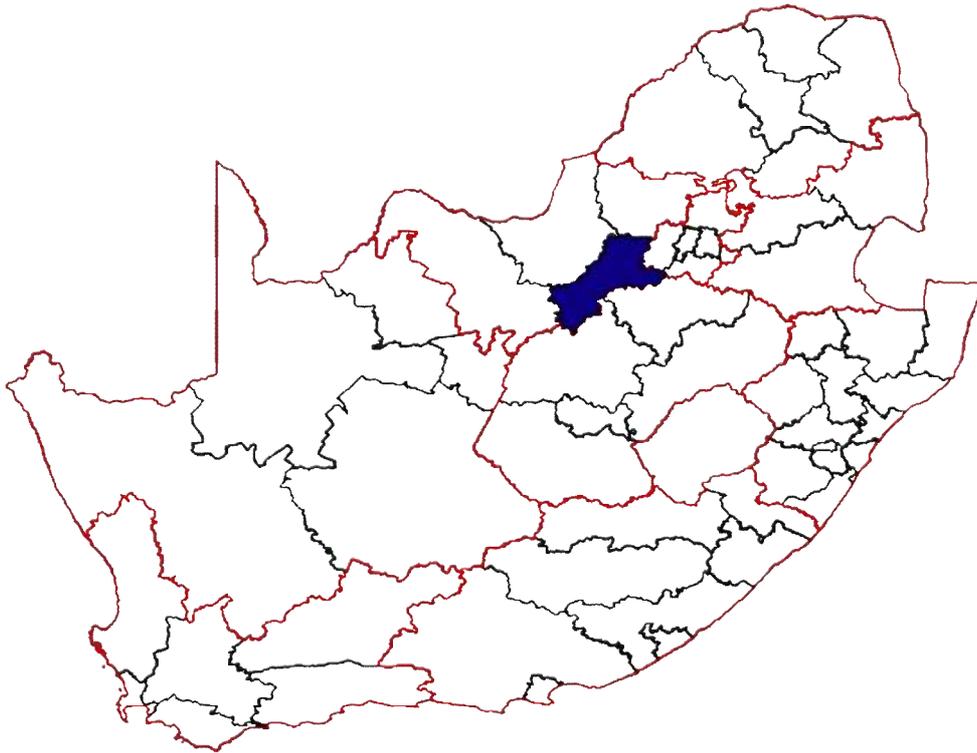


# NORTH WEST KENNETH KAUNDA DISTRICT PROFILE

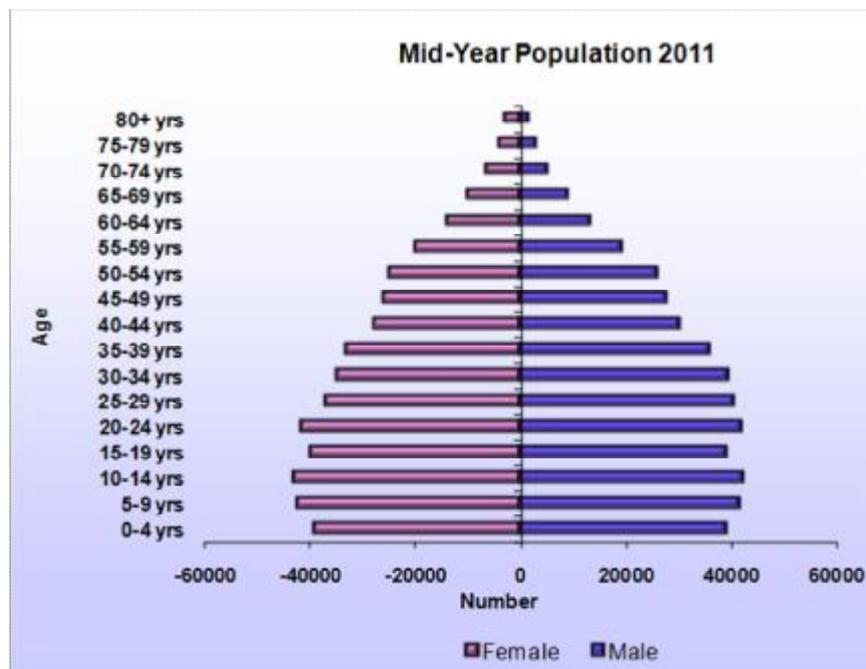


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# 1. Demographic Information

The Dr Kenneth Kaunda District is situated in the North West Province and its neighbouring districts are Dr Ruth Segomotsi Mompati to the west, Ngaka Modiri Molema north, and Bojanala to the east. It covers geographically 14,767 square kilometres.



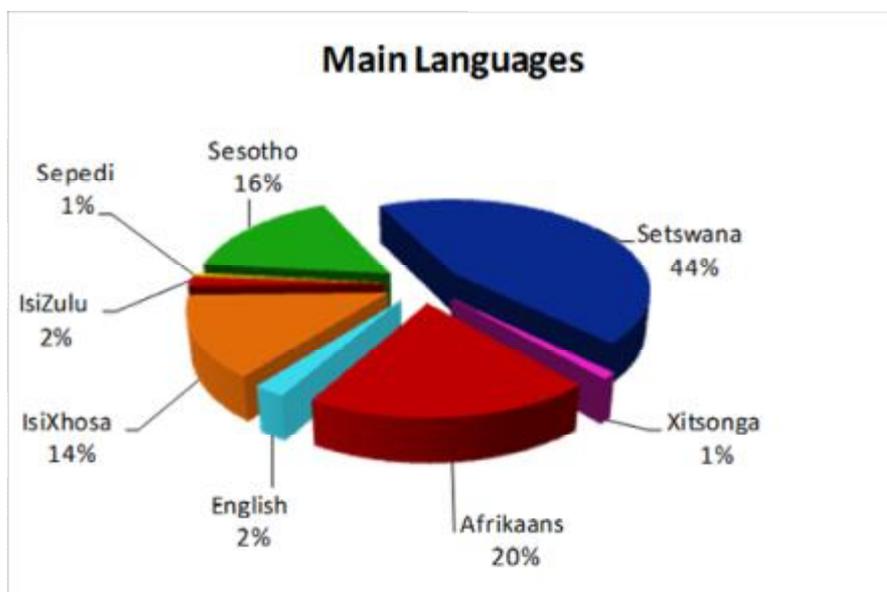
The District has a total population of 807,252. The population density is 54.7 per square kilometre. The population pyramid for Dr Kenneth Kaunda District above illustrates a broad base of young aged population (0-14) followed by a decline of both males and females from 15 – 49 years. Further analysis reveals the average life expectancy to be at 50-54.

Demographic Data	
Geographical area	14,767 Km <sup>2</sup>
Total Population (Midyear 2011 DHIS)	796,823
Population density (Midyear 2011)	54.7/km <sup>2</sup>
Percentage of population with medical insurance (General Household Survey 2007)	24.1%

Dr Kenneth Kaunda District comprises of 4 Sub-Districts. Most of the population resides in Matlosana and Tlokwe, which are peri-urban areas. There are 2 rural Sub-Districts: Ventersdorp and Maquassi Hills. All the Sub-Districts have mining activities.

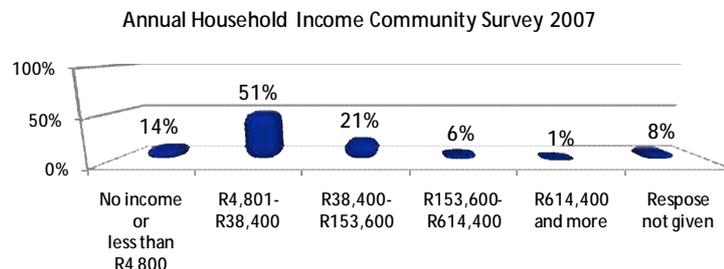
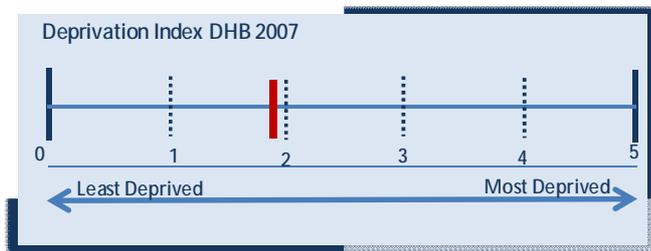
Name of Sub-district	Total Population
Maquassi Hills Sub-District	91 991
Matlosana Sub-District	476 334
Tlokwe Sub-District	170 652
Ventersdorp Sub-District	57 846
District	796 823

19 Years and younger	20-24 Years	25-39 Years	40-64 Years	65 Years and older
0.8%	4.6%	35.2%	51.2%	8.2%



The main language spoken in Kenneth Kaunda is Setswana (44%), followed by Afrikaans (20%) and Sesotho (16%).

## 2. Social Determinants of Health



Indicators for Basic Services	Community Survey 2007
Percentage traditional and informal dwelling, shacks and squatter settlement	23.9%
Percentage households without access to improved sanitation	13.8%
Percentage households without Access to Piped Water	2.9%
Percentage households without access to electricity for lighting	18.1%
Percentage households without refuse removal by local authority/private company	19.1%

The deprivation index for the district is 1.8, which means the district falls in the 4<sup>th</sup> quintile if all 52 districts which are ranked from worst off to best and with the 1<sup>st</sup> quintile indicating the worst off districts. The District therefore is relatively well developed with only 2.9 % of households that do not have access to piped water and 13.8 % without access to improved sanitation. In terms of housing, 23.9 % of the population lives in informal dwellings or squatter settlements. Access to basic services, in particular pure water supply, proper sanitation, refuse removal and proper housing has implications for the health status of communities. This may affect the most vulnerable under-five population mostly with high rates of respiratory tract infection and diarrhoea which can lead to high under-five mortality rates.

According to the Community Survey 2007, 19.4% of the population are unemployed and 14% of households live with an annual income below R4, 800 or less than R400 per month.

### 3. Service Delivery Platform

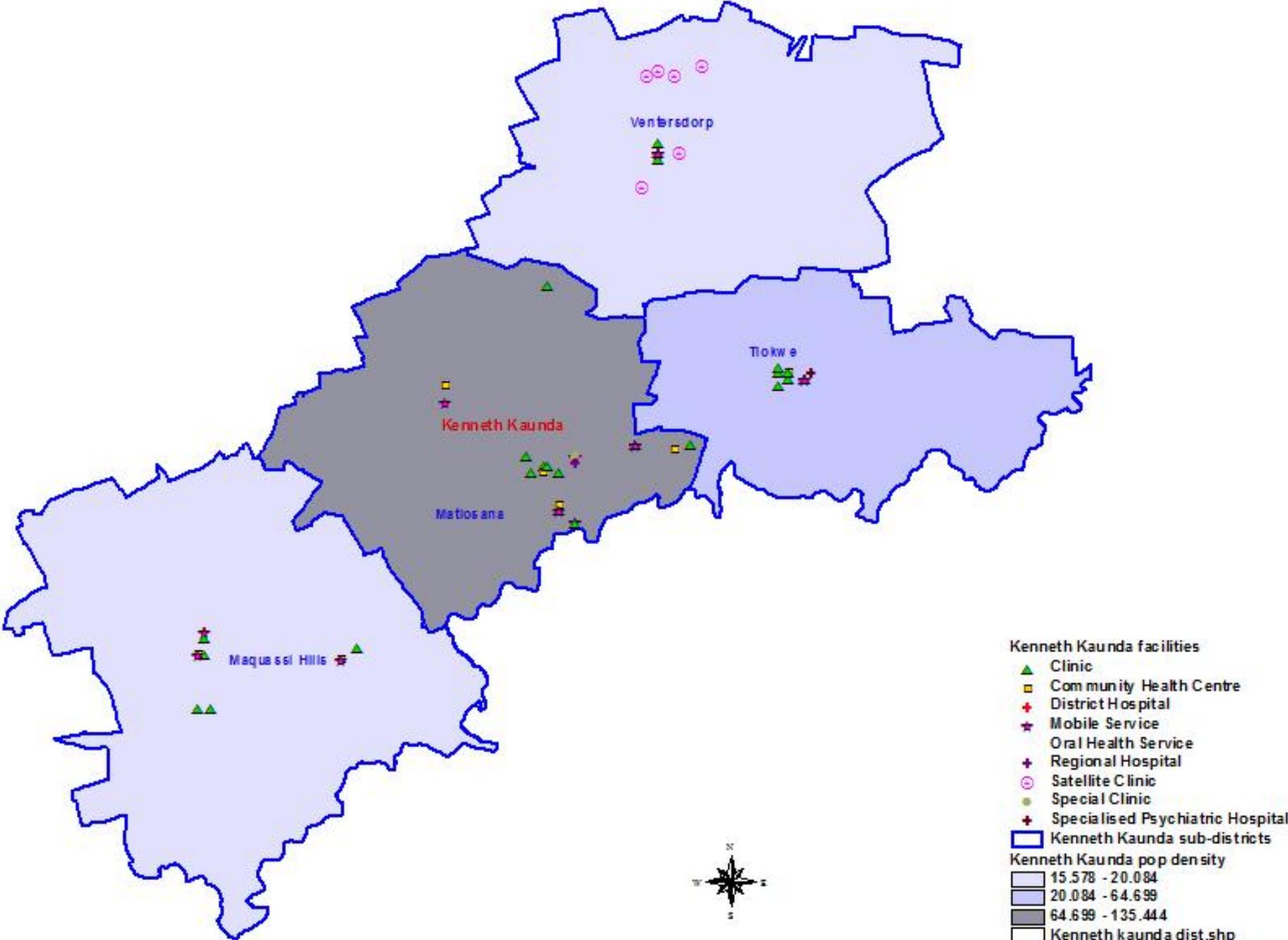
#### 3.1 Facility Types Sub-Districts

Sub District	Clinic	Community Health Centre	District Hospital	Health Post	Mobile Service	Regional Hospital	Satellite Clinic	Specialised Psychiatric Hospital	Grand Total
Maquassi Hills	6	2			4				12
Matlosana	13	4			5	1			23
Tlokwe LM	6	2	1	1	2			1	13
Ventersdorp LM	2	1	1		3		6		13
<b>Grand Total</b>	<b>27</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>15</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>62</b>

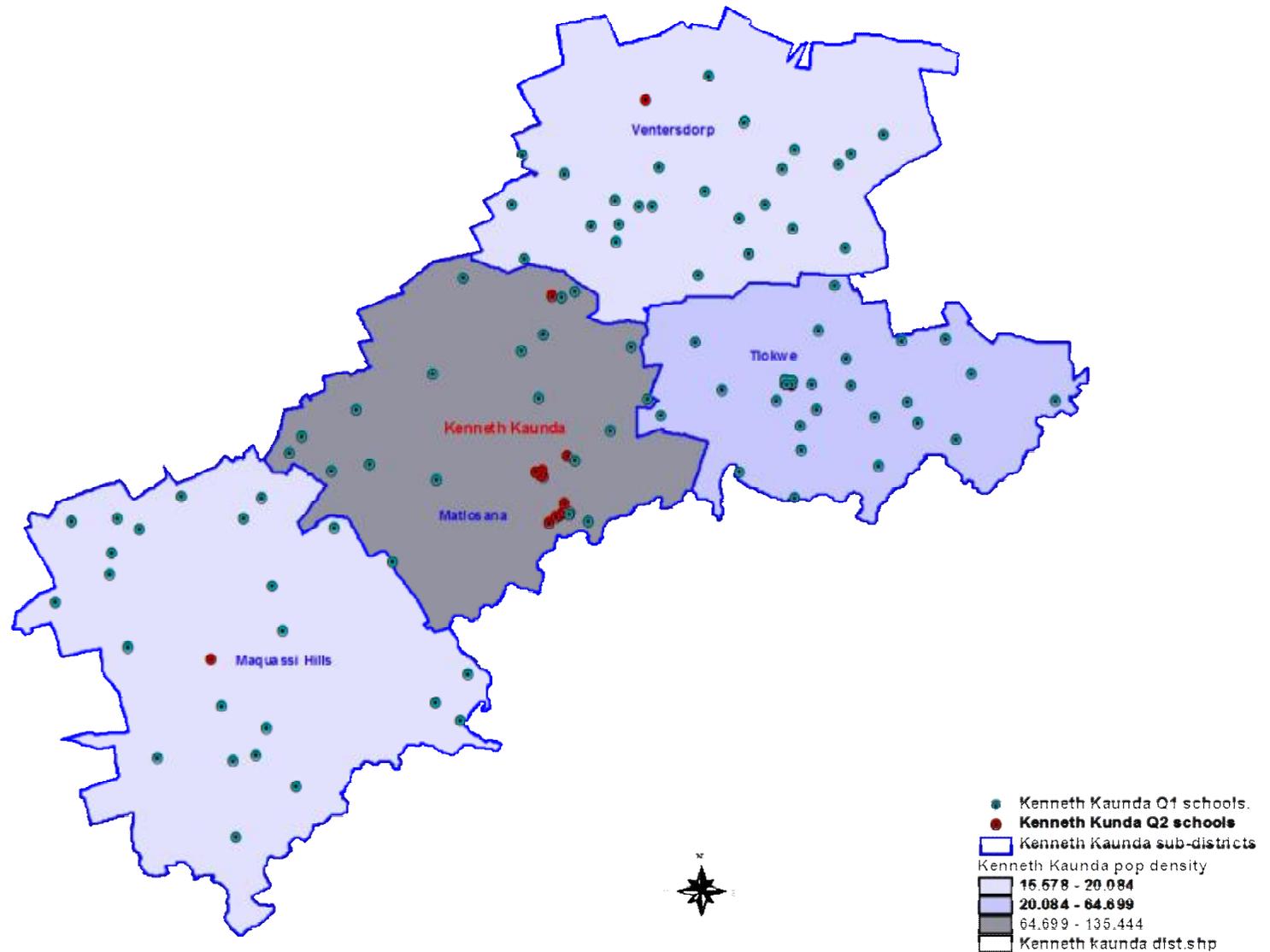
Health services are delivered by 1 Regional; 3 District Hospitals; 9 Community Health Centers; 27 clinics; 6 satellite clinics and 2 mobile health service units.

The 2 district hospitals in the district are both situated in the rural area of the Province. In the urban areas level one service are provided at the Regional Hospitals. This arrangement have impact on the costs for delivering level 1 Hospitals services more to the district in delivering level 1 services. Due to accessibility issues there is a cross boundary flow of patients from Ottosdal to Nic Bodenstein Hospital and Gamotlatla to Ventersdorp Hospital increasing financial burden on the district.

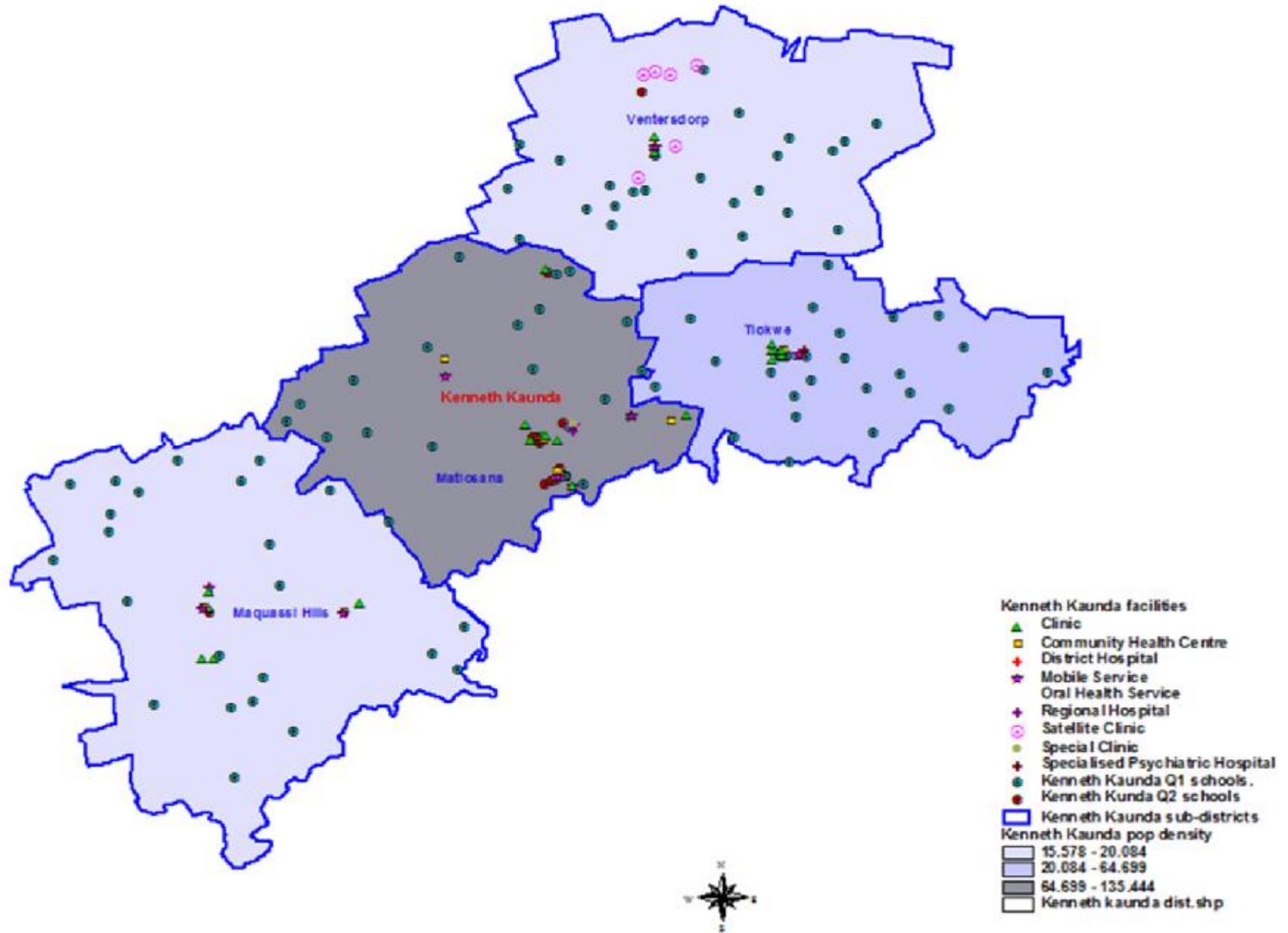
# Health Facilities



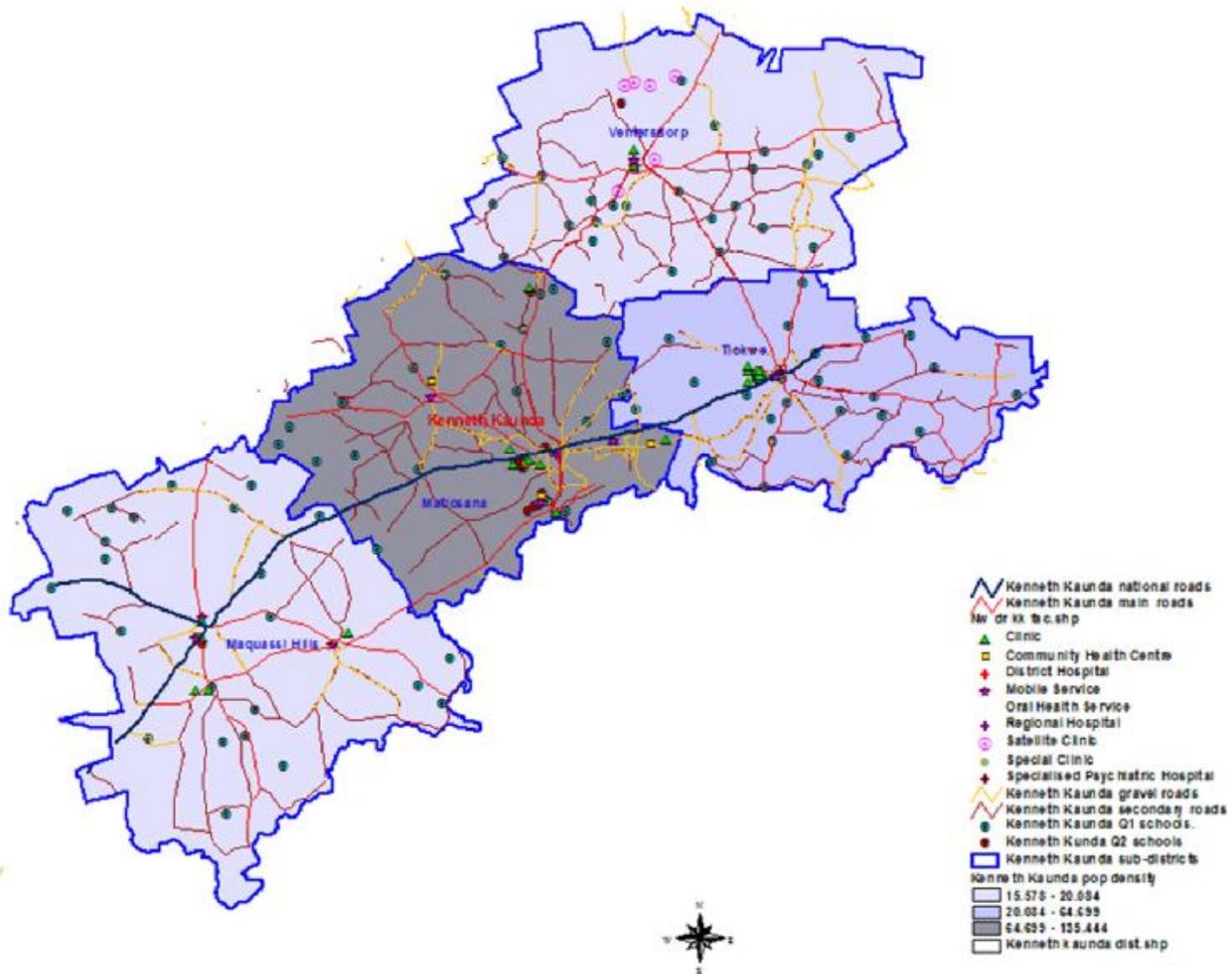
## Quintile 1 and 2 Schools



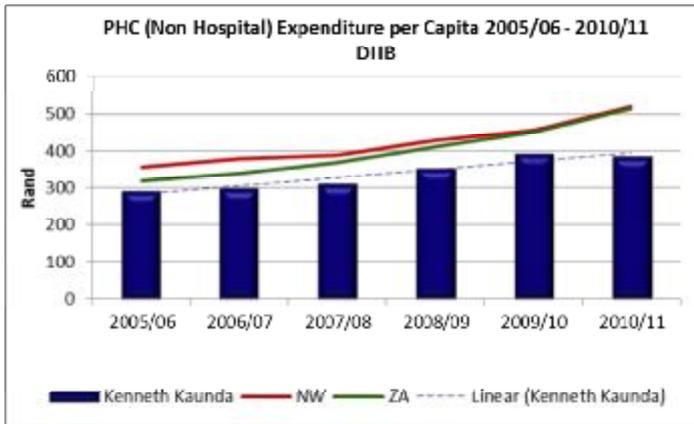
# Health Facilities and Quintile 1 and 2 Schools



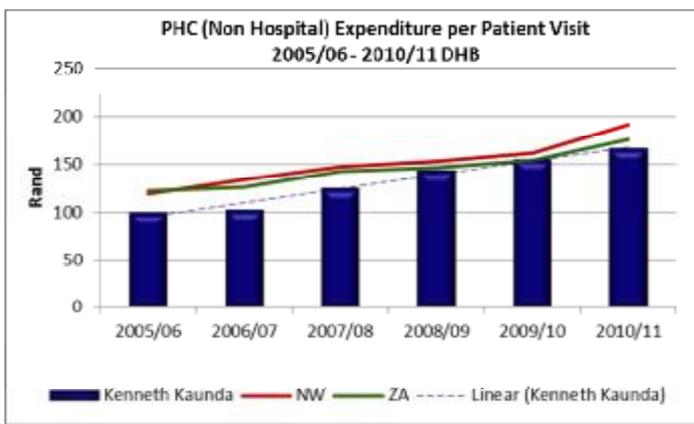
## Health Facilities and Quintile 1 and 2 Schools with Road Networks



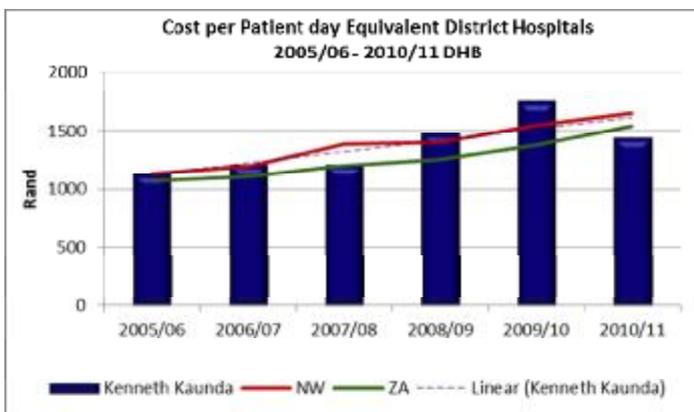
## 3.2 Trend of Public Health Expenditure



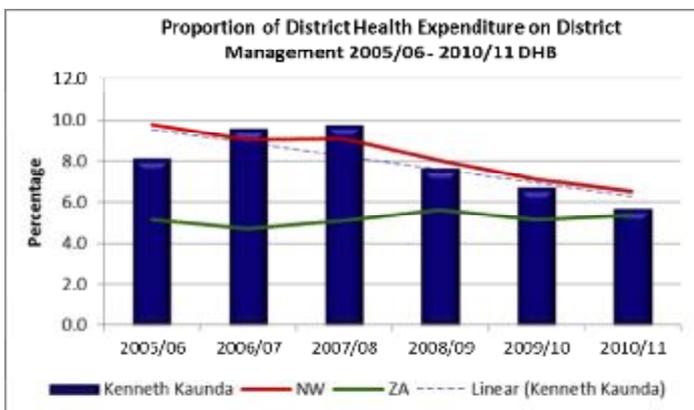
Kenneth Kaunda had below national and provincial per capita expenditure since 2005/06



The cost per patient visit has increased steadily over the years in Kenneth Kaunda (also provincially and nationally).

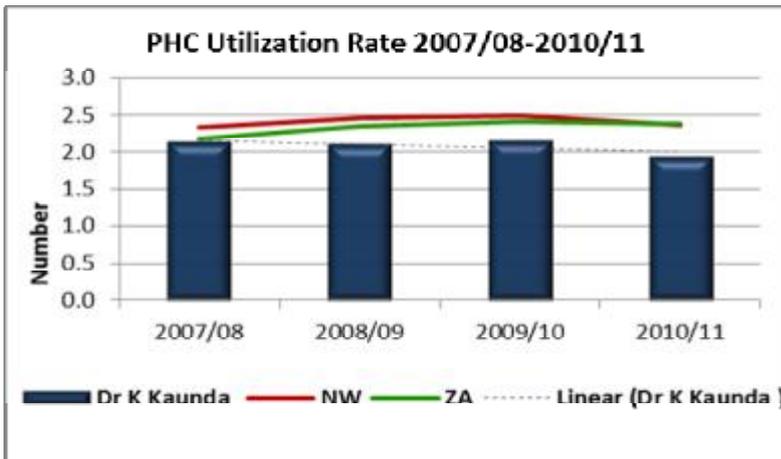


The district's PDE for district hospitals was above national and provincial averages, but dropped significantly in 2010/11 below national and provincial averages.

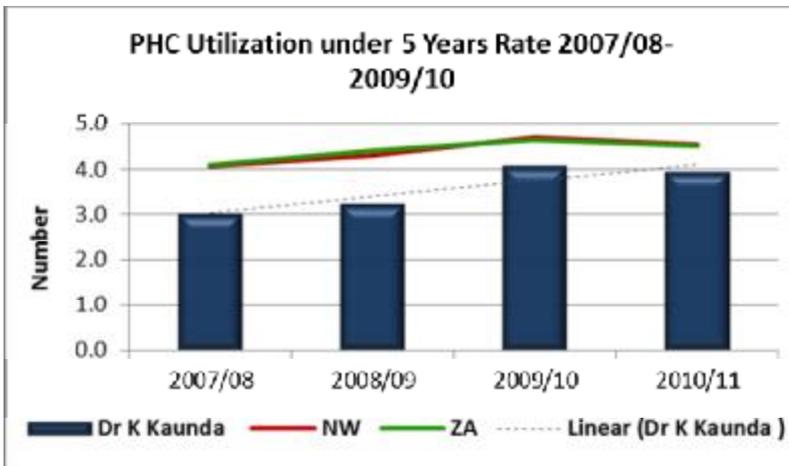


The proportion of total district health expenditure on district management is influenced by provincial policies on budget allocation, or by systematic provincial differences in how various types of expenditure are coded. The district had above national expenditure on district management since 2005/06 but in line with provincial expenditure.

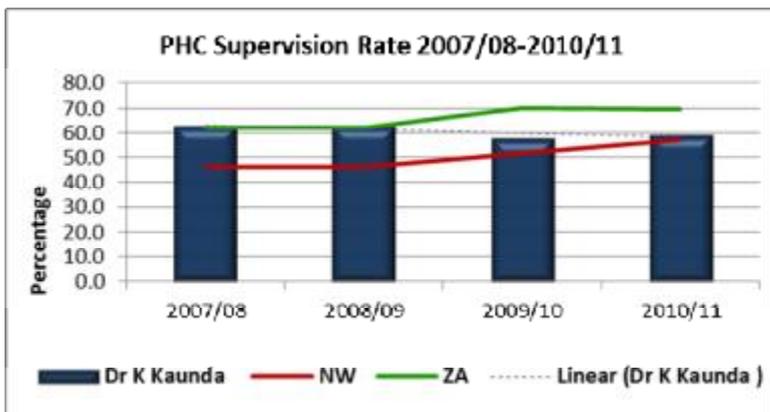
### 3.3 Trend of Health Services Delivery



PHC Utilisation rate decreased slightly in Kenneth Kaunda and was below national and provincial averages last 4 financial years.



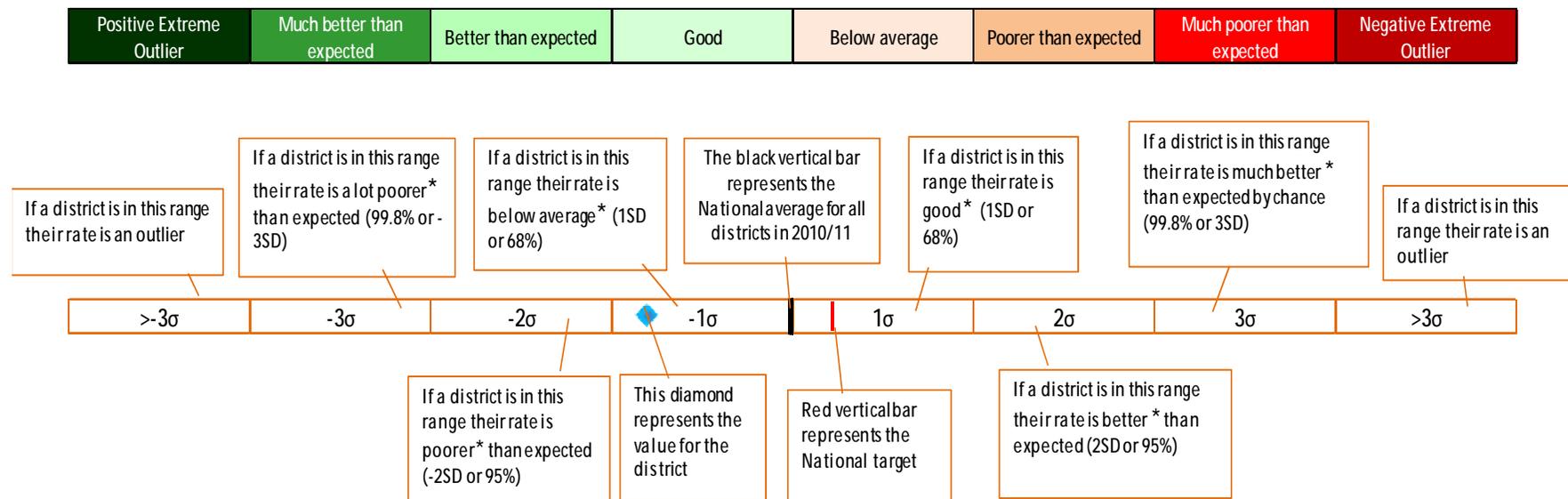
The PHC under 5 years utilisation increased steadily but was below the national and provincial average in past 4 financial years.



Supervisory visits provide a system for identifying and addressing problems at facility level. The supervision rate decreased slightly in Kenneth Kaunda and is below national average, but in in line with provincial average last 4 financial years.

# 4. Performance on Priority Indicators 2010/11

The charts below are constructed using statistical process control (SPC) principles and use control limits to indicate variation from the national average (as well as national target where available). The purpose of this type of display is to give feedback on the performance of the district compared to the performance range of all 52 districts for the period under review (2010/11) for selected priority indicators. The display shows one standard deviation (68%), two standard deviation (95%) and three standard deviation (99.8%) control limits. Values within the 1SD below or above national average are said to display 'normal cause variation' in that variation from the mean can be considered to be random. Values outside these limits (in the darker green or orange sections) are said to display 'special cause variation' at a two standard deviation level, and a cause other than random chance should be considered. Values outside these sections (in the dark green or red sections) also display 'special cause variation' but at against a more stringent test. Variation at the two standard deviation level can be considered to raise an alert, and variation at the three standard deviation level to raise an alarm.



\* Values that fall in the positive standard deviations are good for certain indicators e.g. Immunisation coverage where higher is better, but the opposite is true for indicators that measures disease burdens or e.g. PCR test positive at 6 weeks rate where lower (negative standard deviations) is better. For other indicators like ALOS both too high or too low is bad and the "good range" will fall in both 1SD and -1SD. Performance should therefore be interpreted in conjunction with the colours codes above.

Indicator	Period	District value	National average	Chart	Comment
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Indicator	Period	District value	National average	Chart	Comment
Utilisation rate - PHC (annualised)	2010/11	1.9	2.4		In the 1 SD below National average range and far below National target of 3.5
Utilisation rate under 5 years - PHC (annualised)	2010/11	4	4.5		In the 1SD below National average and far below National target of 5.5
Percentage of CHCs with a resident doctor	2010/11	2.8%	14.7%		Very far below 1 SD from National average range and far below National target of 100%
Fixed PHC facilities with a monthly supervisory visits rate	2010/11	59.1%	86%		In the 1SD below national average range (poor)
Immunisation coverage under 1 year (annualised)	2010/11	104.4%	90%		In the 2SD above the National average (very good) and above National target
Vitamin A coverage 12-59 months (annualised)	2010/11	31.1%	34.7%		In the 1SD below National average range (poor)
Measles 1st dose under 1 year coverage (annualised)	2010/11	108.8%	95%		In the 2SD above national average (very good) and above national target
PCV 3rd dose coverage (annualised)	2010/11	58%	72%		In the 1SD below national average (poor) and far below National target.
RV 2nd dose coverage (annualised)	2010/11	50%	90%		In the 2SD below average range (very poor) and far below National target.
Facility maternal mortality	2010/11	340.5	138.2		2SD above national average (very poor)
Facility Infant (under 1 year) mortality rate	2010/11	10.7	8.1		In the 1SD above the National average range Reporting on this indicator poor country wide.

Indicator	Period	District value	National average	Chart	Comment
Facility Child (under 5 years) mortality rate	2010/11	6.8	5.5		In the 1SD above the National average range. Reporting on this indicator poor country wide.
Couple year protection rate	2010/11	23.4%	31.6%		In the 1SD below the National average (poor) and far below National target.
Delivery in facility under 18 years rate	2010/11	7.2%	8.1		1SD below national average
Cervical cancer screening coverage (annualised)	2010/11	53.9%	52.2%		In the 1SD above the National average range (good) and above national target of 40%.
Antenatal visits before 20 weeks rate	2010/11	41.9%	37.5%		1SD above national average (good), but below the national target of 70%.
Baby PCR positive at 6 weeks rate	2010/11	5.2%	7.6%		In the 1SD below national average range (good) and close to the national target of 5%.
Male condom distribution rate	2010/11	4.7	14.8		In the 2SD below national average (very poor) and far below national target of 15%
Bed utilisation Rate	2010/11	80.6%	65.4%		In the 2SD above national average (very good) and above the national target of 75%
Average Length of Stay	2010/11	4.4	4.2		In the 1SD above the national average (good) but above national target of 3.5
Caesarean Section rate	2010/11	22.8%	19%		1SD above national average (good) but above national target of 15%

## 5. Glossary

### Deprivation indices and socio-economic data

The deprivation index is a measure of relative deprivation across districts within South Africa. Just as any index, the deprivation index is a composite measure derived from a set of variables. Variables included in the analysis are considered to be indicators of material and social deprivation. The deprivation indices

for this report were generated using StatsSA's GHS and 2007 Community Survey (CS) data and have been calculated in such a way that the indices are directly comparable to the deprivation indices generated from the 2005 GHS data. This therefore provides three years of deprivation trend data. To simplify interpretation, the deprivation index was normalised such that the district that is least deprived has a deprivation index of 1. Districts with higher values are relatively more deprived than districts with lower values. The score itself does not have any intrinsic meaning, but the relative scores show which districts are more deprived than others and can be used to rank districts. Each district was thus ranked according to levels of deprivation and categorised into socioeconomic quintiles (SEQ). Districts that fall into quintile 1 (worst off) are the most deprived districts. Those that fall into quintile 5 are the least deprived (best off).

Since there is no official consensus on a single measure of poverty or deprivation, an additional indicator is included with the deprivation index. This is the percentage of households with access to piped water. This indicator is provided from both the GHS and the CS data up to 2007. Unfortunately no new district level data for the deprivation index or access to piped water has been collected since 2007, thus the socio-economic quintiles from 2007 have been used for each of the years thereafter to enable on-going analysis of equity according to socio-economic status.

Variables included in the calculating the deprivation index were:

- The proportion of the district's population that are children below the age of five
- The proportion of the district's population that are black Africans
- The proportion of household heads in the district that are females
- The proportion of household heads in the district that has no formal education
- The proportion of working-age population within the district that is unemployed (
- The proportion of the district's population that lives in a traditional dwelling, informal shack or tent
- The proportion of the district's population that has no piped water in their house or on site
- The proportion of the district's population that has a pit or bucket toilet or no form of toilet
- The proportion of the district's population that does not have access to electricity, gas or solar power for lighting, heating or cooking.

### District boundaries and maps

Geographic information from the Municipal Demarcation Board is used to define district and provincial boundaries and is the same as is followed by the DHIS.

For some DHB indicators such as the deprivation index, old demarcation boundary data was used.

### Averages

It is important to note that all averages (provincial, national, metro and ISRDP) are weighted averages, based on the total numerator and denominator for all the sub-areas included, and are thus not averages of the district indicator values.

### Financial year and calendar year

Some indicators are displayed for (April – March), which is the financial year of the Department of Health. Indicators for financial years are annotated as 2010/11. Other sources such as the TB data from ETR.net, antenatal HIV survey, water quality and cause of death data cover a calendar year (January – December). Data from StatsSA surveys are for the period of the census or survey.

### Finance indicators

All expenditure trends over time used from the DHB have been adjusted for inflation, and figures are quoted in real 2010/11 prices, unless indicated otherwise.

## 6. Indicator Definitions

	Indicator name	Indicator definition	Numerator description	Denominator description	Source
Deprivation	Deprivation Index	The deprivation index is a composite index of deprivation using StatsSA Census and household survey, recalculated to a district level.			Health Economics Unit, UCT - based on data from StatsSA Census 2001, GHS and Community Survey
Basic services	Percentage traditional and informal dwelling, shacks and squatter settlement	Number of households that are informal dwellings, shacks or squatter settlements as percentage of total households	Total number of informal dwellings, shacks or squatter settlements	Total number of households	Community Survey 2007
	Percentage households without access to improved sanitation	Number of households that do not have access to improved sanitation (bucket, pit latrine or no toilet facilities) as percentage of total households	Total number of households without access to improved sanitation.	Total number of households	Community Survey 2007
	Percentage households without Access to Piped Water	Number of households that do not have access to piped water within 200m from dwelling as percentage of total households	Number of households without access to piped water	Total number of households	Community Survey 2007
	Percentage households without access to electricity for lighting	Number of households that do not have access to electricity for lighting (as proxy of availability of electricity in community) as percentage of total households	Number of households without access to electricity for lighting	Total number of households	Community Survey 2007
	Percentage households without refuse removal by local authority/private company	Number of households that do not have access to refuse removal by local authority/private company	Number of households without refuse removal by local authority/private company	Total number of households	Community Survey 2007

	Indicator name	Indicator definition	Numerator description	Denominator description	Source
Finance	Cost per Patient Day in district hospitals	Average cost per patient per day seen in a hospital (Expressed as Rand per patient day equivalent).	Total expenditure on health district hospitals Percentage of District	Patient day equivalent - Total	BAS, NW financial data, DHIS
	Percentage of District Health 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
	Non-hospital PHC expenditure per capita	Total amount spent on non-hospital PHC health services per person without medical scheme coverage. PHC (non-hospital) expenditure per capita, uses a subset of total PHC expenditure; most importantly it excludes DHS expenditure on HIV, nutrition, coroner services and district hospitals	Provincial expenditure on the following sub-programmes of DHS (district management, clinics, CHCs, community based services and other community services) plus nett local government expenditure on PHC	Uninsured population (total population less medical scheme coverage x population)	Calculated from BAS, NW financial data, Treasury data on LG exp, DHIS population and StatsSA GHS medical scheme coverage
	Non-hospital PHC expenditure per patient visit	Total amount spent on non-hospital PHC health services per primary health care visit. The PHC expenditure per patient visit indicator measures the average cost of a patient visit to a primary care facility. In practice it is the average cost to the health service of a patient visit to a community health centre (CHC), clinic, satellite clinic or mobile clinic, excluding district hospitals but including the cost of managing the district. This indicator's numerator is thus the total cost in a particular district of running all these facilities for a year. The denominator is the total PHC	Provincial expenditure on the following sub-programmes of DHS (district management, clinics, CHCs, community based services and other community services) plus nett local government expenditure on PHC	Total PHC headcount	Calculated from BAS, NW financial data, Treasury data on LG expenditure, DHIS PHC headcount

	Indicator name	Indicator definition	Numerator description	Denominator description	Source
		headcount for these facilities for the same year. It does not take into account the patient case mix found in practice.			
Insurance	Medical scheme coverage	Percentage of population who have medical scheme Insurance			Modelled from StatsSA GHS
Utilisation	ALOS: Average length of stay (district hospitals)	The average number of patient days that an admitted patient spends in hospital before separation. If the ALOS is persistently high it suggests that patients spend too much time in hospital either because they are not timeously discharged or appropriately treated resulting in longer recovery times, or they are not discharged when they should be. Admission, treatment and discharge procedures should therefore be reviewed. If the ALOS is persistently low (less than 1.5 days), it could mean that patients are discharged earlier than they should be, or referral rates to other hospitals are high.	Inpatient days + 1/2 Day patients	Separations - Discharges + Deaths + Transfers out + Day patients	DHIS NDoH5 (data for District Hospitals only)
	BUR: Usable bed utilisation rate (district hospitals)	The 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	Total patient days - (Inpatient days + 1/2 Day patients) x 100	Total usable bed days	DHIS NDoH5 (data for District Hospitals only)

	Indicator name	Indicator definition	Numerator description	Denominator description	Source
		30 days in a month. A very high bed utilisation rate (BUR) suggests that the hospital is very busy and that the quality of care provided to the patients may be compromised due to insufficient staff to provide optimal care to patients. A very low BUR may suggest that the hospital is under-utilised either because there is no need for the service in the area, or because patients choose not to use the hospital.			
	PHC utilisation rate	The rate at which PHC services are utilised by the catchment population, represented as the average number of visits per person per year in the catchment population. The denominator is usually Census-derived population estimates. It is calculated by dividing the PHC total annual headcount by the total catchment population. The target for the South African public health sector is 3.5 PHC visits per person per year.	PHC total headcount	Total population	DHIS NDoH5
	PHC under 5 year utilisation rate	The rate at which PHC services are utilised by children under 5 years in the catchment population, represented as the average number of PHC visits per child under 5 per year in the target population. The denominator is usually Census-derived population estimates.	PHC headcount under 5 years	Total population below 5 years	DHIS NDoH5

	Indicator name	Indicator definition	Numerator description	Denominator description	Source
Management	Fixed PHC facilities with a monthly supervisory visit rate	Proportion of fixed PHC facilities visited by a dedicated clinic supervisor, who performs a visit according to the clinic Supervision manual. The target for monthly visits is 100%.	Number of fixed PHC facilities visited at least once	Number of fixed PHC facilities	
Child Health	Measles 1st dose 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
	Diarrhoea incidence under 5 years	The number of children with diarrhoea per 1 000 children in the catchment population.	Diarrhoea cases under 5 years -new	Population under 5 years	DHIS NDoH5
	Severe malnutrition under 5 years incidence	The number of children who weigh below 60% Expected Weight for Age (new cases that month) per 1 000 children in the target	Severe malnutrition under 5 years - new	Target population under 5 years	DHIS NDoH5
	Pneumonia under 5 years incidence	Children under 5 years diagnosed with pneumonia, per 1,000 children in the catchment population	Pneumonia under 5 years - new ambulatory	Target population under 5 years	DHIS NDoH5
Maternal Health	Perinatal mortality rate in facility	The perinatal mortality rate (PNMR) is the number of perinatal deaths per 1 000 births. Perinatal deaths are the sum of stillbirths plus early neonatal deaths (<7 days). The perinatal period starts as the beginning of foetal viability (28 weeks gestation or 1 000g) and ends at the end of the 7th day after delivery	Stillbirths and Inpatient early neonatal deaths in facility	Total births in facility	DHIS NDoH5
	Delivery rate in facility	The percentage of deliveries taking place in health facilities under supervision of trained personnel. The number of	Deliveries in facility	All expected deliveries in target population	DHIS NDoH5

	Indicator name	Indicator definition	Numerator description	Denominator description	Source
		children under one year, factorised by 1.07 due to infant mortality, is used as an estimated proxy denominator for expected deliveries per month.			
	Antenatal coverage	The proportion of pregnant women coming for at least one antenatal visit. The census number of children under one 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 28 weeks), still births (after 28 weeks gestation), and infant mortality.	Antenatal 1 <sup>st</sup> visit	Children under one year factorised by 1.15	DHIS NDoH5
	Couple year protection rate	The couple year protection rate is a composite indicator of the different contraceptive methods. The numerator is contraceptive years equivalent and the denominator is the female target population (between 15 and 44 years). It is measured as a percentage and reflects the availability, accessibility and acceptability of reproductive health services and serves as proxy indicator for MDG 5b.	Contraceptive years equivalent	Female target population (between 15 and 44 years).	DHIS NDoH5

	Indicator name	Indicator definition	Numerator description	Denominator description	Source
TB	Smear conversion rate (new Smear positive PTB clients)	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 positive before starting treatment but show a negative smear after 2 months treatment	Total number of new smear positive cases registered during the specified time.	NDoH TB Directorate
	TB cure rate (new smear positive PTB clients)	The proportion of new 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.	NDoH TB Directorate
BOD	Percentage of deaths due to communicable diseases, maternal, HIV/TB, non-communicable diseases and injuries	The proportion of deaths due to communicable diseases / maternal, HIV/TB, non-communicable diseases and injuries.	Number of deaths due to communicable diseases /maternal, HIV/TB, non-communicable diseases and injuries.	Total number of deaths	StatsSA Causes of Death