

# Definitions and Sources

Group	Type	Level	Indicator	Definition	Numerator	Denominator	Source	Notes	
Demographic and socio-economic			Population				SSA_DM_Mid-year estimates 20 Mar 2006.xls and ZA_PopEst_July2006_SubDis.xls (DHIS)		
			Population under 1 year				SSA_DM_Mid-year estimates 20 Mar 2006.xls and ZA_PopEst_July2006_SubDis.xls (DHIS)		
			Area				Municipal Demarcation Board		
			Population Density		Number of people per square km.	Number of people	Area (km)	Calculated	
			Access to piped water		Census 2001: The percentage of the total number of households of a district that has access to piped water which includes: Piped water inside dwelling Piped water inside yard Piped water on community stand:less than 200m from dwelling Piped water on community stand:greater than 200m from dwelling General Household Survey: Number of households with access to 'piped (tap) water in dwelling', 'piped (tap) water on site or in yard' or 'public tap' as a percentage of total households. Community Survey: Number of households with Piped water inside the dwelling, Piped water inside the yard, Piped water from access point outside the yard as a percentage of total households. <sup>4</sup>			StatsSA Census 2001, GHS 2005	
			Deprivation index		The deprivation index is a composite index of deprivation using StatsSA Census and household survey, recalculated to a district level. The index shows that the socio-demographic variables that have the greatest influence of deprivation in the SA context are: <ul style="list-style-type: none"> <li>• lack of access to piped water,</li> <li>• race,</li> <li>• living in a shack or traditional dwelling,</li> <li>• lack of access to electricity or solar power,</li> <li>• living in a female headed household, being a child under 5 years,</li> <li>• living in a household whose head has no schooling and</li> <li>• being unemployed.</li> </ul>			Health Economics Unit, UCT - based on data from StatsSA Census 2001, GHS 2005	Note that for the updated analysis using the survey data some variables were for HOUSEHOLD indicators whereas the Census variables were available at the PERSON level e.g. "Proportion of district's households that have no piped water in their house or on site" versus "Proportion of district's population that have no piped water in their house or on site"
			Socio-economic quintiles		The socio-economic quintiles are derived from the deprivation index. It is a simple stratification of districts based on their respective deprivation index scores. Quintile 1 comprises of districts that are the most deprived and those that fall under quintile 5 are the least deprived.			StatsSA Census 2001, GHS 2005	

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Financing	Input		Total PHC Expenditure per Capita	Total amount spent on PHC (district health services) per person without medical aid coverage	Provincial expenditure on District Health Services expenditure (all sub-programmes) plus net local government expenditure on PHC	Uninsured population (total population less medical aid coverage x population)	Calculated from BAS, NW financial data, Treasury data on LG exp, DHIS population and StatsSA GHS medical aid coverage	
	Input		PHC (Non-Hospital) Expenditure per Capita	Total amount spent on non-hospital PHC health services per person without medical aid coverage.	Provincial expenditure on the following sub-programmes of District Health Services expenditure (district management, community health clinics, community health centres, community based services and other community services) plus net local government expenditure on PHC	Uninsured population (total population less medical aid coverage x population)	Calculated from BAS, NW financial data, Treasury data on LG exp, DHIS population and StatsSA GHS medical aid coverage	Data in REAL terms have been adjusted for the effects of inflation to 2006/7 prices.
	Input		Proportion of District Health Services Expenditure on District Management	Percentage of total district health services spent on district management.	Provincial expenditure on District Management	Total provincial expenditure on District Health Services	BAS, NW financial data	
	Input	District hospitals	Proportion of District Health Services Expenditure on District Hospitals	Percentage of total district health services spent on district hospitals.	Provincial expenditure on District Hospitals	Total provincial expenditure on District Health Services	BAS, NW financial data	
	Input		PHC (Non-Hospital) Expenditure per Patient Visit	Total amount spent on non-hospital PHC health services per primary health care visit.	Provincial expenditure on the following sub-programmes of District Health Services expenditure (district management, community health clinics, community health centres, community based services and other community services) plus net local government expenditure on PHC	Total PHC headcount	Calculated from BAS, NW financial data, Treasury data on LG exp, DHIS PHC headcount	
	Input	District hospitals	Cost per patient day equivalent	Average cost per patient per day seen in a hospital (expressed as Rands per patient day equivalent)	Total expenditure on health per hospital	Patient day equivalents (Inpatient days + 1/2 Day patients + 1/3 outpatient and ER visits)	BAS, NW financial data, DHIS (PDE)	
	Input		Private health facilities (hospitals)				Wilbury and Claymore database 2007	Note that doesn't include state-aided facilities
	Input		Private facilities beds				Wilbury and Claymore database 2007	Note that doesn't include state-aided facilities
	Input		Public health facilities - number of facilities by type				DHIS	
	Input		Useable beds - public sector				DHIS	
	Process		Nurse clinical workload	Number of patients seen by a nurse in PHC clinics per nurse clinical work day.	PHC total headcount	Nurse clinical work days (including Enrolled Nurse, Nursing Assistant and Professional Nurse)	DHIS NDoH4	Nurse work load is relevant for analysing utilisation patterns, efficiency, needs for more/less staff.
	Process	District hospitals	Bed utilisation rate (BUR)	"Measure of the occupancy of the beds available for use"	"(Inpatient days + 1/2 Day patients) x 100"	"Usable beds x days in period."	DHIS NDoH5 (data for district hospitals only)	
	Process	District hospitals	Average length of stay (ALOS)	"Average duration of patient stay in a health facility (in days)"	"Inpatient days + 1/2 Day patients"	"Discharges + Deaths + Transfers out + Day patients"	DHIS NDoH5 (data for district hospitals only)	
	Process		Clinic supervision rate	Percentage of primary level facilities which are visited by a supervisor at least once per month.	Number of clinics and CHCs visited at least once	Total number of clinics and CHCs	DHIS NDoH5	

Part B: Province and District Profiles

Group	Type	Level	Indicator	Definition	Numerator	Denominator	Source	Notes
PMTCT	Output		Immunisation coverage < 1 year	Percentage of all children in the target area under one year who complete their primary course of immunisation during the month (annualised). A Primary Course includes BCG, OPV 1,2 & 3, DTP-Hib 1,2 & 3, HepB 1,2 & 3, and 1st measles.	"Children fully immunised under 1 year"	"Target population under 1 year"	DHIS NDoH4	Immunisation coverage is one of the main predictors of the infant mortality rate. It represents one of the health intervention components which can be used as a proxy indicator of the availability of PHC service in developing countries.
	Output		Immunisation drop-out rate (DTP1-3)	"The percentage of children who dropped out between the first and third dose of DTP vaccine."	"Drop outs between 1st and 3rd DTP-Hib Dose"	DTP-Hib 1st Dose	DHIS NDoH4	"The advantages of using "drop out" indicators are for instance that: both the numerators and the denominators are routine health data, the drop outs often represent "quick-wins" that can motivate staff to do better within current financial/infrastructure."
	Output		Measles Coverage	The percentage of children who received their 1st measles dose (normally at 9 months) - annualised.	Measles 1st dose under 1 year	Target population under 1 year	DHIS NDoH5	
	Output		Measles drop-out rate	The percentage of children who dropped out between the first (normally at 9 months) and second (normally at 18 months) measles dose.	Drop outs between 1st and 2nd Measles doses	Measles 1st dose	DHIS NDoH6	
	Output	District hospitals	Caesarean section rate	"The number of Caesarean section deliveries expressed as a percentage of all deliveries."	"Caesarean sections in facility"	Deliveries in facility	DHIS NDoH5 (data for district hospitals only)	
	Output		Male condom distribution rate	The number of male condoms, distributed (to patients at the facility or through other channels) per male 15 years and older.	"Condoms distributed at PHC facilities"	"Male population 15 years and older"	DHIS NDoH4	
	Output		Utilisation rate	Average number of visits per person to PHC health facilities per year (public sector).	PHC total headcount	"Total catchment population"	DHIS NDoH4	
	Output		Proportion ANC clients tested for HIV	The proportion of women coming for their first antenatal visit that are tested for HIV.	"Antenatal clients tested for HIV"	"Total antenatal clients at first booking visit"	DHIS NDoH4	
	Outcome		HIV prevalence among ANC clients tested	The percentage of antenatal clients who accept to be tested for HIV, and then tested positive.	"Antenatal clients tested HIV positive - new cases"	"Antenatal clients tested for HIV"	DHIS NDoH4 and antenatal seroprevalence survey	
	Output		Baby PCR test around 6 weeks uptake	The proportion of infants born to known HIV positive women who were PCR tested for HIV 6 weeks after birth.	Baby PCR test around 6 weeks	Live birth to HIV positive woman	DHIS NDoH4	
	Output		Antenatal client CD4 1st test rate	HIV positive antenatal clients (NOT on HAART) CD4 tested for the first time during current pregnancy as a proportion of antenatal clients eligible for first CD4 tests.	Antenatal client CD4 1st test	Antenatal client eligible for CD4 1st test CALC	DHIS NDoH4	
	Outcome		Incidence of STI treated - new	A new episode of a symptomatic Sexually Transmitted Infection (STI) treated according to the Syndromic Approach in a patient 15 years and older. One patient can have more than one new episode at a time.	Number of new episodes of STI treated	Population 15 years and older	DHIS NDoH4	
	Outcome		Incidence of new smear positive TB	The number of new smear positive TB cases per 100 000 population, diagnosed in a year.	The number of new smear positive TB cases	Total population	ETR.net and DHIS population	Number of new smear positive TB cases per year per 100 000 population.
	TB	Outcome		Smear positivity	Percentage of all pulmonary TB cases that are new smear positive.	Number of new PTB cases who were found smear positive.	Total number of new PTB cases registered during the specified time.	Calculated from the (DoH TB directorate data)

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	Outcome		Smear conversion rate	The smear conversion rate (SCR) is the percentage of new smear positive PTB cases that are smear negative after two months of anti-TB treatment and are therefore no longer infectious.	Number of new PTB cases who were +ve before starting treatment but show a -ve smear after 2 months treatment	Total number of new smear positive cases registered during the specified time.	DoH TB directorate	
91	Outcome		TB Cure rate	The proportion of smear positive PTB patients who completed treatment and were proven to be cured (which means that they had two negative smears on separate occasions at least 30 days apart).	The number of initially smear positive patients who converted to negative smears at two or three months after starting treatment	Total number of new PTB smear positive cases started on treatment during the specified time.	DoH TB directorate	"TB constitutes a major public health problem in most areas, and provided that the programme is an integral part of health sector policy and financial management, the indicators used for monitoring TB control programmes can also be used as excellent proxies for monitoring overall health sector performance. Cure rate is an indicator for treatment performance. It reflects both regularity of drug supply and adherence to treatment. Adherence to treatment depends to a large extent on staff responsiveness and quality of care."
	Outcome		Delivery rate in facility	The percentage of deliveries taking place in health facilities under supervision of trained personnel in a year.	Number of deliveries in facility in a year	All expected deliveries in target population in a year.	DHIS NDoH4	The number of children under one year, factorised by 1.07, due to infant mortality, is used as an estimated proxy denominator for expected deliveries.
	Impact		Stillbirth rate	The total number of births that are stillbirths (babies born dead) per 1000 births in facility.	Number of babies born dead (stillbirths) in facility	Total number of births in facility.	DHIS NDoH4	Adjusted to be per 1000 births (DHIS is %). This is a facility based indicator (number of deliveries in a facility) and not a population based indicator. (Total deliveries including home deliveries)
	Impact		Perinatal mortality rate in facility	The number of perinatal deaths per 1000 births in facility.	Stillbirth in facility + Inpatient death (early neonatal)	Total number of births in facility.	DHIS NDoH4	Adjusted to be per 1000 births (DHIS is %). The perinatal period commences at 22 completed weeks (154 days) of gestation (the time when birth weight is normally 500 g), and ends seven completed days after birth.