Child health

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Section 27 of the Constitution of South Africa 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".[1]

Article 14(1) of the African Charter on the Rights and Welfare of the Child states that "every child shall have the right to enjoy the best attainable state of physical, mental and spiritual health".[2]

Article 24 of the UN Convention on the Rights of a Child 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".[3]

The infant and under-five mortality rate

The infant and under-five mortality rates are key indicators of heath and development. They are associated with a broad range of bio-demographic, health and environmental factors which are not only important determinants of child health but are also informative about 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 who die in a year per 1,000 live births during the same year. Similarly, the under-five mortality rate (U5MR) is defined as the probability of a child dying between birth and their 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.

This information is ideally obtained from civil and vital registration (CRVS) systems. The Rapid Mortality Surveillance (RMS) Report based on the deaths recorded on the population register by the Department of Home Affairs.[4] has been providing national empirical estimates of mortality indicators since 2012. The RMS data have been recommended by the Health Data Advisory and Co-ordinating Committee because corrections have been made for known biases. In other words, the indicators shown in Table xx are nationally representative. The RMS reports vital registration data adjusted for under-reporting which allows for the evaluation of annual trends. They suggest the IMR peaked in 2003 when it was 53 per 1,000 and decreased to 25 per 1,000 in 2018. During the same period the U5MR decreased from 81 per 1,000 to 34 per 1,000. Although infant and under-five mortality rates decreased until 2017, there was a slight increase in both rates between 2017 and 2018. The current trends are therefore somewhat uncertain.

The neonatal mortality rate (NMR) is the probability of dying within the first 28 days of life per 1,000 live births. The NMR was 11 deaths per 1,000 live births in 2018. Estimates of the NMR are derived directly from vital registration data (i.e. registered deaths and births without adjustment for incompleteness) up to 2013, and from 2013 onwards the estimates were derived directly from neonatal deaths and live births recorded in the District Health Information System.

Table 3a: Child mortality indicators, rapid mortality surveillance, 2012 – 2018

INDICATOR	2012	2013	2014	2015	2016	2017	2018
Under-five mortality rate per 1,000 live births	42	43	42	39	36	33	34
Infant mortality rate per 1,000 live births	28	29	29	28	26	23	25
Neonatal mortality	11	11	12	12	12	12	11

Source: Dorrington RE, Bradshaw D, Laubscher R & Nannan, N (2020) *Rapid Mortality Surveillance Report 2018*. Cape Town: South African Medical Research Council.

The South African Demographic and Health Survey (SADHS) also reports child mortality rates. After a long gap (since 2003) the SADHS was conducted again in 2016.[5] For the period 2012 – 2016, the RMS estimated a slightly higher overall under-five mortality rate than the SADHS – 42 versus 39 per 1,000 live births. However, the SADHS infant mortality rate (IMR) for recent years is much higher than the IMR from the RMS (35 versus 27 per 1,000 live births for the period 2012 – 2016). The SADHS estimates are likely to be too high because its neonatal mortality rate is too high.

Children living far from their health facility

This indicator reflects the distance from a child's household to the health facility they normally attend. Distance is measured as the length of time travelled to reach the health facility, by whatever form of transport is usually used. The health facility is regarded as "far" if a child would have to travel more than 30 minutes to reach it, irrespective of mode of transport.

A review of international evidence suggests that universal access to key preventive and treatment interventions could

avert up to two-thirds of under-five deaths in developing countries.[6] Preventative measures include the promotion of breast and complementary feeding, micronutrient supplements (vitamin A and zinc), immunisation, and the prevention of mother-to-child transmission of HIV, amongst others. Curative interventions provided through the government's Integrated Management of Childhood Illness strategy include oral rehydration, infant resuscitation and the dispensing of medication.

According to the UN Committee on Economic, Social and Cultural Rights, primary health care should be available (in sufficient supply), accessible (easily reached and affordable), acceptable and of good quality.[7] In 1996, primary level care was made free to everyone in South Africa, but the availability and physical accessibility of health care services remain a problem, particularly for people living in remote areas.

Physical inaccessibility poses particular challenges when it comes to health services because the people who need these services are often unwell or injured or need to be carried because they are too young, too old or too weak to walk. Physical inaccessibility can be related to distance, transport options and costs, or road infrastructure. Physical distance and poor roads also make it difficult for mobile clinics and emergency services to reach outlying areas. Within South Africa, the extent to which patients use health care services is influenced by the distance to the health service provider: those who live further from their nearest health facility are less likely to use the facility. This "distance decay" is found even in the uptake of services that are required for all children, including immunisation and maintaining the Road-to-Health Book.[8]

A fifth (20%) of South Africa's children live far from the primary health care facility they normally use, and 94% attend the facility closest to their home. Within the poorest 20% of households, only 3% do not use their nearest facility, while 14% of children in the wealthiest quintile travel beyond their nearest health facility to seek medical attention. The main reasons for attending a remote health service relate to perceptions of service quality; a preference for private health services (37%), and other complaints including long waiting times (16%); the unavailability of medication (6%) and rude or uncaring staff (4%). Cost considerations also inform choices, and 11% of households that did not use their nearest facility chose to travel further in order to access cheaper medical care or free government health services.[9]

In total, 3.9 million children travel more than 30 minutes to reach their usual health care service provider. This is a significant improvement since 2002, when 36% (or 6.6 million children) lived far from their nearest clinic.

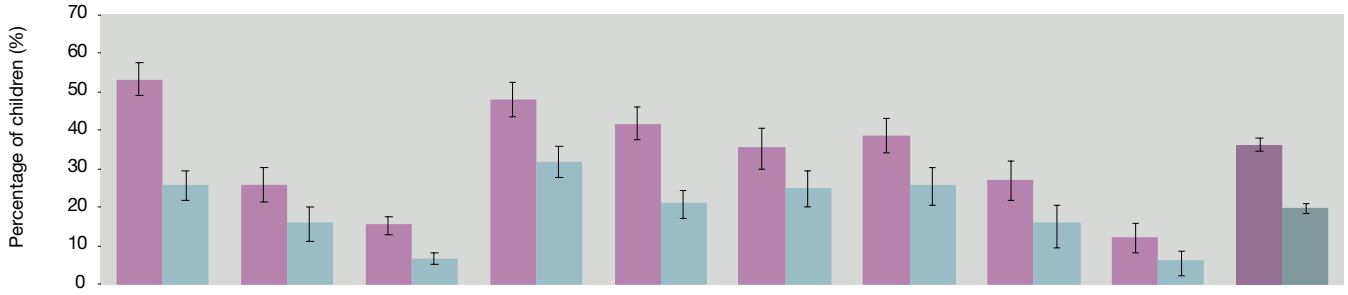
It is encouraging that the greatest improvements in access have been made in provinces which performed worst in 2002: the Eastern Cape (where the share of children with poor access to health facilities dropped from 53% in 2002 to 26% in 2017), KwaZulu-Natal (down from 48% to 32%), Limpopo (from 42% to 21%) and North West (from 39% to 26%). Provinces with the highest rates of access are the largely metropolitan provinces of the Western Cape (where only 6% of children live more than 30 minutes from their usual health care service) and Gauteng (7%).

There are also significant differences between population groups. A quarter (22%) of African children travel far to reach a health care facility, compared with between 4% and 9% of Indian, White and Coloured children. Racial inequalities are amplified by access to transport: if in need of medical attention, 93% of White children would be transported to their health facility in a private car, compared with only 11% of African children. Only 2% of the poorest children (quintile 1) travel to their health facility in a private car, while nearly 60% walk.

Poor children bear the greatest burden of disease, due to undernutrition and poorer living conditions and access to services (water and sanitation). Yet health facilities are least accessible to the poor. More than a quarter of children (29%) in the poorest 20% of households have to travel far to access health care, compared with 7% of children in the richest quintile.

There are no significant differences in patterns of access to health facilities when comparing children of different sex and age groups.

Figure 3a: Children living far from their health facility, by province, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	53%	26%	15%	48%	42%	35%	39%	27%	12%	36%
	1,559,000	259,000	453,000	1,988,000	1,010,000	538,000	451,000	108,000	199,000	6,568,000
2018	26%	16%	7%	32%	21%	25%	26%	16%	6%	20%
	650,000	164,000	282,000	1,333,000	500,000	421,000	355,000	69,000	122,000	3,902,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018.* Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

Immunisation coverage of children

This indicator shows the percentage of children younger than 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 to prevent serious illnesses and death in young children. It entails giving injections or drops to young children that protect them against potentially life-threatening illnesses such as tuberculosis, polio, hepatitis and measles. South Africa has an up-to-date immunisation programme, in keeping with world standards.

The Expanded Programme on Immunisation (EPI) in South Africa was last updated in 2015.

The revised EPI schedule for public health facilities providing services to children in the first year of life includes immunisation at birth, and then at 6 weeks, 10 weeks, 14 weeks and 9 months.[10] Thus, by the time of their first birthday, all babies should have visited a health facility at least four times after birth for immunisation services, and these immunisations should be recorded in the child's Road-to-Health booklet.

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

Immunisation rates are tracked in the District Health Information System and are calculated as the number of children who have received complete immunisation divided by the child population within that district. The percentages obtained in this way will be influenced by population movement in health seeking behaviour – for example, if children from one district are taken to a health facility in a neighbouring district. This has sometimes resulted in some districts, and even provinces, reporting immunisation rates of over 100%.

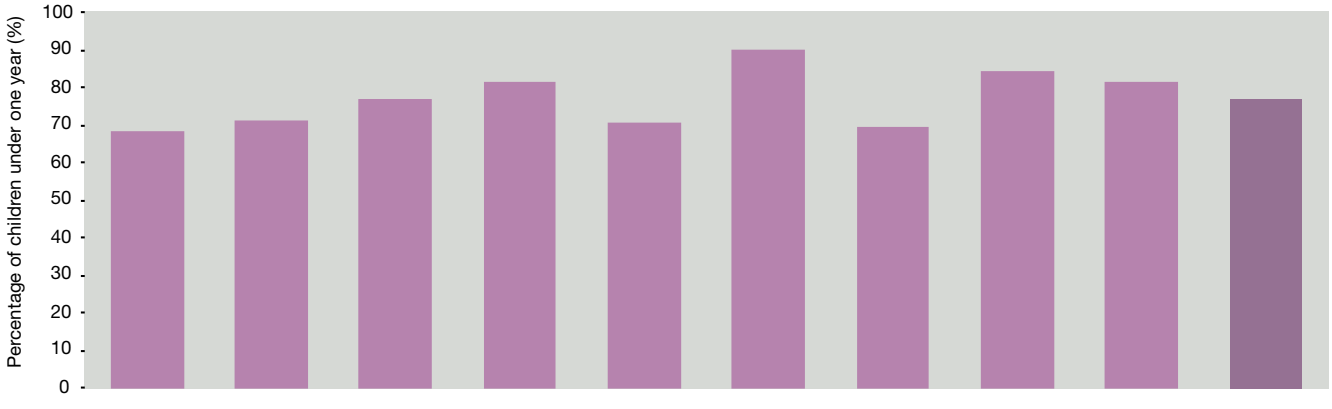
The immunisation rates are also affected by national (and district-level) estimates of population size.

The 2015/16 immunisation rate, as reported in the 2017 District Health Barometer, reflected high levels of immunisation for infants under a year, at 89.2%.[11] Since then, Statistics South Africa revised its model to derive the mid-year population estimates, and it was found that the number of children in the country had previously been underestimated.[12] The 2015/16 immunisation rate was revised downwards to 79.5%. The 2016/17 rate had dropped even before the new population estimates were released, to 82.3% and after retrospective adjustment to the revised population estimates, the rate for that year was calculated at 71.2%. The lower immunisation rate for that year was attributed to a global shortage of Hexavalent vaccine.[10] In 2017/18 the immunisation rate was estimated at 77%. The immunisation rates in the District Health Barometer have not been adjusted retrospectively before 2015, and so it is not possible to determine long-term trends in immunisation uptake.

The highest immunisation rates for 2017/18 were in Mpumalanga (90%), the Northern Cape (85%), KwaZulu-Natal (82%) and the Western Cape (81%) – all of which exceeded the national average of 77%. Eastern Cape and North West had the lowest immunisation rate (69%).

The challenge of national and provincial aggregates is that they can mask differences between districts and hide areas with low coverage. District coverage is available in the 2017/18 District Health Barometer where 29 of the 52 districts show coverage below the national average. Coverage for individual districts demonstrates significant inter-district inequities in service access for young children – ranging from a low coverage rate of 56% in the Sarah Baartman District Municipality of the Eastern Cape, to 98% in the eThekwini Metropolitan Municipality in KwaZulu-Natal. Low coverage rates are concentrated mainly in poorer districts, where health needs may be greatest.

Figure 3b: Immunisation coverage of babies younger than one year, by province, 2017/18



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2017/18	68.5%	71.3%	77.3%	81.7%	70.7%	90.4%	69.4%	84.5%	81.4%	77.0%

Source: Department of Health (2019) District Health Information System. Reported in: Massyn N, Pillay Y & Padarath A (eds) *District Health Barometer 2017/2018*. Durban: Health Systems Trust.

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 the most vulnerable who have not been immunised in that community will be protected – including young children and those with low immunity.

Even though immunisation is freely available, and the goal is for it to be universal, it is voluntary and there is growing evidence that some parents choose not to immunise their children. A "worldwide increase in vaccine hesitancy and refusal" has been described as a threat to the public health achievements in controlling and preventing infectious diseases.[13] At a country level, vaccine sentiment and voluntary compliance is inversely correlated with socio-economic status (i.e. compliance is lower in wealthy countries than in poorer ones).[13]

The completion rates for "basic immunisation" (BCG, three doses of STaP-IPV-Hib, and one dose of measles vaccine) in the South African Demographic and Health Survey of 2016 were substantially lower than those recorded in the District Health Information System (at 61%, compared with 77%). The reason for this discrepancy is not clear, but it is important to note that compliance was highest in the poorest wealth quintile (66%) while the richest quintile was lower, at 60%.[5] This suggests an inverse correlation between socio-economic status and immunisation in South Africa, a highly unequal country.

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