years) in the DHS reported having had sex by the age

of 15, compared with 12% of young men. This suggests that boys become sexually active earlier than girls. By the end of their childhood (18 years), 42% of girls and 63% of boys had become sexually active. The MRC study similarly found that boys were more likely than girls to have had sex at a young age, with the difference being even more striking: 21% of males and 4% of females reported having had sex before the age of 14.

Multiple partners Multiple sexual partnerships are regarded as indicative of high risk sexual behaviour because they substantially increase the risk of HIV transmission through sexual networks.⁹ In the DHS, only 3% of all young women in the 15 – 19 year age group reported having more than one sexual partner in the previous year, as opposed to 8% of males.¹⁰ Just under half of adolescents in the 15 – 19 age group were sexually active (ever had sex), with similar proportions for males and females. Multiple partnerships were more frequently reported in the MRC study, where 52% of sexually active male learners and 26% of females reported multiple partnerships. The difference is partly attributable to different formulations of the question and to different ways of deriving the proportions: While the DHS frames the question within the last year and includes all respondents in the denominator, the MRC study limits the denominator to sexually active people and asks whether they have had two or more sexual partners in their lifetime.

It is worth noting that for males, the reported rate of multiple partnerships increases dramatically from the age of 20, so that the relatively low incidence of multiple partnerships amongst teenage boys is only achieved again after the age of 40. Across all age groups, men are much more likely than women to have multiple sexual partners within a year, as illustrated below.

Figure 3b:
Proportion of men and women reporting multiple sexual partnerships within a year, by age group
(Y-axis reduced to 30%)



Source: Department of Health, Medical Research Council & OrcMacro (2007) *South African Demographic and Health Survey 2003*. Pretoria: DoH.

Condom use Consistent and correct condom use is considered a highly effective strategy for the prevention of HIV.¹¹ In the DHS analysis, condom use is expressed as a proportion of those who have had “high risk sex” (outside of marital/co-habiting unions), since condom use would understandably be lower amongst married partners or those in permanent co-habiting partnerships. In addition, those who are actively trying to conceive would not be using condoms. However, few people in the 15 – 19 age group are married or co-habiting, so sexual relationships outside of marriage are common. Of the teenagers (15 – 19) who were sexually active in the year preceding the survey, 95% of females and 99% of males were not married or co-habiting with their partner – ie having “high risk” sex.

Of those teenagers who had “high risk” sex in the previous 12 months, 49% of girls and 73% of boys reported using a condom at their last sexual encounter. In the MRC study, on the other hand, the difference

between girls and boys was less pronounced, with 33% of sexually active girls and 29% of boys reporting that they “always” used condoms. Where condoms were included as one of a number of categories in a question about contraceptive methods, 42% of sexually active female learners and 47% of males reported using condoms.

Teenage pregnancy In 2003, 12% of teenage girls aged 15 – 19 years had ever been pregnant or were pregnant at the time of the DHS.¹² This is lower than the reported teenage pregnancy rate of 16% in the 1998 DHS. The proportion of teenagers who have been pregnant rises rapidly with each year of age from 15 years (2%) to 19 years (27%). The teenage pregnancy rate for girls reported in the MRC study appears much higher (24% when expressed as a proportion of sexually active learners), but is in fact much lower (7%) when calculated as a proportion of all female learners in the sample.

Table 3c: Proportion of teenagers (aged 15 – 19 years) engaged in sexual risk behaviour, 2007

Sexual risk behaviour	Male %	Female %
Ever had sex	43	43
First sexual intercourse before 15 years	12	7
Sexually active in last 12 months	35	34
More than one sexual partner in last 12 months	8	3
Condom use at last sex (as proportion of sexually active)	74	49
Females ever pregnant	–	12

Sources: Department of Health, Medical Research Council & OrcMacro (2007) *South African Demographic and Health Survey 2003*. Pretoria: DoH.

Notes: The denominator in the above indicators is all males and females in the 15 – 19 age group, with the exception of reported condom use, where the denominator is males and females who are sexually active and have engaged in “high risk sex” (ie sex with a non-marital/non-cohabiting partner) in the past 12 months.

References

- a Children living far from the nearest clinic; adolescent sexual risk behaviour
 - b Infant and under-five mortality
 - c Immunisation
- 1 Constitution of the Republic of South Africa. Act 108 of 1996.
 - 2 Secretary General of the African Union (1990) *African Charter on the Rights and Welfare of the Child*. OAU resolution 21.8/49. Addis Ababa: OAU.
 - 3 Office of the High Commissioner of Human Rights (1989) *Convention on the Rights of the Child*. UN General Assembly resolution 44/25. Geneva: United Nations.
 - 4 United Nations Economic and Social Council (2000) *International Covenant on Economic, Social and Cultural Rights, article 12: The right to the highest attainable standard of health: General comment no. 14*. Geneva: Committee on Economic, Social and Cultural Rights.
 - 5 Department of Health (2009) District Health Information System database. In: Day C, Barron P, Monticelli F & Sello E (eds) *District Health Barometer 2008/09*. Durban: Health Systems Trust.
 - 6 Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Pillay-van-Wyk V, Mbelle N, Van Zyl J, Parker W, Zungu NP, Pezi S & the SABSSM III Implementation Team (2009) *South African national HIV prevalence, incidence, behaviour and communication survey 2008: A turning tide among teenagers?* Cape Town: HSRC Press.
 - 7 Reddy SP, James S, Sewpail R, Koopman F, Funani NI, Sifunda S, Josie J, Masuka P, Kambaran NS & Omdardien RG (2010) *Umthente Uhlaba Usamila – The South African Youth Behavioural Survey 2008*. Cape Town: Medical Research Council.
 - 8 See no. 7 above.
 - 9 See no. 7 above.
 - 10 Department of Health, Medical Research Council & OrcMacro (2007) *South African Demographic and Health Survey 2003*. Pretoria: DoH.
 - 11 See no. 7 above.
 - 12 See no. 11 above.