

Definitions and sources (abbreviations given in footnote)

Group	Indicator	Description	Numerator	Denominator	Source
Deprivation	South African Index of Multiple Deprivation Rank (1 = most deprived)	Ranking for composite index of deprivation. Indicators cover the following domains: income and material deprivation, employment deprivation, education deprivation, and living environment deprivation			Southern African Social Policy Research Institute (SASPRI), based on data from Stats SA Census 2011
	Antenatal 1st visit coverage	The proportion of potential antenatal clients coming for at least one (booking) antenatal visit. The census number of children under 1 year factorised by 1.15 is used as a proxy denominator – the extra 0.15 (15%) is a rough estimate to cater for late miscarriages (~10 to 26 weeks), still births (after 26 weeks' gestation) and infant mortality. Pregnant women are regarded as potential antenatal clients from around 10 weeks' gestation, i.e. spontaneous abortions before that as well as termination of pregnancy cases are excluded	Antenatal 1st visit - total	Estimated pregnant women ~10 weeks gestation	WebDHS
Maternal and neonatal	Antenatal 1st visits before 20 weeks rate	Women who have a booking visit (1st visit) before they are 20 weeks into their pregnancy as a proportion of all antenatal 1st visits	Antenatal 1st visits before 20 weeks	Antenatal 1st visits	WebDHS
	Maternal mortality in facility ratio	Women who died in hospital as a result of childbearing, during pregnancy or within 42 days of delivery or termination of pregnancy, per 100 000 live births in facility	Maternal deaths in facility	Live births in facility	WebDHS
Child health and nutrition	Inpatient neonatal death rate	Infants 0-28 days who died during their stay in the facility as a proportion of live births in facility	Neonatal 0-28 days death in facility	Live birth in facility	WebDHS
	Pneumonia incidence	Children under 5 years newly diagnosed with pneumonia per 1 000 children under 5 years in the population	Pneumonia new in child under 5 years	Population under 5 years	WebDHS
	Child under 5 years pneumonia case fatality rate	Proportion of children under 5 years admitted with pneumonia who died	Child under 5 years pneumonia death	Child under 5 years pneumonia admitted	WebDHS
	Child under 5 years severe acute malnutrition case fatality rate	Proportion of children under 5 years admitted with severe acute malnutrition who died	Child under 5 years severe acute malnutrition death	Child under 5 years severe acute malnutrition admitted	WebDHS
	Measles 2nd dose coverage	Proportion of children 1 year (12-23 months) who received measles 2nd dose, normally at 18 months	Measles 2nd dose	Population 1 year	WebDHS
Immunisation	Confirmed measles case incidence	Number of laboratory-confirmed measles cases per million population	Laboratory-confirmed measles cases	Population - total	NDoH
	Immunisation coverage under 1 year	Percentage of all children in the target area under 1 year who complete their primary course of immunisation. A primary course includes BCG, OPV1, DTaP-IPV-Hib-HBV 1, 2 and 3, PCV 1, 2 and 3, RV 1 and 2, and measles 1	Children fully immunised under 1 year	Target population under 1 year	WebDHS
	DTaP-IPV-Hib-HBV 3rd dose coverage	Children under 1 year who received DTaP-IPV-Hib-HBV 3rd dose, normally at 14 weeks, as a proportion of population under 1 year. Both Pentaxim and Hexavalent will form part of the numerator to ensure accurate coverage of historical data	DTaP-IPV/Hib (Pen) 3rd dose plus DTaP-IPV-Hib-HBV (Hex) 3rd dose	Population under 1 year	WebDHS

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Reproductive health	Couple year protection rate	Women protected against pregnancy by using modern contraceptive methods, including sterilisations, as proportion of female population 15-49 years. Contraceptive years are the total of (Oral pill cycles / 15) + (Medroxyprogesterone injection / 4) + (Norethisterone enanthate injection / 6) + (IUCD x 4.5) + (Sub-dermal implant x 2.5) + Male condoms distributed / 120) + (Female condoms distributed / 120) + (Male sterilisation x 10) + (Female sterilisation x 10)	Contraceptive years dispensed (including sterilisations)	Female target population 15-49 years	WebDHIS
	Contraceptive prevalence rate	Percentage of sexually active women of reproductive age who are currently using a modern method of contraception	Number of sexually active women aged 15-49 reporting current contraceptive use	Total population of sexually active women aged 15-49	SADHS
Tuberculosis	TB symptoms 5 years and older screened in facility rate	Children under 5 years screened for TB symptoms as a proportion of PHC headcount under 5 years	Child under 5 years screened for TB symptoms	PHC headcount under 5 years	WebDHIS
	TB sputum 5 years and older test rate	Clients 5 years and older screened for TB symptoms as a proportion of PHC headcount 5 years and older	Clients 5 years and older screened for TB	PHC headcount 5 years and older	WebDHIS
	TB child under 5 years start on treatment rate	TB child under 5 years started on treatment as a proportion of all symptomatic children under 5 years	TB child under 5 years start on treatment	TB symptomatic child under 5 years	WebDHIS
	TB client 5 years and older start on treatment rate	TB client 5 years and older start on treatment as a proportion of TB symptomatic client 5 years and older test positive	TB client 5 years and older start on treatment	TB symptomatic client 5 years and older tested positive	WebDHIS
	TB drug-susceptible successful client treatment rate	Proportion of TB clients (all types of TB) cured plus those who completed treatment	TB client cured OR completed treatment	TB client initiated on treatment	NDoH TB Directorate
	TB drug-susceptible client loss to follow-up rate	TB clients who started drug-susceptible TB treatment and who subsequently became loss to follow-up as a proportion of all those in the treatment outcome cohort	All drug-susceptible TB loss to follow-up	All drug-susceptible TB patients in treatment outcome cohort	NDoH TB Directorate
	TB drug-susceptible client death rate	TB clients who started drug-susceptible TB treatment and who subsequently died as a proportion of all those in the treatment outcome cohort	All drug-susceptible TB client died	All drug-susceptible TB patients in treatment outcome cohort	NDoH TB Directorate
	TB multidrug-resistant treatment success rate	TB MDR client successfully completing treatment as a proportion of TB MDR-confirmed clients started on treatment	MDR client successfully complete treatment	TB MDR-confirmed client start on treatment	NDoH TB Directorate
	TB XDR treatment success rate	TB XDR clients successfully completing treatment as a proportion of TB XDR-confirmed clients started on treatment	TB XDR client successfully complete treatment	TB XDR-confirmed client start on treatment	NDoH TB Directorate
	HIV/AIDS	Infant PCR test positive around 10 weeks rate	Infants tested PCR-positive for follow-up test as a proportion of infants PCR-tested around 10 weeks	Infant PCR test positive around 10 weeks	Infant PCR test around 10 weeks
Clients remaining on ART rate		Percentage of estimated people living with HIV who remain on ART	Total clients remaining on ART at end of the month	Estimated number of people living with HIV	NDoH TB Directorate
Adult with viral load completion rate at 12 months		Proportion of adult clients still on treatment who had viral load test done at 12 months	ART adult client viral load done at 12 months	ART first-line regimen + ART second-line regimen at intervals at 12 months	WebDHIS
Child with viral load completion rate at 12 months		Proportion of children still on treatment who had viral load test done at 12 months	ART child viral load done at 12 months	ART first-line regimen + ART second-line regimen at intervals at 12 months	WebDHIS
Adult with viral load suppressed rate 12 months		Proportion of adult ART clients with viral load suppressed at 12 months	ART client viral load under 400 cps/mL at 12 months	ART viral load done (VLD) at 12 months	WebDHIS
Child with viral load suppressed rate 12 months		Proportion of child ART clients with viral load suppressed at 12 months	ART client viral load under 400 cps/mL at 12 months	ART viral load done (VLD) at 12 months	WebDHIS

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Non-communicable diseases	Cervical cancer screening coverage	Cervical smears in women 30 years and older as a proportion of 10% of the female population 30 years and older	Cervical cancer screening in women 30 years and older	10% of female target population 30 years and older	WebDHS
	Mental disorders treatment rate new	Clients treated for mental disorders (depression, anxiety, dementia, psychosis, mania, suicide, developmental disorders, behavioural disorders and substance use) as a proportion of total PHC headcount	PHC client treated for mental disorders	PHC headcount - total	WebDHS
	Mental health separation rate	Proportion of clients admitted for mental health problems. Inpatient separations is the total of inpatient discharges, inpatient deaths and inpatient transfers out	Mental health separations	Inpatient separations - total	WebDHS
	Prevalence of non-raised blood pressure	Percentage of population 15 years and older with non-raised blood pressure, regardless of treatment status, age-standardised (Census 2011 population)	Number of people with normal blood pressure (SBP <140 and DBP <90 mmHg)	Adult population (15 years and older)	National Income Dynamics Study "modelled"
	Prevalence of obesity/ overweight	Percentage of adults (15+ years) who are either overweight or obese according to standard BMI cut-offs	-	-	National Income Dynamics Study "modelled"
	Prevalence of diabetes	Percentage of people with diabetes. Defined in SANHANES as those with HbA1c >6.5%	-	-	National Income Dynamics Study "modelled"
	Treatment coverage for diabetes	Percentage of people with diabetes receiving treatment	Number of people reporting treatment for diabetes	Estimated number of people with diabetes	National Income Dynamics Study "modelled"
	Percentage ideal clinics	Percentage of fixed PHC facilities assessed on the ideal clinic dashboard that achieved Ideal Clinic status (silver, gold, platinum or diamond status)	Number of fixed PHC facilities achieving silver, gold, platinum or diamond status on the ideal clinic dashboard	Fixed clinics plus fixed CHCs/ CDCs	WebDHS, Ideal Clinic review tools
	Percentage of fixed PHC facilities with 90% of tracer medicines available	Percentage of PHC facilities, out of all facilities that have conducted a status determination, with 90% of the tracer medicines available	Number of fixed PHC facilities with 90% of the tracer medicines available	Number of PHC facilities that conducted a status determination	Ideal Clinic review tools
	Tracer items stock-out rate (fixed clinic/CHC/CDC)	The proportion of all fixed clinics, CHCs and CDCs that had stock-out of any tracer item for any period as a proportion of fixed clinics plus fixed CHCs/CDCs	Any tracer item drug stock-out (clinic/CHC/CDC)	Fixed clinics plus fixed CHCs/ CDCs	WebDHS
Proportion of health facilities with essential medicines by district	Proportion of health facilities with availability of the WHO-recommended core list of essential medicines	-	-	WebDHS	
PHC management	PHC utilisation rate	The rate at which PHC services are utilised by clients of all ages in the catchment population, represented as the average number of PHC visits per client per year in the target population. The denominator is usually Census-derived population	Total PHC headcount	Total population	WebDHS
	PHC under 5 years utilisation rate	The rate at which PHC services are utilised by clients under 5 years of age in the catchment population, represented as the average number of PHC visits per client per year in the target population. The denominator is usually Census-derived population	PHC headcount under 5 years	Population under 5 years	WebDHS

Group	Indicator	Description	Numerator	Denominator	Source
Inpatient management	Average length of stay	Average number of patient days that an admitted patient spends in hospital before separation	Inpatient days + 1/2 day patients	Separations = Discharges (including day patients) + Deaths + Transfers out	WebDHS
	Inpatient bed utilisation rate	Number of patient days during the reporting period, expressed as a percentage of the sum of the daily number of useable beds. (Comment: The calculation here is an approximation. It assumes: (1) a day patient occupies a bed for half a day, (2) there are always 30 days in a month	Total patient days = (Inpatient days + 1/2 day patients) x 100	Total useable bed days = (Inpatient beds - total) x 30.42	WebDHS
	Patient day equivalent	Weighted data element as proxy for estimating resources for all types of patients in terms of inpatient days	The sum of inpatient days total x 1, day patient total x 0.5, and OPD/emergency total headcount x 0.33	-	WebDHS
	OPD new client not referred rate (district hospitals)	Proportion of new OPD clients without a referral letter	OPD headcount not referred new	OPD new clients total	WebDHS
Environmental health	Inpatient crude death rate	Proportion of admitted clients/separations who died during hospital stay	Inpatient deaths - total	Separations = Discharges (including day patients) + Deaths + Transfers out	WebDHS
	Hospital beds per 10 000 target population	Number of inpatient beds per 10 000 target population. For public sector beds, the uninsured population is used as the target	Inpatient beds	Uninsured population (total population less medical scheme coverage x population)	WebDHS
	Environmental health services compliance rate	The compliance of a municipality with national environmental health norms and standards in rendering environmental health services. The compliance is determined by assessing the municipality against elements in the audit tool and providing a subsequent score	Number of audited elements achieved	Number of audited elements	EHS database
	Port health services compliance rate	The compliance is determined by assessing the point of entry against elements in the audit tool and providing a subsequent score	Number of audited elements achieved	Number of audited elements	EHS database
Finance	Provincial and Local Government expenditure on District Health Services per capita (uninsured)	Total amount spent on PHC (DHS) per person without medical scheme coverage	Provincial expenditure on DHS (excluding 2.8 Coroner) plus net LG expenditure on PHC	Uninsured population (total population less medical scheme coverage x population)	BAS, Treasury data on LG expenditure, WebDHS population and GHS modelled for medical scheme coverage
	Provincial PHC expenditure per capita (uninsured)	Total amount spent on non-hospital PHC health services per person without medical scheme coverage	Provincial expenditure on PR2.2-2.7 of DHS + net LG expenditure	Uninsured population (total population less medical scheme coverage x population)	BAS, Treasury data on LG expenditure, WebDHS population and GHS modelled for medical scheme coverage
	Provincial expenditure per PHC headcount	Total amount spent on non-hospital PHC health services per headcount	Provincial expenditure on PR2.2-2.7 of DHS + net LG expenditure	Total PHC headcount	BAS, WebDHS (PHC headcount)
	Expenditure per Patient Day Equivalent	Average cost per patient per day seen in a hospital (expressed as Rand per PDE)	Total expenditure on health per hospital	PDE total	BAS, WebDHS (PDE)

Group	Indicator	Description	Numerator	Denominator	Source
Human resources	Medical practitioners per 100 000 uninsured population	Ratio of the number of medical practitioners (doctors) to the population (per 100 000). Note that the measure of the number of personnel may differ for the public and private sectors and also that the population may be adjusted to be the population assumed to be dependent on that sector	Medical practitioners registered to practice, total number	Uninsured population (total population less medical scheme coverage x population)	Persal, WebDHS population and GHS modelled estimates of medical scheme coverage
	Professional nurses per 100 000 uninsured population	Ratio of the number of professional nurses to the population (per 100 000). Note that the measure of the number of personnel may differ for the public and private sectors and also that the population may be adjusted to be the population assumed to be dependent on that sector	Professional nurses registered to practice, total number	Uninsured population (total population less medical scheme coverage x population)	Persal, WebDHS population and GHS modelled estimates of medical scheme coverage
	Pharmacists per 100 000 uninsured population	Ratio of the number of pharmacists to the population (per 100 000). Note that the measure of the number of personnel may differ for the public and private sectors and also that the population may be adjusted to be the population assumed to be dependent on that sector	Pharmacists registered to practice, total number	Uninsured population (total population less medical scheme coverage x population)	Persal, WebDHS population and GHS modelled estimates of medical scheme coverage
Extra	Health worker density (index)	An indicator based on SDG indicator 3.c.1 with a modified scaling approach as described by Lozano et al. 2018. Medical practitioners, professional nurses and pharmacists per uninsured population were rescaled from 0-100 against thresholds of 30, 100 and 5 per 10 000. The index was calculated as the geometric mean of the 3 scaled scores	-	-	Persal, WebDHS population, GHS modelled estimates of medical scheme coverage
	Medical scheme coverage (average)	Percentage of population who have medical scheme insurance	Number of medical scheme beneficiaries	Total population	GHS modelled estimates of medical scheme coverage

AIDS = acquired immune deficiency syndrome; ART = antiretroviral therapy; BAS = National Treasury Basic Accounting System; BCG = Bacille Calmette-Guerin; BP = blood pressure; CDC = community day centre; CHC = community health centre; DHIS = District Health Information Software; DHS = District Health Services; DTaP-IPV-Hib-HBV = diphtheria, tetanus, and pertussis; inactivated polio vaccine; Haemophilus influenzae type B; hepatitis B vaccine; GHS = General Household Survey; HIV = human immunodeficiency virus; LG = local government; MDR= multidrug-resistant; NCDs = non-communicable diseases; NDoH = National Department of Health; OPD = outpatient department; OPV = oral polio vaccine; PCR = polymerase chain reaction; PCV = pneumococcal conjugate vaccine; PDE = patient day equivalent; PHC = primary health care; PR = programme; RV = rotavirus vaccine; SADHS = South Africa Demographic and Health Survey; SANHANES = South African National Health and Nutrition Examination Survey; Stats SA = Statistics South Africa; TB = tuberculosis; WHO = World Health Organization; XDR = extremely drug-resistant.



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