

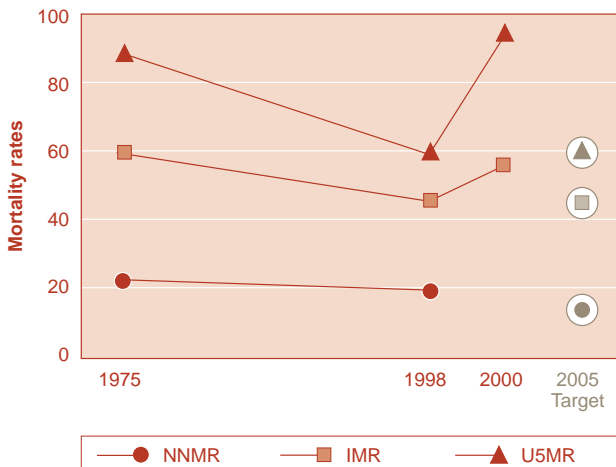


Geoff Solarshⁱ and Ameena Gogaⁱⁱ

ⁱ Monash University School of Rural Health

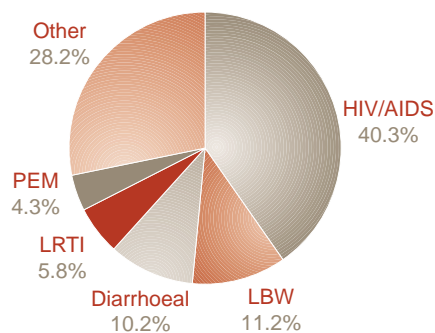
ⁱⁱ Directorate: Child and Youth Health, Cluster: Maternal Child and Women's Health and Nutrition, National Department of Health

Mortality Trends



Sources: SADHS (1975, 1998), UNICEF (2000), ASSA (2000)

Causes of death in under 5s, 2000



Source: Burden of Disease Study

Key Messages

- ◇ The Millennium Development Goals provide an important framework for SA national child health policies and programmes.
- ◇ Free health care has been provided for children under the age of 6 years since 1994, and various policies, programmes and strategies have been developed to meet national and international goals.
- ◇ The challenge lies in implementing these, and measuring their impact or effect on child health. There is a relative lack of good quality routine data to monitor child health status and the progress with child health programmes in SA.
- ◇ Under-5 mortality rates appear to be rising. Hence renewed and continued commitment to research and programmes that reduce mother-to-child transmission of HIV and support children and families infected with HIV is needed.
- ◇ In spite of the impact of the HIV epidemic on child health there is ample evidence of:
 - continued morbidity and mortality from common infectious diseases and neonatal causes, and
 - a child health transition in SA,
 signifying the need for intensified implementation of policies, programmes and strategies that prevent or manage common childhood illnesses and a parallel commitment to programmes that improve the quality of life of the vast majority of children surviving beyond 5 years of age, such as programmes to address the special needs of children with disability and those affected by abuse and neglect.

Framework for Monitoring and Evaluation

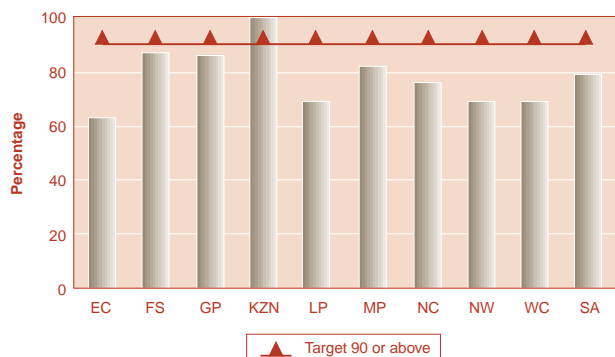
Global:

- ◇ Millennium Development Goals
- ◇ A World Fit for Children
- ◇ Expanded Programme on Immunization (EPI)
- ◇ Global Alliance for Vaccines and Immunization (GAVI)

South Africa:

- ◇ Health Goals, Objectives and Indicators 2001-2005
- ◇ Primary Health Care Package + Norms and Standards
- ◇ District Hospital Service Package for South Africa
- ◇ Breastfeeding Guidelines for Health Workers
- ◇ Guidelines for Nutrition Interventions
- ◇ PMTCT Protocol for Pilot Sites

Full immunisation coverage (%) under 1 year, 2002



Source: DHIS

- ◇ Expanded Programme on Immunisation (EPISA)
- ◇ Integrated Management of Childhood Illness Strategy
- ◇ National Health Policy Guidelines for Improved Mental health
- ◇ Policy Guidelines for the Management and Prevention of Genetic Disorders, Birth Defects, and Disabilities
- ◇ HIV/AIDS/STD Strategic Plan 2000-2005
- ◇ National Rehabilitation Policy

Key Indicators

Morbidity/mortality indicators:

- Infant mortality rate (IMR)
- Under-5 mortality rate (U5MR)
- Neonatal mortality rate (NNMR)
- Low birth weight rate (LBWR)
- Diarrhoea incidence per 1000 children under 5
- Reported cases of measles
- Reported cases of NNT per 1000 live births
- HIV incidence rate in infants
- Prevalence of stunting
- Prevalence of Vitamin A, Iron and Iodine deficiency
- Non-polio AFP rate

Programme indicators:

- Full immunisation coverage under 1 year
- Measles first dose coverage
- Immunisation drop out rate (between measles 1 and 2)
- Facilities with 60% of health workers trained in IMCI
- Proportion of facilities that are "baby friendly"
- Exclusive breastfeeding rate

Key References and Data Sources

- District Health Information System (DHIS)
- Health indicators update, NDoH
- UNICEF
- Childinfo.org

Introduction

There has been very little previous research into socio-economic inequities in child health in African countries. In a recent household survey in Tanzania, care-seeking behaviour for under-fives with acute illnesses was found to be significantly worse in poorer than in wealthier households, even within a rural society in which there had been reason to believe that households were uniformly poor.¹ In South Africa (SA), with its wide gaps between rich and poor and between urban and rural populations, similar disparities are expected and have been previously demonstrated.²

This chapter summarises the national Department of Health (NDoH) goals and objectives for child health in SA, the priority child health services and programmes that have been implemented to meet those goals and objectives, and their impact on child health status. Within the limits of available data, disparities in service provision and child health outcomes in different locations and subgroups in this country are highlighted. The focus is on the health of children under the age of 5 years. This chapter does not review progress with implementation of the National Programme of Action, and services provided by the Department of Social Development.

Framework for Monitoring and Evaluation

Since 1994, SA has had a unitary national health system, which provides the framework for integrated and comprehensive primary health care services for mothers and children. Free health care for children under the age of 6 years was implemented in 1994. The National Health Bill³ reiterates Government's commitment to providing free health care to children below the age of six years and to children with disabilities, who are not members or dependents of a medical aid scheme.

National, provincial and district directorates or offices of the Department of Health (DoH) that focus on maternal and child health are responsible, respectively, for:

- ◆ developing national goals, objectives, indicators and policies, for monitoring the attainment of national objectives and programme implementation and for providing support to provinces
- ◆ developing provincial health goals and indicators, for monitoring the implementation of programmes in pursuit of those goals and for providing support to districts, and

- ◆ for the implementation and monitoring of programmes in districts themselves.

Current Child Health Goals, Objectives and Indicators

International Goals, Objectives and Indicators

Health goals and objectives in SA are guided by a set of international goals and objectives. In 2000, SA adopted the Millennium Development Goals (MDGs),⁴ and *inter alia*, committed itself to:

- ◆ Reducing by two-thirds the mortality rate among children under five by 2015
- ◆ Halting and beginning to reverse the spread of HIV/AIDS as well as the incidence of malaria and other major diseases by 2015.

In 2002, SA, amongst other countries, further committed to creating "A World Fit for Children" by adopting several international goals, strategies and actions. These include the following:⁵

- ◆ Reducing infant and under-5 mortality rates by one third by 2010 and by two thirds by 2015
- ◆ Reducing child malnutrition among children <5 yrs by at least 1/3 by 2010 with special attention to children <2 years
- ◆ Reducing the proportion of infants infected with HIV by 20% by 2005 and by 50% by 2010
- ◆ Ensuring that the reduction of maternal and neonatal morbidity and mortality is a health sector priority
- ◆ Reducing child injuries due to accidents or other causes
- ◆ Developing policies and programmes aimed at children to prevent substance abuse and for the reduction of violence and suicide
- ◆ Protecting children from all forms of violence, abuse, neglect and exploitation.

At present, it appears unlikely that the MDGs or the goals adopted at the Special session of the UN General Assembly, May 2002, will be reached by many countries.^{4, 6}

In addition, SA subscribes to the following international targets on childhood immunisation:^{5, 7}

- ◆ 80% coverage per district for each of the following vaccinations: oral polio vaccine (OPV) 3, diphtheria, tetanus and pertussis (DTP) 3 and Measles 1st dose
- ◆ <10% drop out rate between 1st and 3rd DTP vaccine doses
- ◆ <10% drop out rate between Measles 1 and 2 doses
- ◆ 80% Tetanus Toxoid 2 coverage for pregnant women

- ◆ High quality surveillance for EPI-targeted disease conditions
- ◆ Polio eradication by 2005
- ◆ Elimination of maternal and neonatal tetanus by 2005.

UNICEF uses the under-five mortality rate (U5MR) as the principal indicator of human and economic progress. U5MR measures an end result of the development process rather than an 'input' such as school enrolment level, per capita calorie availability, or the number of doctors per thousand population – all of which are means to an end. The U5MR is known to be the result of a wide variety of inputs: the nutritional health and the health knowledge of mothers; the level of immunisation and oral rehydration therapy use; the availability of maternal and child health services (including prenatal care); income and food availability in the family; the availability of clean water and safe sanitation; and the overall safety of the child's environment. The U5MR is less susceptible to averages; it is much more difficult for a wealthy minority to affect a nation's U5MR, and it therefore presents a more accurate, if far from perfect, picture of the health status of the majority of children.⁸

The Global Alliance for Vaccines and Immunization (GAVI) has suggested a list of core indicators for monitoring immunisation programmes, which align with the WHO/UNICEF Joint Reporting Form.⁹ Coverage levels with diphtheria and tetanus toxoid and pertussis vaccine (DTP), usually the third dose, are considered one of the best indicators of health system performance.¹⁰ The MDG include measles coverage as a key indicator for reducing child mortality.⁴

National Child Health Goals and Objectives

The NDoH goals for child health (2001-2005)¹¹ are guided by international child health goals, and go beyond concerns with survival. These are:

- ◆ To reduce perinatal morbidity and mortality
- ◆ To reduce infant and child mortality and morbidity
- ◆ To reduce HIV infection in children
- ◆ To improve nutritional status in under-fives
- ◆ To prevent and control noncommunicable chronic diseases
- ◆ To reduce violence towards women and children.

Various directorates in the DoH – Child and Youth Health, Nutrition, Women's Health and Genetics, HIV/AIDS and STIs, Chronic Diseases and Disabilities, Oral Health and Mental Health and Substance Abuse – are responsible for programmes that impact directly or indirectly on the health of children and have set separate and specific programme-related goals and objectives.¹¹

National Child Health Indicators

A comprehensive list of child health indicators for children under the age of 5 years, together with their associated goals and objectives, is provided in Table 1. Three new health status indicators, namely post-neonatal mortality rate and cause-specific mortality rates for infants and under-fives, respectively, have been proposed. They provide important additional information about age groups of special interest and provide specific guidance with the development of child health priorities and programmes.

Definition and relationship of age-specific mortality rates

Still births	Early neonatal deaths	Late neonatal deaths	Post-neonatal deaths	Child deaths
>28 weeks gestation	Birth → end of the 7th day	8th day → end of 27th day	28th day → end of 365th day	1st year → end of 4th year
Perinatal Mortality				
	Neonatal Mortality		Post-neonatal Mortality	
	Infant Mortality			Child Mortality
	Under-5 Mortality			

Table 1: Goals, Objectives and Indicators for Child Health in South Africa

Goal	Objective	Indicator	Numerator	Denominator	Data Source
Mortality Indicators	Reduce the number of still births and early neonatal deaths	Attain a national perinatal mortality rate of 30 per 1000 by the year 2005	Perinatal Mortality Rate Sum of still births (≥ 28 weeks gestation) + early neonatal deaths (≤ 7 days of age) in a given period	Per 1000 live births + still births in the same period	StatsSA, SADHS, DHIS, PPIP, Maternal Registry
	Reduce the number of infants dying in the first 28 days of life	Attain a national neonatal mortality rate of 14 per 1000 by the year 2005	Neonatal Mortality Rate No. of deaths under 28 days of age in a given period	Per 1000 live births in the same period	StatsSA, SADHS, HSRC, Maternal Registry
Reduce the number of infants dying between 28 days and 365 days of life	Attain a national post-neonatal mortality rate of 20 per 1000 by the year 2008	Post-neonatal Mortality Rate No. of deaths occurring between 28 and 365 days after birth in a given period	No. of deaths occurring between 28 and 365 days after birth in a given period	Per 1000 live births in the same period	StatsSA, SADHS, HSRC
Reduce the number of infants dying in the first year of life	Attain a national infant mortality rate of 45 per 1000 by the year 2005	Infant Mortality Rate No. of deaths in the first year of life in a given period	No. of deaths in the first year of life in a given period	Per 1000 live births in the same period	StatsSA, SADHS, HSRC
Reduce the number of infants dying in the first 5 years of life	Attain a national under-5 mortality rate of 59 per 1000 by the year 2005	Under-5 Mortality Rate No. of deaths under the age of 5 years in a given period	No. of deaths under the age of 5 years in a given period	Per 1000 live births in the same period	StatsSA, SADHS, HSRC
Measure the number of children dying of preventable causes in the first year of life	Sentinel facility-based surveillance system for infant deaths due to HIV, diarrhoeal diseases and acute respiratory infections by the year 2010	Cause-Specific Infant Mortality Rate	No. of deaths in children under the age of 12 months by cause in a given period	Per 1000 live births in the same period	StatsSA, Burden of Disease Estimates for SA (2000)
Measure the number of children dying of preventable causes in the first 5 years of life	Sentinel facility-based surveillance system for under-5 deaths due to HIV, diarrhoeal diseases and acute respiratory infections by the year 2010	Cause-Specific U-5 Mortality Rate	No. of deaths in children under the age of 5 years by cause in a given period	Per 1000 live births in the same period	StatsSA, Burden of Disease Estimates for SA (2000)

Note: Lines with darker shading are proposed new indicators

Goal	Objective	Indicator	Numerator	Denominator	Data Source	
Communicable Disease Indicators	Reduce infant and child mortality and morbidity	Reduce the incidence of diarrhoeal disease in under-5s by 20% by the year 2005	Proportion of under-5s at health facilities with diarrhoea	No. of children under the age of 5 years presenting to health facilities with diarrhoeal disease	Per 1000 under-5 attendances during the same period	SADHS, DHIS
	Eliminate Measles	Notify and confirm all cases of suspected measles	Annual Confirmed Cases of Measles	No. of confirmed cases of measles in children under 15 years in a given period and a defined population	Per 100 000 children under 15 years in the same period and same population	Disease notification system and measles surveillance system
Eliminate Neonatal Tetanus	Notify and confirm all cases of neonatal tetanus	Annual Confirmed Cases of Neonatal Tetanus	No. of confirmed cases of neonatal tetanus during the first 28 days in a given period and defined population	Per 100 000 infants less than 28 days in the same period and same population	NNT Surveillance System	
Eradicate Poliomyelitis	Detect and investigate at least 1 case of Acute Flaccid Paralysis (AFP) per 100 000 children under 15 years of age	Non-polio AFP Rate	No. of reported and confirmed cases of flaccid paralysis (polio + non-polio) in children under the age of 15 years in a given period and defined population	Per 100 000 children under the age of 15 in the same period and the same population	AFP Surveillance System	
Reduce the incidence of HIV infection in infants and children	Reduce the proportion of infants infected with HIV by 20% by 2005 and by 50% by 2010	HIV Incidence Rate in Infants	No. of children born to HIV+ women who are HIV antibody+ at 15 months of age	Per 100 children born to HIV+ women during the same period	Provincial PMTCT Programmes	
Nutritional Indicators	Improve the Nutritional and Anthropometrical Status of Under-fives	Reduce the prevalence of stunting among children less than 5 years of age to 18% by the year 2005	Stunting Rate	No. of children more than 2 SDs below the median reference value for height for age in a defined population of under-5s in a given period	Per 100 children under the age of 5 years in that population in the same period	Periodic Nutrition Surveys, SADHS
		Reduce the prevalence of under-weight among children less than 5 years of age to 8% by the year 2005	Underweight Rate	No. of children more than 2 SDs below the median reference value for weight for age in a defined population of under-5s in a given period	Per 100 children under the age of 5 years in that population in the same period	Periodic Nutrition Surveys, SADHS, DHIS

Goal	Objective	Indicator	Numerator	Denominator	Data Source
	Reduce the prevalence of wasting among children less than 5 years of age to 2% by the year 2005	Wasting Rate	No. of children more than 2 SDs below the median reference value for weight for height in a defined population of under-5s in a given period	Per 100 children under the age of 5 years in that population in the same period	Periodic Nutrition Surveys, SADHS
Reduce infant and child mortality and morbidity	Increase exclusive breastfeeding rate to 15% by the year 2005	Exclusive Breast-feeding Rate	No. of infants exclusively breastfed until 6 months of age in a given period	Per 100 live births in the same period	Periodic Nutrition Surveys, SADHS
Improve nutritional status	Reduce Vitamin A deficiency in children less than 5 years of age to 15% by the year 2005	Vitamin A Deficiency Rate	No. of children less than 5 years of age with biochemical evidence of Vitamin A deficiency in a defined population in a given period	Per 100 children under the age of 5 years in that population and in the same period	Periodic Nutrition Surveys, SADHS
Improve nutritional status	Reduce Iron Deficiency in children less than 5 years of age to 7.5% by the year 2005	Iron Deficiency Rate	No. of children <5 years of age with evidence of iron deficiency anaemia in a defined population and a given period	Per 100 children under the age of 5 years in that population and in the same period	Periodic Nutrition Surveys, SADHS
Improve nutritional status	Reduce Iodine deficiency in children less than 5 years of age to 7.5% by the year 2005	Iodine Deficiency Rate	No. of children <5 years of age with evidence of iodine deficiency in a defined population and a given period	Per 100 children under the age of 5 years in that population and in the same period	Periodic Nutrition Surveys, SADHS
Reduce infant and child mortality and promote child growth and development	Reduce the prevalence of low birth weight (<2.5 kg) to less than 10% of all live births by the year 2005	Low Birth Weight Rate	No. of children born with birth weight <2.5 kg in a defined population and in a given period	Per 100 live births in the same population and period	Stats SA, Periodic Surveys, SADHS, Hospital and Health Facility Records, PPIP

Goal	Objective	Indicator	Numerator	Denominator	Data Source
Programme Indicators					
IMCI	Train 60% of all PHC nurses in the implementation of IMCI by the year 2005	Proportion of PHC facilities with ≥60% of staff who are IMCI-trained	No. of facilities with their staff who are IMCI-trained in a given period	Per 100 PHC facilities eligible to implement IMCI in the same period	IMCI National Coordinator Statistics, National DoH
IMCI	Correctly prescribe drugs from the PHC essential drug list for children in 80% of cases by 2005	Proportion of sick children receiving drug management that conforms with IMCI guidelines	No. of children correctly managed by PHC nurses in spot assessments at selected PHC clinics in a given period	Per 100 nurses evaluated for prescribing practices during the same period	IMCI Health Facility Survey, Supervisory Visit Reports
BFHI	Accredit 20% of eligible health facilities (with maternity beds) as 'baby-friendly' by the year 2005	Proportion of health facilities with maternity beds that are baby-friendly	No. of accredited 'baby-friendly' facilities in SA	Per 100 health facilities with maternity beds in SA	BFHI Assessments
EPI	Attain 90% vaccination coverage in the 1 st year of life at correct times and intervals with all the following vaccines: BCG, oral polio x 4 doses, DPT x 3 doses, HepB x 3 doses, Hib x 3 doses, Measles x 1 dose	Proportion of children that have been fully vaccinated in their first year of life	No. of doses of each vaccine antigen administered to children in their first year of life in a defined population and in a given period	Per 100 expected doses (based on the no. of children under 1 year of age and no. of required doses for each vaccine) in the same population and the same period	DHIS, Mid-Year Estimates of Target Populations
EPI	Vaccinate 90% of children against measles in their first year of life	Percentage of children receiving a single dose of measles vaccine in the first year of life	No. of doses of measles vaccine administered to children in their first year of life in a defined population and in a given period	Per 100 children under 1 year of age in the same population and the same period	DHIS, Mid-Year Estimates of Target Populations
EPI	Improve the quality of immunisation practices and improve public acceptance of immunisation	Adverse Events Rate following Immunisation (%)	No. of children receiving vaccines in a defined population and in a given period	Per 100 children in the target age group in the same population and in given period	AEFI Surveillance System

Adapted from: HGOI 2001-2005

Health Indicators Update: Issue 2: Child Health, Department of Health, Pretoria, 2003

Note: SD – standard deviation

BCG – Bacille Calmette-Guerin (TB)

HIB – Haemophilus influenzae type B

AEFI – Adverse Events Following Immunisation

HepB – Hepatitis B

BFHI – Baby-friendly hospital initiative

Child Health Policy

A detailed presentation of child health policy in SA is beyond the scope of this chapter. Several policies, strategies and guidelines have been developed to assist with the attainment of national and international goals and objectives. Box 1 lists the key policies, strategies and guidelines relating to child health in SA, that either have been, or are currently being developed by the NDoH.

Box 1: Child Health Policies and Guidelines relevant for children under the age of 5 years

- ◇ Policy Guidelines for the Management and Prevention of Genetic Disorders, Birth Defects, and Disabilities
- ◇ National Health Policy Guidelines for Improved Mental Health in South Africa
- ◇ Policy Guidelines for Child and Adolescent Mental Health
- ◇ National Rehabilitation Policy
- ◇ Draft: Child Health Policy and Implementation Guidelines
- ◇ Draft: Infant and Young Child Feeding Policy
- ◇ Draft: Policy Framework for noncommunicable chronic conditions in children
- ◇ Draft: National Policy Framework for Child Abuse

Strategies and Guidelines (excluding training packages)

- ◇ Comprehensive Primary Health Care Package + Norms and Standards
- ◇ District Hospital Service Package for South Africa
- ◇ SA Breastfeeding Guidelines for Health Workers
- ◇ Guidelines for Nutrition Interventions at Health Facilities to Manage and Prevent Child Malnutrition
- ◇ PMTCT Protocol for Pilot Sites
- ◇ Expanded Programme on Immunisation (South Africa) – Immunisation Schedule and Fact Sheets
- ◇ Integrated Management of Childhood Illness Strategy: Case Management Guidelines
- ◇ National Guidelines on Palliative Care for Children
- ◇ HIV/AIDS/STD Strategic Plan of the National Department of Health: 2000-2005
- ◇ Operational Plan for Comprehensive HIV and AIDS Care, Management and Treatment for South Africa
- ◇ Management of Diabetes Type I in children (<18 years) at hospital level
- ◇ Management of Asthma in Children
- ◇ National Guidelines on Primary Prevention and Prophylaxis of Rheumatic Fever and Rheumatic Heart Disease for Health Professionals at primary level
- ◇ Draft: Maternal and Neonatal Strategy
- ◇ Draft: Guidelines for Health Care Providers Managing Suspected Child Abuse, Neglect and Exploitation

Current Child Health Strategies and Programmes

Various national strategies and programmes stem from these child health goals, objectives and policies and are currently being implemented.

Integrated Management of Childhood Illness (IMCI)

This is the key national strategy for reducing morbidity and mortality from common childhood illnesses that affect children under the age of 5 years. It has 3 intervention areas:

- ◆ Improving the skills of health care personnel managing children in the use of case-management guidelines that address the most important causes of mortality and morbidity in young children;
- ◆ Strengthening the health system (equipment, supplies, communication and referral systems);
- ◆ Improving household, family and community behaviours to facilitate and promote child health and development.

IMCI is an all-encompassing and integrated approach to child health. It has a primary health care and a hospital component. The SA IMCI strategy has been adapted to include care of children infected with HIV or born to HIV-positive women. Two key elements of IMCI are counselling of caregivers and regular follow-up of children. Such counselling and follow-up provide the main vehicle for the promotion of child health and the primary, secondary and tertiary prevention of ill-health amongst pre-school children. Children with severe or complicated illnesses are referred to higher and more sophisticated levels of care.

The following core programmes address key causes and determinants of under-5 morbidity and mortality. They link with, or are to a variable extent encompassed within the IMCI strategy.

Prevention of Mother-To-Child Transmission of HIV (PMTCT)

The PMTCT programme was initiated in 18 pilot sites by the NDoH in 2001 in order to demonstrate the feasibility of integrating a package of proven and cost-effective interventions – counselling, HIV testing, modified obstetric practices, a short course of nevirapine and support for infant feeding options – into existing Mother-Child health services. This programme is at different stages of implementation in all nine provinces. Programme indicators have been developed in order to monitor progress.

Perinatal Problem Identification Programme (PPIP)

The PPIP is a computer-based audit system, currently based at 27 sentinel health facilities throughout SA. It was developed by

the Maternal and Infant Health Care Strategies Research Unit of the Medical Research Council and is supported by the NDoH. It aims to estimate a national perinatal mortality rate and to identify the causes of perinatal mortality, including avoidable factors such as delay in seeking care, substandard care provided by health care staff and missed opportunities e.g. untreated positive syphilis serology results, during pregnancy, labour and delivery. Its location within sentinel facilities limits the extrapolation of these estimates, causes and factors to all parts of SA. It does, however, provide one of the few reliable data sources for perinatal and neonatal mortality, which are increasingly important contributors to infant mortality in SA.

Kangaroo Mother Care

This intervention, primarily for the care of the low birth weight (LBW) infant, is recognised as a way of improving perinatal and neonatal survival and well-being. Its implementation is supported in principle by the national and provincial departments of health.

Expanded Programme on Immunisation, South Africa (EPISA)

EPISA aims to decrease childhood morbidity and mortality from vaccine-preventable diseases. It has various programmatic dimensions, which include vaccine procurement and distribution; cold chain management; daily immunisation services at maternal and child health clinics and surveillance (immunisation coverage; vaccine adverse events; incidence rates of acute flaccid paralysis, measles and neonatal tetanus).

Integrated Nutrition Programme (INP)

The INP, developed from the recommendations of the Nutrition Committee appointed by the Minister of Health in 1994, adopts an integrated approach to nutrition. The INP gives special attention to children under 2 years and to pregnant and breastfeeding women. The broad strategies identified by the INP to improve the nutritional status of all South Africans are:

- ◆ Disease-specific nutrition support, treatment and counselling
- ◆ Growth monitoring and promotion
- ◆ Nutrition education, promotion and advocacy
- ◆ Protection, promotion and support of breastfeeding
- ◆ Micronutrient malnutrition control
- ◆ Food service management
- ◆ Household food security.

Although there are numerous other child health programmes and thrusts in SA, this chapter focuses on the core child health strategies and programmes described above. Together, they offer the best prospect for reducing mortality and morbidity in children less than 5 years of age.

Data: Progress in Child Health Status in South Africa

Mortality Data

Perinatal Mortality

Objectives (by 2005):

- ◆ Reduce Perinatal Mortality Rate (PNMR) from 40 to 30 per 1000 total births.¹¹

Findings:

- ◆ There is evidence that 80-85% of births occur under supervision of skilled health workers in health facilities.^{12, 13} There are recent reports that supervised deliveries may be much lower than this figure in some provinces and particularly in rural under-served areas.
- ◆ The mean PNMR (2000-2002) from the PPIP programme in 73 sentinel sites was 34 per 1000 births.¹⁴ Disparities existed between metropolitan (36.2), town (38.6) and rural (26.7) hospitals.
- ◆ Primary causes of perinatal deaths were intrapartum asphyxia or birth trauma (6.2-6.9 per 1000) and spontaneous preterm delivery (5.4-6.8 per 1000).
- ◆ 34-63% of all asphyxia or birth trauma-related deaths are considered to be potentially preventable through earlier or better quality antenatal monitoring and better management of labour and delivery.¹⁵

Comments:

- ◆ Population-based estimates of perinatal mortality are lacking. Facility-based estimates from hospitals participating in the PPIP may either underestimate or overestimate the PNMR in SA.¹⁶
- ◆ Since population-based estimates are very difficult to obtain, improvement in the quality and completeness of facility-based data offers the best prospect for true measures of perinatal mortality in South African populations.
- ◆ The Maternal and Neonatal strategy (see Box 1), due to be implemented in 2004, aims to improve maternal and neonatal care.

Infant and Under-5 Mortality

Table 2: Infant, Child and Under-5 Mortality trends for South Africa, 1975-1998

Provinces	Neonatal Mortality		Post-neonatal Mortality		Infant Mortality		Child Mortality ⁱⁱⁱ		Under-5 Mortality	
	1975	1998	1975	1998	1975	1998	1975	1998	1975	1998
Eastern Cape		24.7		36.5		61.2		20.5		80.5
Free State ⁱ						53.0		19.0		72.0
Gauteng		17.8		18.5		36.3		9.3		45.3
KwaZulu-Natal		23.2		28.9		52.1		23.6		74.5
Limpopo		18.3		18.9		37.2		15.7		52.3
Mpumalanga		23.6		23.6		47.3		17.3		63.7
Northern Cape		20.5		21.3		41.8		14.3		55.5
North West ⁱ						42.0		14.0		56.0
Western Cape ⁱ						30.0		9.0		39.0
Population Groups										
African	28.0	20.6	48.0	26.5	76.0	47.0	42.0	17.4	114.0	63.6
Coloured	26.0	9.6	30.0	9.2	30.0	18.8	37.0	9.6	91.0	28.2
Indian ⁱⁱ										
White ⁱⁱ										
South Africa	23.0	19.8	36.0	25.6	59.0	45.4	32.0	14.7	89.0	59.4

Source: 1975 data – Findings from a series of demographic and health surveys, 1987-1989.¹⁷
Based on life table estimates 10-14 years before a 1988 demographic and health survey. No breakdown by province is available.

Source: 1998 data – SADHS 1998¹²
Provincial rates are for the ten years before the survey and national rates are for the 5 years before the survey.

Notes: i Rates for 3 provinces¹² were adjusted following the survey to bring them in line with 1996 census estimates. No adjustments were made for neonatal and post-neonatal mortality rates which have therefore not been included.

ii Numbers for both Whites and Indians were too small to permit precise mortality estimates and were therefore excluded.

iii Child Mortality: Deaths amongst children aged 12 months to age 5 years (i.e. to the end of the 4th year), per 1000 live births.

Objectives (by 2005):

- ◆ Reduce the Neonatal Mortality Rate (NNMR) from 20 to 14 per 1000 live births.
- ◆ Return the national Infant Mortality Rate (IMR) to 45 per 1000 live births.
- ◆ Return the national Under-5 Mortality Rate (U5MR) to 59 per 1000 live births.

Findings:

- ◆ Between 1975 and 1998 IMR and U5MR fell dramatically (Table 2).^{12, 17}
- ◆ The main reductions occurred in post-neonatal and child mortality.
- ◆ The contribution of neonatal deaths to overall IMR increased during this period from 39% in 1975 to 45% in 1992. This

was not due to an absolute increase in neonatal deaths, which have remained fairly constant, but rather to the fall in post-neonatal deaths.

- ◆ Projections indicate that IMR had increased to 56/1000¹⁸ in 2000 and 59/1000¹⁹ in 2001 and will increase further to 75 per 1000 live births by 2010.²⁰
- ◆ Projections also indicate that U5MR increased to 95 per 1000²¹ in 2000.

Comments:

- ◆ Historical data on infant and under-5 mortality support the contention that SA, in parallel with many other sub-Saharan African countries, has been undergoing a transition in child health status since the mid 1960s.^{22, 23}
- ◆ These demographic changes mirror mortality trends in industrialised countries 60-80 years ago.²⁴

- ◆ Comparisons of recent infant mortality rates in the 9 provinces of SA with mortality time trends in the United Kingdom between 1900 and 1972 suggest that the Eastern Cape, Mpumalanga, Gauteng and the suburb Soweto are at points in the child health transition that occurred in the United Kingdom in 1931, 1941, 1946 and 1961 respectively.²⁴
- ◆ This demonstrates the large gaps between child health status in SA and industrialised countries and the large disparities in health status between children in different parts of this country, supporting the findings of the 2000 UNDP report that rated SA as below average in terms of human development.²⁵
- ◆ Neonatal mortality accounted for 39% of infant mortality in 1975 and 44% of infant mortality in 1998, although this proportion varies between more and less developed provinces.^{12, 17}
- ◆ Available data indicate large discrepancies between population groups (Table 2) supporting the UNDP Report that SA is ranked as the third most unequal society in the world.²⁵
- ◆ The data in Table 2 do not fully capture the current impact of HIV infection on IMR and U5MR, which has been increasingly felt in countries such as SA, where HIV seroprevalence has rapidly increased.^{23, 26, 27, 28} The projected increases in IMR and U5MR are largely attributable to the HIV/AIDS epidemic, and pose a major challenge to child health in SA. More recent data from the field are needed to validate these projections and intensified action is needed so that the gains of the past are not negated.

Cause-specific Mortality

Table 3: Causes of death in under-fives, SA, 2000

Rank	Cause of death	No. of Deaths	%
1	HIV/AIDS	42 749	40.3
2	Low Birth Weight	11 876	11.2
3	Diarrhoeal Diseases	10 786	10.2
4	Lower Respiratory Tract Infections	6 110	5.8
5	Protein-Energy Malnutrition	4 564	4.3
6	Neonatal Infections	2 920	2.8
7	Birth Asphyxia and Trauma	2 584	2.4
8	Congenital Heart Disease	1 238	1.2
9	Road Traffic Accidents	1 219	1.1
10	Bacterial Meningitis	1 141	1.1
11	Fires	1 102	1.0
12	Neural Tube Defects	1 019	1.0
13	Septicaemia	980	0.9
14	Tuberculosis	743	0.7
15	Homicide / Violence	654	0.6
16	Drowning	532	0.5
17	Cot Death	491	0.5
18	Down Syndrome and other Chromosomal Abnormalities	445	0.4
19	Congenital GIT Disorders	379	0.4
20	Congenital Syphilis	257	0.2
	All Causes	106 070	

Sources: MRC Policy Brief No. 3. What are the leading causes of death among South African children?²⁹
Initial Burden of Disease Estimates for South Africa, 2000.¹⁹

Objectives:

- ◆ No objectives or indicators have yet been developed for cause-specific mortality.

Findings:

- ◆ HIV/AIDS was responsible for 40% of all under-5 deaths in the year 2000.
- ◆ Low Birth Weight was responsible for 11% of all under-5 deaths in the year 2000.
- ◆ Diarrhoeal disease, lower respiratory tract infections and malnutrition, when adjusted for HIV/AIDS co-morbidity, only ranked 3rd, 4th and 5th as causes of death but together were responsible for 20.3% of all under-5 deaths in the year 2000.

Comments:

- ◆ The data on infant, under-5 mortality and cause-specific mortality (Table 3) together support the view that the rise in both infant and child mortality since 1998 is substantially attributable to the HIV/AIDS epidemic.²⁹ This emphasises the fact that programmes to prevent mother-to-child transmission of HIV, followed by interventions to effectively manage HIV-positive children remain the best option to reduce infant and child mortality in SA.

Infectious Diseases**Diarrhoea Incidence Rate****Objectives (by 2005):**

- ◆ Reduce the incidence of diarrhoeal disease by 20% in children less than 5 years of age.

Findings:

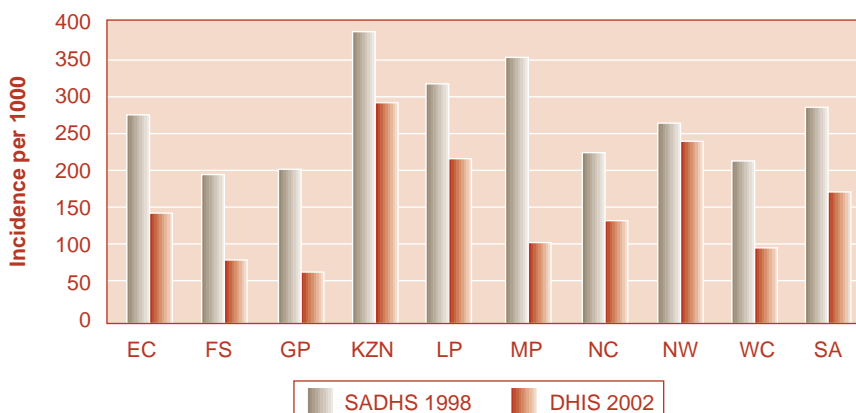
- ◆ Apparent reduction in diarrhoea incidence rates based on comparison between data from SADHS (1998) and data from the District Health Information System (DHIS) in 2002³⁰ (see Figure 1).

Comments:

- ◆ These estimates involve numerous unexplained assumptions and, additionally, compare facility-based with population-based data. They highlight the difficulties involved in the collection of morbidity data, in general, and diarrhoeal disease incidence data, in particular.
- ◆ Furthermore, it is critically important to monitor the incidence of 'diarrhoea with any dehydration' and 'diarrhoea with no dehydration', rather than 'total incidence of diarrhoea'. The two former indicators provide information on the ability of caregivers to manage diarrhoea and prevent dehydration,

and may thus serve as a proxy for the success of community-outreach and community-based diarrhoea prevention and management interventions. Managing diarrhoea and preventing dehydration is critical for reducing infant and under-5 morbidity and mortality. Although these data elements have been included in the DHIS, no data are currently available.

- ◆ Given the numerous assumptions and methodological difficulties in comparing DHIS data with national surveys, these apparent reductions in the incidence of diarrhoeal disease should be treated with extreme caution. Annual DHIS data, particularly as quality improves, will hopefully offer a better perspective of longitudinal trends in diarrhoeal disease incidence.

Figure 1: Incidence of diarrhoea per 1000 children less than 5 years of age

Rates for diarrhoeal incidence/LRTI incidence reflect the increased incidence of HIV infection with which they will be regularly associated and are likely to be correspondingly elevated. There is a need for surveillance systems that link HIV status to reports of diarrhoeal disease and LRTIs.

Source: DHIS 2000 – Health Indicators Update (Issue 2)³⁰

Lower Respiratory Tract Infection (LRTI) Incidence Rate

Objectives:

- ◆ Reduce the incidence of LRTI by 20% in children less than 5 years of age.

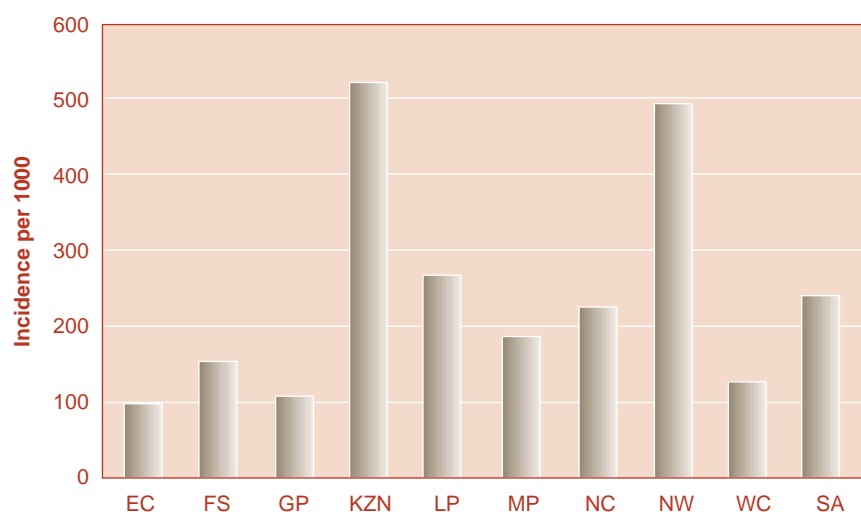
Findings:

- ◆ An overall annual incidence of 241 new cases of LRTI per 1000 under-fives in 2002.³¹
- ◆ Wide variation in incidence between the 9 provinces (100 to 510 cases per 1000).

Comments:

- ◆ These estimates are thought to be falsely elevated, as many health care providers do not adhere to the DHIS definition of LRTI, and record 'runny nose' and any 'cough', even without fast breathing, as a 'lower respiratory tract infection'.
- ◆ The indicator 'LRTI rate' has recently been changed to 'pneumonia rate', adopting the IMCI definition, in an attempt to improve data quality.

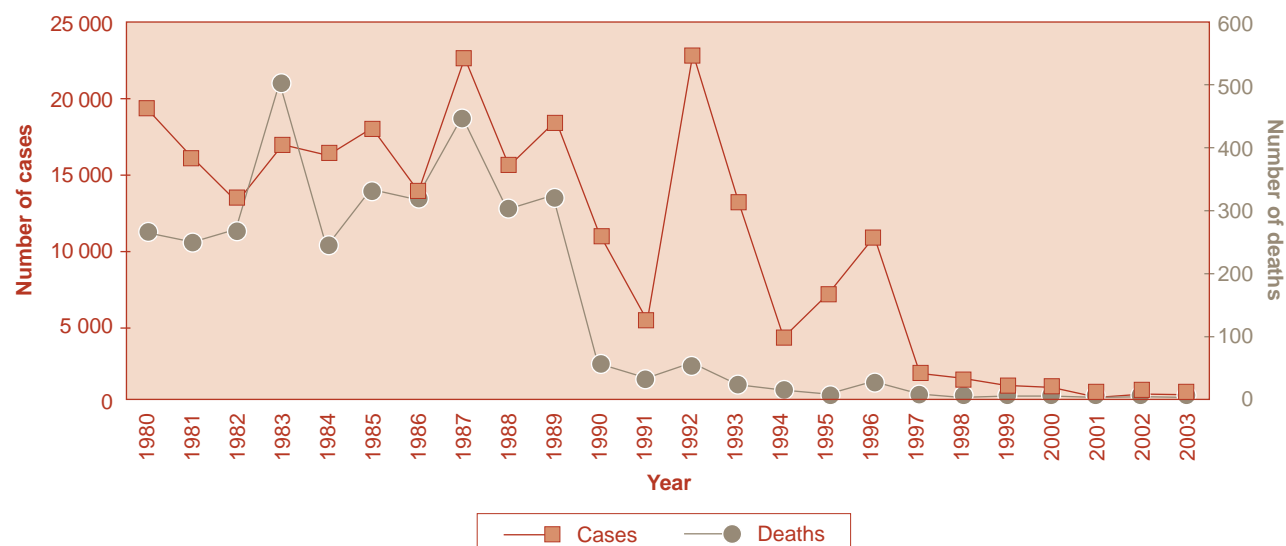
Figure 2: Incidence of lower respiratory tract infections per 1000 children less than 5 years of age, 2002



Source: DHIS - February 2003

Reported Cases of Measles

Figure 3: Measles cases and deaths, SA, 1980-2003



Sources: Measles surveillance system: Sub-directorate, EPI, Cluster: Maternal, Child and Women's Health and Nutrition, NDoH
Disease notification system, Cluster: Health Monitoring and Evaluation, NDoH

Objectives:

- ◆ Notify and confirm all cases of suspected measles.

Findings:

- ◆ Dramatic fall in the number of reported measles cases and deaths over the past 10 years.
- ◆ Only 4 confirmed cases of measles countrywide in 2002 and no reported deaths.
- ◆ In October 2003 there were 170 confirmed cases of measles reported in Gauteng and Mpumalanga provinces, largely amongst adults and older children, with no deaths.

Comments:

- ◆ Contributing factors to the low measles incidence include the adoption of a measles elimination strategy in 1997, introduction of case-based measles surveillance in 1998 and mass measles campaigns to supplement routine immunisation in 1997 and 2000.
- ◆ The recent outbreak, mainly among older children and adults, emphasises the fact that as measles is eliminated in children aged less than 5 years, the epidemiology of the disease might change, affecting older age groups, whose immunity is low (absent or has waned). This emphasises the need for ongoing measles immunisation amongst children – aiming for high coverage and low drop out rates between measles 1 and measles 2 – and routine measles surveillance.

Reported Cases of Neonatal Tetanus (NNT)**Objectives:**

- ◆ Reduce NNT to fewer than 1 case per 1000 live births.

Findings:

- ◆ In 2002 there were fewer than 7 cases of NNT notified in SA.
- ◆ In 2002 a validation process for NNT elimination was conducted in all provinces by WHO, UNICEF and the NDoH. The validation process, which comprised data review and field trips, compared South African indicators with international targets (< 1 case of NNT per 1000 live births in each district; 80% DTP 3 coverage; 80% TT 2 / booster coverage of pregnant women; 80% clean or facility-based deliveries and 80% ANC first visit coverage), concluded that South Africa has eliminated neonatal tetanus.

Comments:

- ◆ Notification data are often unreliable as they depend on individuals remembering to notify diseases.

- ◆ South Africa has to:

- strengthen surveillance for NNT so that accurate and reliable data are collected
- maintain NNT elimination status.

Reported Cases of Polio**Objectives:**

- ◆ Achieve and sustain the criteria for polio eradication.
- ◆ Eradicate polio by 2005.

Findings:

- ◆ Wild Polio Virus was last detected in SA in 1989.

Comments:

- ◆ SA has not yet achieved the international criteria for polio eradication (see later under *Progress with Child Health Programmes*).

HIV Incidence Rate in Infants**Objectives (by 2005):**

- ◆ Reduce the proportion of HIV-infected infants born to HIV-infected mothers by 20%

Findings:

- ◆ Most estimates of HIV related disease burdens in under-fives are based on projections from birth cohort studies, known vertical transmission rates and age-specific mortality rates in the first 5 years of life from studies done elsewhere in sub-Saharan Africa.
- ◆ The only population-based estimate of HIV prevalence rates in children was a recent pooled prevalence of 5.6% [95% CI: 3.7 - 7.4]³² in children 2-14 years of age.
- ◆ Data from the national PMTCT programme indicate that the HIV transmission rate among the 55% of children participating and followed to 12 months of age was 18%, pointing to a $\pm 28\%$ reduction in mother-to-child transmission (MTCT) of HIV.³³

Comments:

- ◆ Although the HIV incidence rate is intended to be a part of the DHIS, routine data on HIV incidence rates in infants are currently not available.
- ◆ More reliable data from a national PMTCT cohort study are awaited to validate the 28% reduction in vertical transmission.
- ◆ Population-based data in age-specific categories are needed to determine true incidence rates.

Nutrition

Low Birth Weight Rate (LBWR)

Objectives (by 2005):

- ◆ Reduce prevalence of LBW from 16% to 10%.

Findings:

- ◆ Research amongst different population groups over the past 20 years suggests LBW rates of approximately 10%.^{34,35}
- ◆ Data from sites implementing PPIP report LBW rates of 19.6%, 16.5% and 13.0% in metropolitan, town and rural hospitals respectively.¹⁴

Comments:

- ◆ Facility-based rates (from the PPIP programme) are almost certainly biased by referral patterns and the various factors that influence these referral decisions.
- ◆ Reliable population-based estimates of LBW that distinguish between the 2 main sub-types (intrauterine growth retardation (IUGR) and preterm delivery) are urgently needed in SA. It is anticipated by the authors that population-based LBW rates are significantly lower than the rates reported from facilities and that IUGR, unlike the situation in many other low-income countries, may not necessarily be the predominant sub-type.

Exclusive Breastfeeding (EBF) Rate

Objectives (by 2005):

- ◆ Increase exclusive breastfeeding rates in infants to 15%.

Findings:

- ◆ Data indicate that although the majority of mothers initiate exclusive breastfeeding, only 10.4% exclusively breastfeed during the first 3 months of life.¹² EBF rates drop to 1.2% by 6 months of age.
- ◆ Almost 50% of women surveyed introduced commercial infant formula milk by bottle during the first 3 months of life.¹²
- ◆ A smaller, more intensive study in a rural district of SA found that only 10% of infants were EBF at 6 weeks of age and 6.8% were EBF at 16 weeks.³⁶

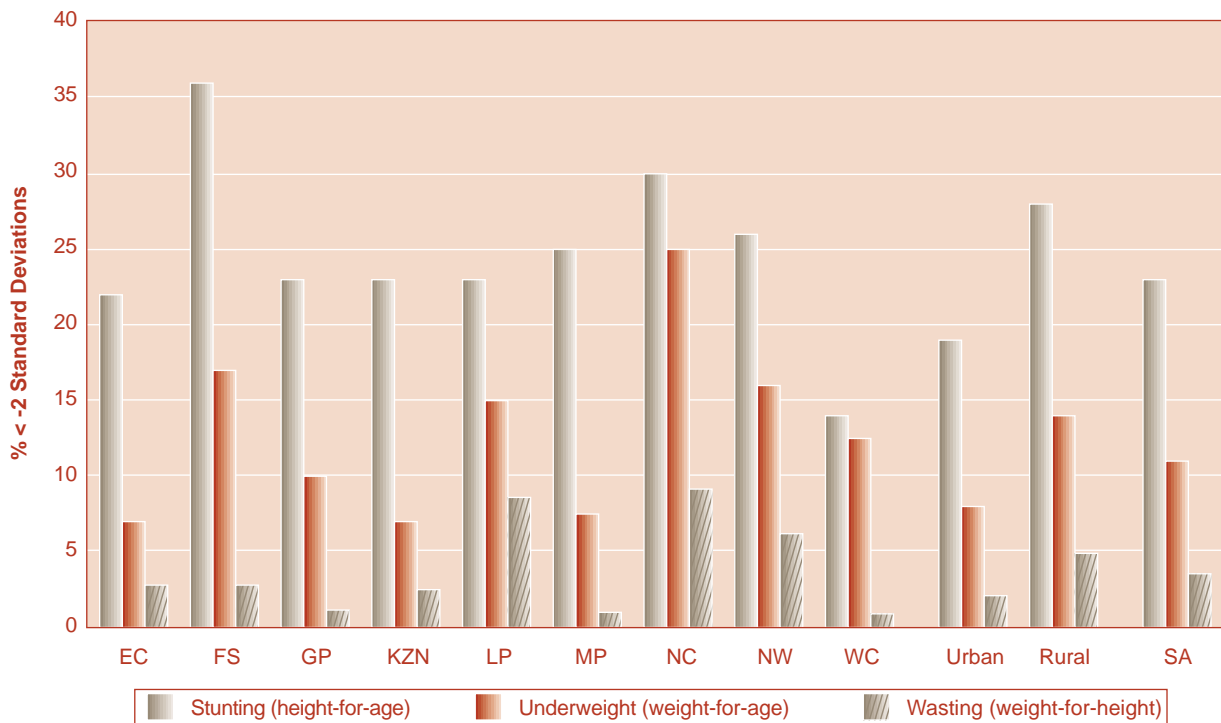
Comments:

- ◆ These data indicate that EBF rates in SA are sub-optimal.
- ◆ The promotion of breastfeeding has been compromised by the confusion about feeding options for HIV-infected women.^{33,37}
- ◆ Recent research suggests that exclusive breastfeeding rates can be increased through counselling and support.³⁸ Even in the context of HIV, a recent review indicated that

breastfeeding is a key child survival strategy.³⁹ However, programmes to promote breastfeeding will need to take into account the special needs of HIV-positive women.

Stunting, Underweight and Wasting Rates

Figure 4: Anthropometric status in children 1-9 years of age by province and by urban/rural settings, 1999



Source: National Food Consumption Survey (NFCS),⁴⁰ data supplied by Nutrition Directorate, NDoH

Objectives (by 2005):

- ◆ Reduce the prevalence of stunting (height-for-age <-2SD) among children less than 5 years to <20%.
- ◆ Reduce the prevalence of underweight (weight-for-age <-2SD) among children less than 5 years to <10%.
- ◆ Reduce the prevalence of wasting (weight-for-height <-2SD) among children less than 5 years to <2%.

Findings:

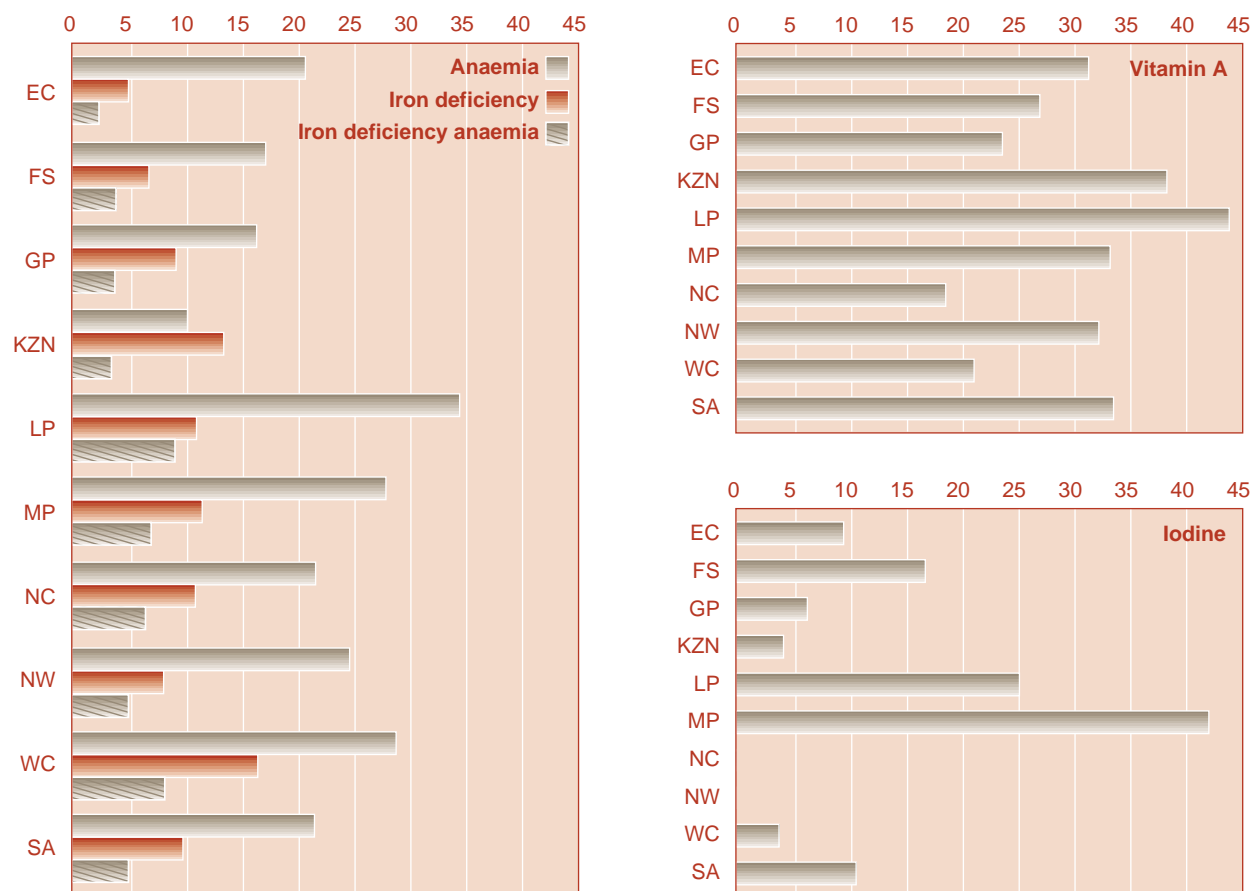
- ◆ Data from a national survey of anthropometric status⁴⁰ show that, in 1999, 21.6% of SA children 1 to 9 years of age were stunted, 10.3% were underweight and 3.7% of children were wasted.
- ◆ These estimates are not significantly worse than estimates from the SADHS survey in 1998.
- ◆ As anticipated from numerous previous anthropometric surveys in SA the predominant problem is stunting although there is evidence of acute nutritional stress or wasting.
- ◆ There is significant variation in the distribution of each of these indices between the different provinces and between urban and rural populations, with rural populations faring far worse than urban populations.

Comments:

- ◆ Since height or length measurements are required for estimates of both stunting and wasting and are seldom measured in PHC facilities, trends in patterns of stunting and wasting are only available from repeated cross-sectional surveys.
- ◆ Weight-for-age (WFA) estimates are routinely available from PHC clinics across the country and form part of the DHIS data set. They provide national trends in anthropometric status and differentials between population subgroups. However, WFA will not distinguish between wasting and stunting, which from a programmatic point of view are the indices of greatest interest: wasting suggests the presence of an acute insult, such as acute shortage of food or a severe infection, requiring an immediate short-term intervention such as food supplementation or treating the underlying disease. Stunting suggests the presence of chronic undernutrition, which will not be reversed by food supplementation, but which needs to be prevented in future generations by strategies such as adequate nutrition, improved household food security and preventing chronic illnesses.
- ◆ The usual limitations of facility-based data compared with population-based data will apply to weight-for-age data collected in PHC clinics.

Micronutrient Deficiency Rate (Vitamin A, Iron and Iodine)

Figure 5: % Micronutrient deficiencies in children by province



Sources: South African Vitamin A Consultative Group 1995⁴¹
Iodine Deficiency Disorder (IDD) Survey 1999⁴⁵

Notes: Anaemia: percentage of children with Hb < 11g/dl
Iron deficiency: percentage of children with ferritin < 12µg/l
Iron deficiency anaemia: percentage of children with Hb < 11g/dl and ferritin < 12µg/l
Vitamin A deficiency: percentage of children with serum retinol < 20µg/dl
Iodine deficiency: percentage of schools where median urinary iodine concentration < 100µg/l

Objectives (by 2005):

- ◆ To reduce micronutrient deficiency disorders.

Findings:

- ◆ Available data indicate that there are still considerable sub-clinical deficiencies in the three micronutrients with the greatest impact on child health. This is particularly true for children 6 to 24 months of age.⁴¹⁻⁴⁵
- ◆ The SAVACG Survey⁴¹ found a 33.3% prevalence of vitamin A deficiency, 21.4% prevalence of anaemia, 10% prevalence of iron deficiency and 5% prevalence of iron deficiency anaemia in children aged 6-71 months. Anaemia and Vitamin A deficiency were most prevalent in the Limpopo province.

- ◆ According to the Iodine Deficiency Survey⁴⁵ conducted among primary school children, between 3.8% and 41.7% of schools had children who were iodine deficient. Schools in rural areas, and in the Mpumalanga and Limpopo provinces were most severely affected. The survey found that the mandatory iodation of food grade salt since 1995 has dramatically improved the iodine and goitre status of children in the country.

Comments:

- ◆ More recent data on the prevalence of Vitamin A, iron and iodine deficiency are needed – population-based data from results from a national survey conducted in 2003-2004 are awaited.

- ◆ Routine administration of Vitamin A to all children aged less than 5 years, and the mandatory fortification of all maize meal and wheat with Vitamin A should prevent Vitamin A deficiency and the increased morbidity and mortality associated with it.
- ◆ According to WHO definitions, South Africa has a mild problem with anaemia in children (1-9% of the population have haemoglobin (Hb) values below the relevant Hb reference value).⁴⁶ Data from the SAVACG survey show that not all anaemia is due to iron deficiency – in some provinces (e.g. Limpopo) – there appears to be little correlation between prevalence of anaemia, iron deficiency and iron deficiency anaemia. Hence the causes of anaemia need to be more clearly defined. However, as iron deficiency anaemia has a negative impact on learning capacity and cognitive development in children, programmes that prevent and treat iron deficiency anaemia in pregnancy, during lactation and in children are crucial.
- ◆ Although the mandatory fortification of all maize meal and wheat with iron should prevent iron deficiency, concerted efforts are needed to identify and treat women and children with iron deficiency.

Data: Progress with Programme Implementation

This section describes the progress with the implementation of national programmes / strategies that improve child health.

Integrated Management of Childhood Illness (IMCI)

Table 4: Progress with IMCI Case Management Training, July 2003

Province	PHC facilities ⁱ with one or more nurses trained in IMCI		Total PHC nurses trained in IMCI	
	n	%	n	% of target ⁱⁱ
EC	192	22	380	18
FS	237	68	696	73
GP	123	38	687	26
KZN	228	42	512	17
LP	225	53	1 152	69
MP	284	81	702	92
NC	-	-	256	92
NW	170	41	484 ⁺	51
WC	64	12	516	38
SA	≥1 488/4 074	≥37	5 385/13 777	39

Source: Routinely collected audit data from IMCI coordinators, NDoH

Notes: ⁱ PHC facilities exclude mobile and satellite clinics

ⁱⁱ Denominator is 60% of nurses in the public health care system who manage children

Table 5: Inappropriate antibiotic usage at facilities implementing IMCI, 2001-2003

Province	Number and % of children receiving an antibiotic where not indicated by IMCI case management guidelines	
	n	%
Eastern Cape	12/47	26
Free State	6/55	11
Gauteng	3/39	8
KwaZulu-Natal	10/53	19
Limpopo	4/57	7
Mpumalanga	2/39	5
Northern Cape	6/36	17
North West	10/44	23
Western Cape	0/31	0
South Africa	53/391	13

Source: IMCI Health Facility Surveys, 2001, 2002, 2003, NDoH

Objectives (by 2005):

- ◆ Improve the use of drugs in children aged less than 5 years in PHC facilities.
- ◆ Train at least 13 777 health workers in the public health care system who manage children (60%) by December 2005.

Findings:

- ◆ A Western Cape baseline survey found that before IMCI implementation, 36% of children not needing an antibiotic received an antibiotic.⁴⁷ The IMCI health facility surveys have shown that this wastage of antibiotics has been reduced to approximately 13% (range: 0-26%).

Comments:

Training

- ◆ The data on number of health workers refer to the number of health workers within the public health system who manage children. They are estimates based on data from the South African Nursing Council and data from the IMCI health facility surveys, which indicated the number of health workers who manage children in PHC facilities. Therefore the percentages indicated above are estimates.
- ◆ The KwaZulu-Natal figures reflect only the health workers trained in IMCI who remain in the health system.
- ◆ In Limpopo, 80% of health workers trained in IMCI (i.e. approximately 920) are still working in the Limpopo public health system.

- ◆ In other provinces it is not known how many IMCI-trained health workers still work in child health within the public health system.
- ◆ In the Western Cape, implementation has focused on the metropolitan areas – expansion to the rural areas started during the second half of 2003.
- ◆ In other provinces such as the Eastern Cape and KwaZulu-Natal, implementation has been prioritised in non-metropolitan areas.
- ◆ If training continues at the current rate, it is likely that 60% of health care personnel managing children will be trained by 2005. However, it remains to be seen how many stay within the public health system.

Appropriate antibiotic use

- ◆ The proportion of children treated correctly assumes effective training, availability of the essential drugs, and faithful implementation of the IMCI protocols. It is therefore an output indicator and provides a better indication of the overall effectiveness of the strategy than training indicators.

Implementation of other aspects of IMCI

- ◆ Situational analyses and community-based training are underway in the presidential Integrated Sustainable Rural Development Programme (ISRDP) nodal sites in Limpopo and Free State provinces, with a view to improving household, family and community practices regarding child health.
- ◆ A communication strategy for child health, that seeks to identify the most appropriate ways to communicate information that improves child health to the general public, is currently under development.
- ◆ Community-based monitoring of child health, which links with the DHIS, is being piloted in Limpopo and the Eastern Cape.
- ◆ IMCI inclusion in the undergraduate curricula of medical doctors and nurses has begun, but is proceeding slowly. Thus far, 4 (out of 8) medical schools have included or committed to include IMCI in their curricula and at least 7 nursing colleges have included IMCI into their curricula.
- ◆ Whereas implementation of the hospital component of IMCI began in Limpopo in 2003, this component still needs to be implemented in other provinces.

Perinatal Problem Identification Programme (PPIP)

PPIP is being implemented in at least 76 sentinel sites, representing every province and every geographical area of SA. There is currently discussion about whether PPIP should be

expanded to all hospitals or whether it should continue to operate from sentinel sites. Experiences with expansion have highlighted problems with data quality.

Kangaroo Mother Care

There are no national data on the implementation of Kangaroo Mother Care in SA.

Integrated Nutrition Programme (INP)

Objectives (by 2005):

There is currently only one national programme indicator as identified in the HGOI 2001-2005:

- ◆ Ensure that 15% of hospitals are certified as being baby-friendly.

Findings:

- ◆ During 2003, 500 health workers were trained on growth monitoring in 4 provinces.
- ◆ Draft regulations relating to foodstuffs for infants and young children within the framework of the Foodstuffs, Cosmetics and Disinfectants Act (Act no. 54 of 1972) await public comment and finalisation.
- ◆ 94 of the 480 facilities that deliver babies (19.6%) were baby-friendly by September 2003, thus already attaining the 2005 target.
- ◆ Although routine Vitamin A supplementation is part of national programmes, there are currently no reliable data on coverage of Vitamin A supplementation.
- ◆ In 2002/03 the primary school nutrition programme reached 78% of the total number of primary / combined schools and 95% of the targeted primary schools.⁴⁸
- ◆ Regulations for the mandatory fortification of all maize meal and wheat with Vitamin A, riboflavin, niacin, pyridoxine, folic acid, iron and zinc came into effect in October 2003.

Comments

- ◆ Growth faltering and weight loss can be an early indicator of chronic illness. Growth monitoring is therefore an important intervention to identify the presence of and decrease morbidity from common and chronic illnesses. Training in growth monitoring needs to be intensified and integrated with the IMCI training course so that health workers who manage children are trained in growth monitoring and are supervised following training.
- ◆ Finalisation, implementation and monitoring the implementation of regulations relating to foodstuffs for infants and young children could protect the public. Providing

appropriate information on infant feeding in more than one official language will make it easier for the general public to make an informed decision on how to feed infants and young children.

- ◆ Although the 2005 target for 'baby-friendly' hospitals has been attained, monitoring needs to occur so that the accredited facilities maintain their 'baby-friendly' status.
- ◆ Data on coverage of routine Vitamin A supplementation are urgently needed, as are data on the effect on food fortification on micronutrient status of children.

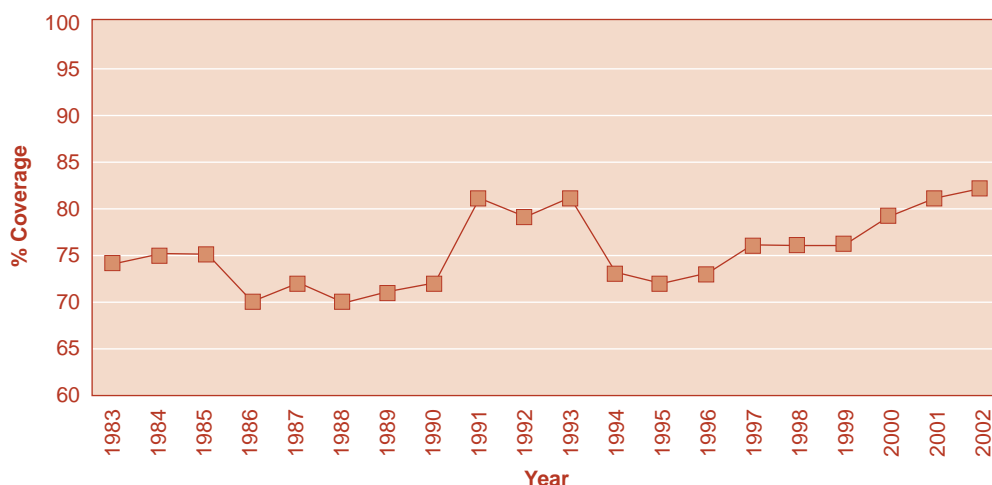
Expanded Programme on Immunisation for South Africa (EPISA)

Table 6: Immunisation Coverage (%), 2002

	Full immunisation coverage under 1 year (annualised)	Measles 1st dose coverage (annualised)	Immunisation drop out rate (Measles 1 to 2)
EC	63	69	22
FS	87	87	14
GP	86	87	23
KZN	100	98	8
LP	69	70	14
MP	82	87	11
NC	76	94	29
NW	69	77	16
WC	69	71	7
SA	79	82	16

Source: DHIS - November 2003⁵⁰

Figure 6: DTP3 Coverage (WHO/UNICEF estimates), 1983-2002



Source: WHO/UNICEF Review of Immunization Coverage⁵¹

Objectives (by 2005):

- ◆ Attain 90% full immunisation coverage amongst children at 1 year of age by 2004.
- ◆ Vaccinate 90% of children against measles.
- ◆ Achieve a less than 10% drop out rate between measles 1 and 2 doses.
- ◆ Eradicate^a polio.⁴⁹

Findings:

- ◆ Routine data (from the DHIS) on BCG coverage are not reliable due to under-reporting and separation of the hospital and PHC data sets within the DHIS.
- ◆ Low rates of “full immunisation coverage” have been documented in the ISRDP nodes of the Eastern Cape – Chris Hani (63%), Alfred Nzo (65%), OR Tambo (55%) and Ukhahlamba districts (68%), Free State, Limpopo – Sekhukhune (54%), Bohlabela (63%) and Northern Cape (57%).⁵⁰
- ◆ The routine OPV3 coverage is 89% (target: 80%).⁵⁰
- ◆ A WHO/UNICEF review of immunisation coverage⁵¹ determined immunisation coverage trends for BCG, OPV3, DTP3, measles1 and HepB using a combination of data sources: officially reported data by SA to WHO; the historical database of immunisation coverage maintained by UNICEF; the published literature – primarily coverage survey results (SAVACG and the DHS); and unpublished EPI coverage

surveys. The review found that since 1994, coverage of DTP3 (Figure 6) and OPV3 has been increasing. The review accounted for possible under-reporting within the routine information system, and estimated BCG coverage to be at 94% and measles 1 coverage to be at approximately 78%.

- ◆ The national AFP detection rate was 1.3 per 100 000 children <15 years in 2003, and
- ◆ The stool adequacy rate was 88% (target: 80%),⁵² an increase from the 76% in 2002 and 72% in 2001.
- ◆ EPI Surveillance ‘monitors’ have been employed to assist with EPI disease surveillance.

Comments:

- ◆ The figures in Table 6 come from reported numbers of doses given at PHC facilities as part of the DHIS data set and use population denominators from census and other sources to generate rates. This is fraught with methodological problems, and is more useful for longitudinal trends than for absolute rates. Hence the data need to be interpreted with caution. However, as these are the only recent national data available, they are presented in this chapter.
- ◆ According to data from DHIS, SA has not yet attained the national objectives, nor the international goal of <10% drop out between measles 1 and 2.
- ◆ Disaggregation of DHIS data into districts and sub-districts reveals significant disparities between different provinces and districts. It is unclear whether these differences are due

^a Note: before a region / country can be certified as having eradicated polio, 3 criteria need to be achieved and sustained for more than 3 years: These are: (i) there should be an AFP detection rate of more than or equal to 1 case of AFP per 100 000 children under the age of 15 years, nationally, and in each province/region; (ii) more than or equal to 80% of AFP cases should have adequate stools specimens taken (i.e. 5-10g stools from 2 separate evacuations, taken less than 15 days since the onset of paralysis). All specimens should arrive moist and frozen on ice, and should be processed in the WHO-accredited laboratory (iii) OPV3 coverage should be >80%.

to poor immunisation coverage or poor data quality.

- ◆ Although the criteria needed to be certified polio free were achieved nationally by December 2003,⁵⁰ when data are disaggregated, they reveal that two provinces (Northern Cape and Eastern Cape) have not achieved the criteria for polio eradication. Furthermore, SA has not achieved these criteria by health district (a WHO requirement).
- ◆ With the employment of surveillance monitors it is expected that the criteria for polio eradication will be met in 2004 and EPI surveillance will be improved.

PMTCT Programme

Provisional Findings:

- ◆ Provincial HIV testing uptake varies from <50% to more than 80%.³³
- ◆ Approximately 99% of infants born to HIV-positive women enrolled in the PMTCT programme receive nevirapine.³³
- ◆ More than 1055 clinics and community health centres and 204 public health hospitals are providing PMTCT services countrywide.^b
- ◆ In response to training needs assessments, which have identified infant feeding as one of the weakest parts of the PMTCT programme, training on PMTCT and infant feeding has been intensified. More than 2800 health care providers have been trained in PMTCT and infant feeding.³⁷
- ◆ More than half (55%) of mother-baby pairs can still be traced one year after they have received nevirapine.³³
- ◆ PMTCT indicators have been included in the minimum data set collected at district level.

Comments:

- ◆ The implementation of the PMTCT programme is one of the largest and most important programmatic challenges ever faced in child health in SA.
- ◆ It requires the development of sufficient biomedical understanding and complex skills in front-line health workers in order to mount an intervention that tackles multiple risk factors at different stages and at sequential contact points during pregnancy and infancy.
- ◆ The programme faces several operational challenges, such as appropriate training of staff; retention of trained staff; procurement and distribution of test kits and infant formula and operationalisation of infant feeding options so that the spill over of formula feeding into the general (HIV-negative or unknown HIV status) population does not occur.³³ As a

result, expansion to provide the full package of services is slow in some provinces.³³

Conclusions

There is good evidence to suggest that a child health transition associated with improvements in child survival and reductions in disease burdens due to infectious and nutritional disorders was already well established by the mid 1990s. Recent increases in mortality and morbidity are considered to be largely attributable to the HIV epidemic. It is imperative at this time to maintain the gains that have been achieved through traditional child survival strategies.

SA has developed goals, objectives, indicators and policies and has identified key strategies and programmes to improve child health. Although these seem appropriate to meet the child health needs of the country, including the challenges posed by HIV, their implementation meets numerous operational challenges and is slower than expected. Attention needs to be paid, in particular, to scaling up interventions that improve perinatal and neonatal health, prevent and treat children born to HIV-infected women (PMTCT and IMCI); improve immunisation coverage and surveillance to meet national and international targets, and prevent and manage child abuse, neglect and exploitation and childhood accidents and injuries. The lack of regular and reliable data makes it difficult to fully assess the effect of current programmes on child health status. There are no reliable data on morbidity due to TB, accidents or injuries in children less than 5 years.

As programmes to reduce MTCT of HIV take effect, programmes to improve the quality of child survival, with an emphasis on morbidity and disability as new endpoints, will become increasingly important. Specifically, programmes that tackle child abuse and neglect and the causes of childhood disabilities, including accidents and injuries, should become increasing priorities even as we continue to address the unfinished agenda of infectious diseases and undernutrition.

b Directorate: HIV/AIDS and STI, NDoH, personal communication.

Recommendations

◆ **Goals, Objectives, Indicators, Policies, Strategies and Programmes:**

- Goals, clearly defined objectives and indicators need to be developed for 2005 onwards. For the 2001-2005 era, some objectives were not clearly defined (e.g. exclusive breastfeeding rate; micronutrient deficiency rate).
- It is suggested that three new objectives and their corresponding indicators be added to the list of national goals, objectives and indicators, as follows:
 - Goals:
 - (i) Reduce the number of infants dying between 28 days and 365 days of life
 - (ii) Reduce the number of children dying of preventable causes in the first year of life and
 - (iii) Reduce the number of children dying of preventable causes in the five years of life.
 - Corresponding indicators:
 - (i) Post-neonatal Mortality Rate
 - (ii) Cause-specific Infant Mortality Rate (CSIMR) and
 - (iii) Cause-specific Under-5 Mortality Rate (CSU5MR).

The post-neonatal mortality rate removes the impact of neonatal care on infant mortality and measures the combined and interrelated effect of adverse social and environmental conditions, nutritional deficiencies and exposure to infection, on infant health, beyond the neonatal period. The CSIMR and CSU5MR address the impact of specific health conditions on child survival and greatly enhance interpretation of mortality data. They provide essential justification for targeted interventions.

- Implementation of current policies, strategies and programmes (including IMCI and PMTCT and infant feeding) needs to be intensified, with specific attention to quality, monitoring and effect on child health status.
- Programme implementation needs to be supported by strategies to retain trained staff, adequate and relevant supervision by trained supervisors at district level, and availability of transport for programme monitoring and supervision.
- Interventions that improve quality of paediatric care at district level hospitals are urgently needed.

◆ **Data:**

- Data obtained through the DHIS needs to be validated regularly so that the data are of sufficient quality to inform

goals and objectives, policies and programme implementation.

- New data elements incorporated into the DHIS (e.g. Vitamin A coverage; HIV incidence) need to be reported on routinely according to specified definitions.
- Reliable data are still needed on perinatal and neonatal morbidity and mortality, exclusive breastfeeding rates; micronutrient deficiencies, and cause-specific mortality and morbidity, including morbidity due to TB, accidents and injuries.

◆ **Advocacy** is needed to ensure that children are 'Put First' at all levels of the health care system. Although SA has signed the Convention on the Rights of the Child, adequate resource allocation to improve child health remains a challenge.

◆ **Resources:** To ensure attainment of goals and objectives, a dedicated child health budget is needed at provincial and district levels.

◆ **Research:**

- Operational research is needed to strengthen programme implementation of child health in general, and HIV and or AIDS and PMTCT in particular, to determine the effect of interventions on child health status.

References

- 1 Schellenberg J, Victora CG, Mushi A, et al. Inequities among the very poor: health care for children in rural southern Tanzania. *Lancet*. 2003; 361(9357): 561-6.
- 2 A National Household Survey of Health Inequalities in South Africa. Johannesburg: Community Agency for Social Enquiry; 1995.
URL: <http://www.hst.org.za/>
- 3 National Health Bill. Bill 32 of 2003.
URL: <http://www.doh.gov.za/docs/bills/b32b.pdf>
- 4 United Nations Development Programme Millennium Development Goals web site. Range of documents and reports relating to the MDGs.
URL: <http://www.undp.org/mdg/> and <http://www.developmentgoals.org/>
- 5 "A World Fit for Children" adopted at the Special Session of the UN General Assembly, May 2002.
URL: <http://www.unicef.org/specialsession/wffc/>
- 6 Hitting the mark: Can under five mortality be cut by two thirds? Insights Health. United Kingdom: Institute of Development Studies (ID21); 2003.
URL: <http://www.id21.org/>
- 7 EPI regional 5-year strategic action plan, 2001-2005; WHO/AFRO; Dec 2000.
URL: <http://www.afro.who.int/ddc/vpd/2000tfi/afrostrategicplan/fiveyrstrategicplan.pdf>

- 8 UNICEF. The State of the World's Children 2004: Girls, education and development. New York: United Nations Children's Fund; 2003.
URL: <http://www.unicef.org/>
- 9 Implementation Task Force. Monitoring national immunization systems using core indicators. Global Alliance for Vaccines & Immunization; 2002.
URL: http://www.vaccinealliance.org/site_repository/resources/Core_Indicator_paper_revised_November2002.doc
- 10 WHO/UNICEF/The World Bank. State of the World's Vaccines and Immunization. Geneva: World Health Organization; 2002.
URL: <http://www.unicef.org/noteworthy/sowwi/>
- 11 Health Goals, Objectives and Indicators 2001-2005. Pretoria: Department of Health; 2001.
URL: <http://www.doh.gov.za/docs/misc/indicators.html>
- 12 Department of Health, Medical Research Council & Measure DHS+. South Africa Demographic and Health Survey 1998, Full Report. Pretoria: Department of Health; 2002.
URL: <http://www.doh.gov.za/facts/1998/sadhs98/>
- 13 Wilkinson D, Cutts F, Ntuli N, Abdool Karim SS. Maternal and Child health Indicators in a rural South African health district. S Afr Med J. 1997; 456-459.
- 14 Pattinson RC. Why babies die - a perinatal survey of South Africa, 2000-2002. S Afr Med J. 2003; 93: 445-450.
- 15 Pattinson RC. Challenges in Saving babies – avoidable factors, missed opportunities, and substandard care in perinatal deaths in South Africa. S Afr Med J. 2003; 93: 450-455.
- 16 Pattinson RC. Population based data. In Pattinson RC, editor. Saving Babies: A Perinatal Care Survey of South Africa 2000. Pretoria: Government Printer, 2000. p. 31-35.
- 17 Hofmeyr BE, Mostert WP, van Zyl JA. South Africa: Findings from a series of demographic and health surveys, 1987-1989. Pretoria: HSRC; 1997.
- 18 UNICEF. The State of the World's Children 2003. New York: United Nations Children's Fund; 2003.
- 19 Bradshaw D, Groenewald P, Laubscher R, et al. Initial Burden of Disease Estimates for South Africa, 2000. Cape Town: Medical Research Council; 2003.
URL: <http://www.mrc.ac.za/bod/bod.htm>
- 20 HIV/AIDS and Human Development, South Africa 1998. UNDP; 1998.
URL: <http://www.undp.org.za/docs/pubs/hdr.overview.htm>
- 21 Actuarial Society of South Africa. AIDS and demographic model. ASSA 2000.
URL: <http://www.assa.org.za/>
- 22 Hill K, Pande R, Mahy M, Jones G. Trends in child mortality in the developing world: 1960-1996. New York: UNICEF; 1999.
- 23 Ahmed OB, Lopez AD, Inoue M. The decline in child mortality: a reappraisal. Bull World Health Organ. 2000; 78: 1175-91.
- 24 MacFarlane A, Mugford M. Birth Counts. In: Statistics of Pregnancy and Childbirth. London: Her Majesty's Stationery Office; 1984.
- 25 Taylor V. UNDP South Africa Human Development Report 2000. United Nations Development Programme; 2000.
URL: <http://www.undp.org.za/sahdr2000/sahdr20002.html>
- 26 Nicoll A, Timaeus I, Kigadye R-M, Walraven G, Killewo J. The impact of HIV-1 infection on mortality in children under 5 years of age in sub-Saharan Africa: a demographic and epidemiological analysis. AIDS. 1994; 8: 995-1005.
- 27 Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. The demographic impact of HIV/AIDS. Report of the technical meeting. New York: United Nations; 1999.
- 28 Walker N, Schwartlander B, Bryce J. Meeting international goals in child survival and HIV/AIDS. Lancet. 2002; 360: 284-9.
- 29 Bradshaw D, Bourne D, Nannan N. What are the leading causes of death among South African Children? MRC Policy Brief No. 3. Tygerberg: South African Medical Research Council; Dec 2003.
- 30 District Health Information System (DHIS) Database. Data extracted 2001. In: Health Indicators Update (Issue 2). Pretoria: Department of Health; 2003.
- 31 District Health Information System (DHIS) Database. National Department of Health. Data extracted February 2003.
- 32 Shisana O, Simbayi L. Nelson Mandela/HSRC Study of HIV/AIDS - South African National HIV Prevalence, Behavioural Risks and Mass Media Household Survey 2002. Cape Town: Human Sciences Research Council; 2002.
URL: <http://www.hsrbpublishers.co.za/hiv.html>
- 33 Doherty T, Besser M, Donohue S. An evaluation of the PMTCT initiative in South Africa: Lessons and key recommendations. Durban: Health Systems Trust; 2003.
URL: <http://www.hst.org.za/>
- 34 Richardson BD. Confusion in the reporting of low birth weight [letter]. S Afr Med J. 1986; 69(6): 345.
- 35 Richardson BD. Low birth weight and health in the preschool years [letter]. S Afr Med J. 1986; 9(7):411.
- 36 Bland RM, Rollins NC, Coutsoudis A, Coovadia HM. Breastfeeding practices in an area of high HIV prevalence in rural South Africa. Acta Paediatr. 2002; 91(6): 615-616.
- 37 Tint K, Doherty T, Nkonki L, Witten C, Chopra M. An Evaluation of PMTCT and Infant Feeding Training in Seven Provinces of South Africa. Durban: Health Systems Trust; October 2003.
URL: <http://www.hst.org.za/>
- 38 Morrow AL, Guerrero ML, Shults J, et al. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomised controlled trial. Lancet. 1999; 353: 1226-31.
- 39 Jones G, Steketee RW, Black R, Bhutta ZA, Morris S and the Bellagio Child Survival group. How many child deaths can we prevent this year? Lancet. 2003; 362: 65-71.
- 40 Labadarios D, editor. The National Food Consumption Survey (NCFS): Children aged 1-9 years, South Africa, 1999. Pretoria (SA): Department of Health; 2000.
URL: <http://www.sun.ac.za/nutrition/nfcs.html>
- 41 South African Vitamin A Consultative Group (SAVACG). Anthropometric, vitamin A, iron and immunisation coverage status in children 6-71 months in South Africa, 1994. S Afr Med J. 1996; 86(40): 354-357.

- 42 Oelofse A, Van Raaij, Benade AJ, et al. Disadvantaged black and coloured infants in two urban communities in the Western Cape, South Africa differ in micronutrient status. *Public Health Nutr.* 2002; 5(2): 289-94.
- 43 Jinabhai CC, Taylor M, Coutsoudis A, et al. A health and nutritional profile of rural school children in KwaZulu-Natal, South Africa. *Ann trop Paediatr.* 2001; 21(1): 50-8.
- 44 Faber M, Benade AJ. Nutritional status and dietary practices of 4-24 month old children from a rural South African community. *Public Health Nutr.* 1999; 2(2): 179-85.
- 45 Immelman R, Towindo T, Kalk WJ, Paiker J, Makuraj S, Naicker J, Omar S. Report of the South African Institute for Medical Research on the Iodine Deficiency Disorder Survey of Primary School Learners for the Department of Health, South Africa. South African Institute for Medical Research; 2000.
- 46 Strategies for the prevention and control of iron deficiency and anaemia. In: Verster A, editor. *Fortification of Flour with iron in countries of the Eastern Mediterranean Middle East and North Africa.* Egypt: WHO/EMRO; 1998.
URL: <http://www.emro.who.int/nfs/FlourFortification-IronDeficiency-Chapter4.htm>
- 47 Patel S. A pilot project to evaluate the effectiveness of the Integrated Management of Childhood Illness Strategy in two districts in the Western Cape [Master's minithesis]. University of the Western Cape; November 2002.
- 48 Primary School Nutrition Programme (PSNP) database. National Department of Health: Directorate Nutrition. September 2003.
- 49 Global polio eradication initiative: Certification of polio eradication. Geneva: WHO; Jan 2002.
URL: <http://www.who.int/vaccines-polio/all/background/files/Certification.pdf> and <http://www.polioeradication.org/>
- 50 District Health Information System (DHIS) Database. National Department of Health. Data extracted November 2003.
- 51 WHO/UNICEF. Review of National Immunization Coverage 1980-2002. Geneva: World Health Organization; October 2003.
URL: http://www.who.int/vaccines-surveillance/WHOUNICEF_Coverage_Review/
- 52 Progress toward Poliomyelitis eradication – Southern Africa, 2001-2003. *MMWR.* 2003; 52(22): 521-524.
URL: <http://www.cdc.gov/mmwr/PDF/wk/mm5222.pdf>

Commentary

Craig Househam – Provincial Head of Health, Western Cape

The past decade has been a tumultuous period for the health care sector in SA. When I assumed office as Head of Health in the Free State in 1995 after a period leading the Strategic Management Team following the 1994 elections, I was faced with a fragmented and segregated service. When I left the province early in 2001 the service was integrated, desegregated and providing health care to ordinary people far better than had been the case in the past. This was a tribute to the many health workers and dedicated managers 'new' and 'old' who rose to the challenge of forging something new and better from what had come from the apartheid past.

Moving to the Western Cape in 2001, and assuming the post of Head of Health in October 2002, has brought different and varied challenges but with a common theme – the need for significant transformation to meet the challenges of health care in the province. Whilst the Free State was a poor province, in the Western Cape I am faced with the challenge of meeting the expectations of communities who have experienced services that are already of a higher standard than in most other areas of SA. Nevertheless the challenge remains, as in the Free State, to deliver a good quality service to ordinary people in the community, be they urban or rural.

With this background I have identified the most significant **achievements** in transforming the health system since 1994 as:

1. Integration of a previously fragmented and segregated health system, into a single health system under new management and policies.
2. Introduction of 'free' primary health care services where there is need. In this single step, which was not without considerable implementation challenges at the time, government did away with discrimination on the basis of being poor and restored people's self-respect. No one in 2004 is required to declare her or himself as "indigent" before accessing health care in SA.

3. Introduction of Cuban health professionals, who initially stabilised health care in rural areas, and later community service for health professionals, which has assured both the delivery of health care in underserved areas and the presence of many health professionals in areas where they previously were rarely seen.
4. Introduction of legislation controlling the sale and use of tobacco products, which was a landmark in preventive health. It was introduced in the face of stiff opposition from the tobacco industry lobby and also proponents of the free-market system who saw the legislation as a threat to free enterprise. It was a first step in taking on the multi-nationals, paving the way for later legislation relating to the pharmaceutical industry that recently has led to the prospect of more affordable drugs.
5. The clinic-building and upgrading programme, which has brought clinic services nearer to people who had never had access to services of this nature before. This was brought home to me when an elderly gentleman told the then Premier of the Free State, Mr Lekota, that the opening of a clinic was the single most important event of his life, as previously health care had been a mobile clinic every six weeks and now it was a clinic open every day.

“... the challenge remains ... to deliver a good quality service to ordinary people in the community, be they urban or rural.”

I see the most significant **challenges** in the next five years as:

1. Improving the quality of health care delivered following the good work of the last ten years in increasing access. This requires appropriately trained, motivated health care professionals working in properly maintained and equipped health care facilities
2. Retention of key health professionals in the National Health System. This is essential to the continued stability of health care in this country. Measures on a wide front will have to be found to reverse the damaging exodus of health professionals from the public health sector, in particular.

Commentary

Craig Househam – Provincial Head of Health, Western Cape

3. Funding for the public health sector must be maintained at an appropriate level. Over the last few years funding has shown a decrease in real terms. This threatens the 'health' of the health care system, and runs the risk of negating the many positive developments which have occurred since 1994.
4. The health system in effect is still functioning under the Health Act of 1977 and the implementation of the National Health Bill is the key legislative framework to drive transformation of the health system to its conclusion. The new Health Act will pose many implementation challenges to the health sector in the coming five years.
5. Almost paradoxically, in the light of the perceived focus of health care reform on primary health care, maintaining a strong core of essential highly specialised services is crucial to the development and strengthening of the regional and district health services. This is a major challenge in view of financial and human resource constraints outlined above.

“... paradoxically, ... maintaining a strong core of essential highly specialised services is crucial to ... district health services.”

Much has been achieved in the last decade and a sound foundation has been laid. The challenges will be to take this forward with bold leadership and innovative management.