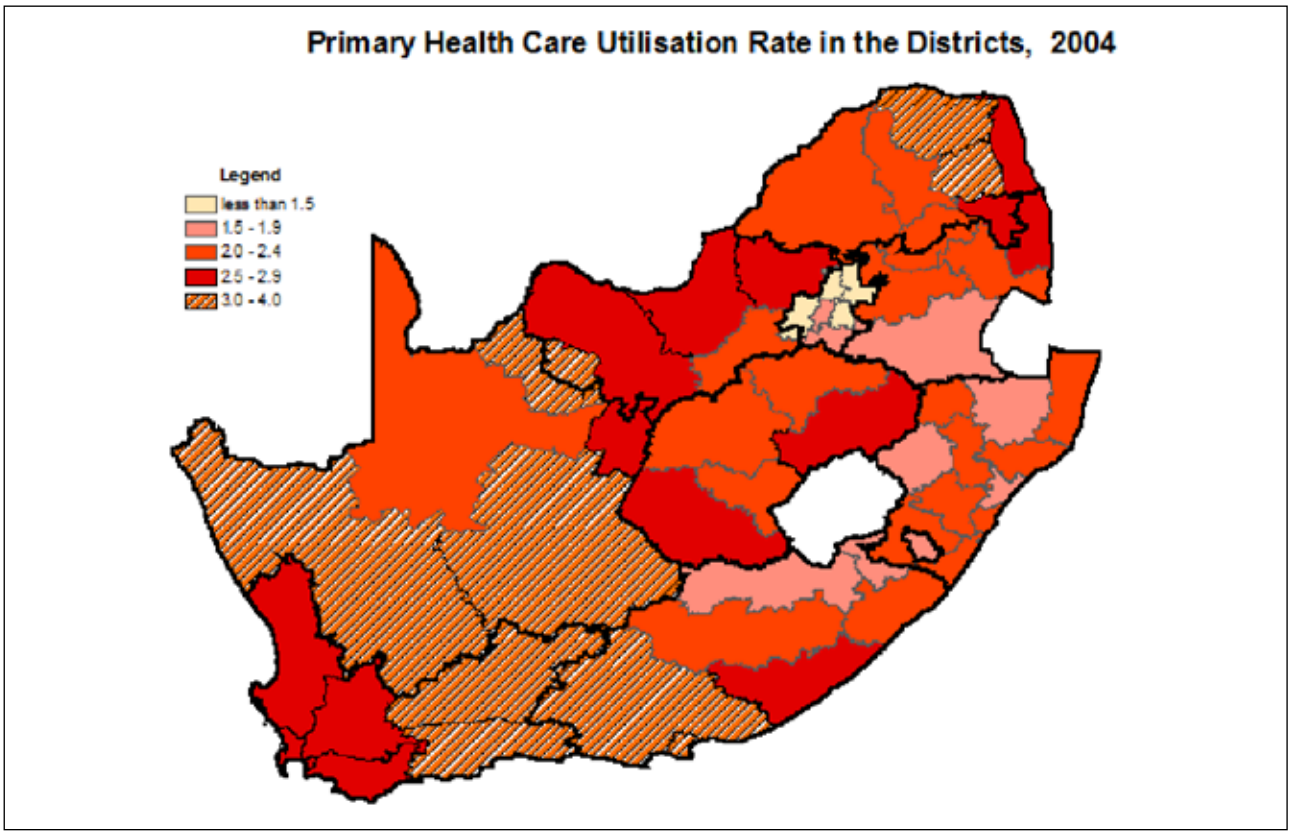
4. OUTCOME INDICATORS

4.1 PHC Utilisation Rate

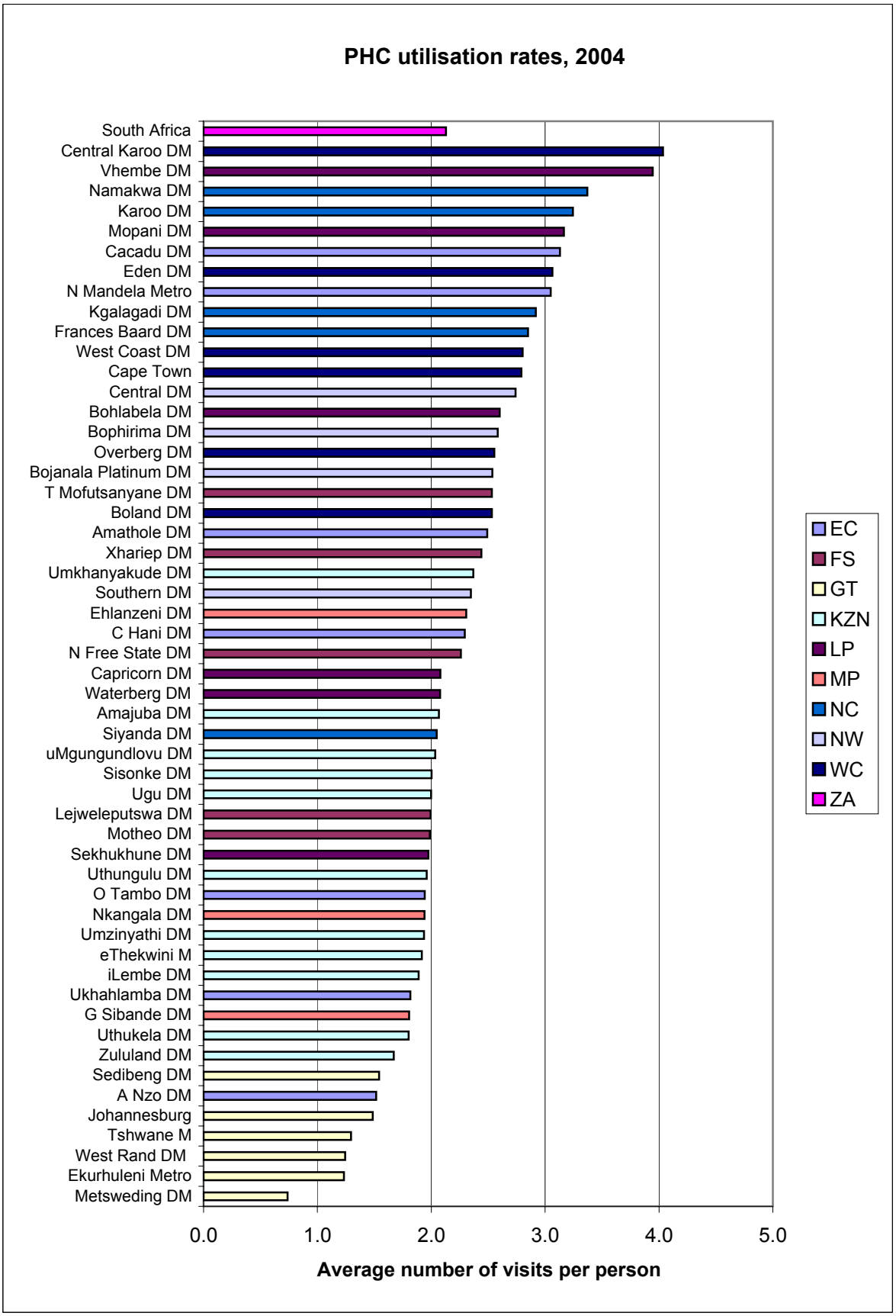
The utilisation rate is the average number of visits per person per year to a public PHC facility. The national target for utilisation rate is 3.5.[25] During 2004 the utilisation rate was 2.1, which was the same rate as for 2003. This rate is based on the total population and not the uninsured section of the population who are dependent on the public sector and is thus an underestimate of the real utilisation. In the metro and urban districts, where a larger proportion of the population have medical aid cover than in non-urban districts, the utilisation rates will be even more of an underestimate.

Map 12: PHC Utilisation Rates in South Africa by District



25 Cleary S, Chitha W, Jikwana S, Okorafor OA, Boulle A. Financing antiretroviral treatment and primary health care services. In: Ijumba P, Barron P, editors. South African Health Review 2005, Durban: Health Systems Trust; 2005.

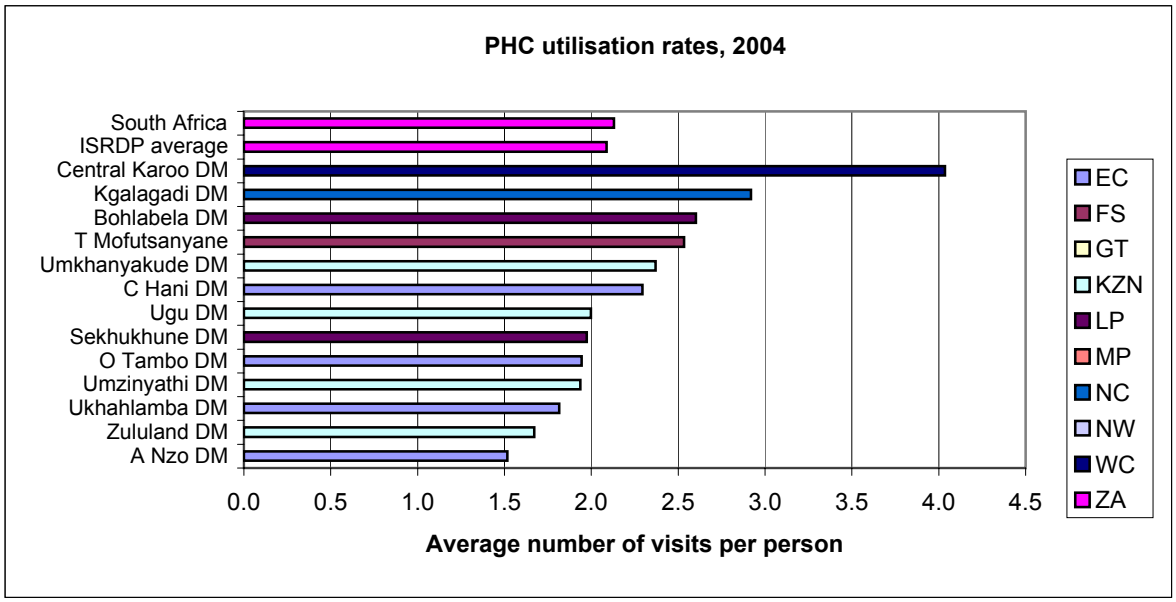
Figure 37: PHC Utilisation Rates by Health District



District View: The graph shows the variation with the highest utilisation rate of 4.0 in the Central Karoo (WC) and the lowest of 0.7 in Metsweding (GT). Of the 10 districts with the highest utilisation rate four are in the Northern Cape. The five districts with the lowest utilisation rate are all in Gauteng, despite the fact that all these districts have above average expenditure rates. In contrast all of the districts in the Western Cape are above the national average. Of the 11 KwaZulu-Natal districts 10 are below the average. Overall, if the utilisation rate is to get closer to the target, much more emphasis will have to be given to improving the resources available to PHC. In those districts that are relatively well resourced the quality of care will have to be improved.

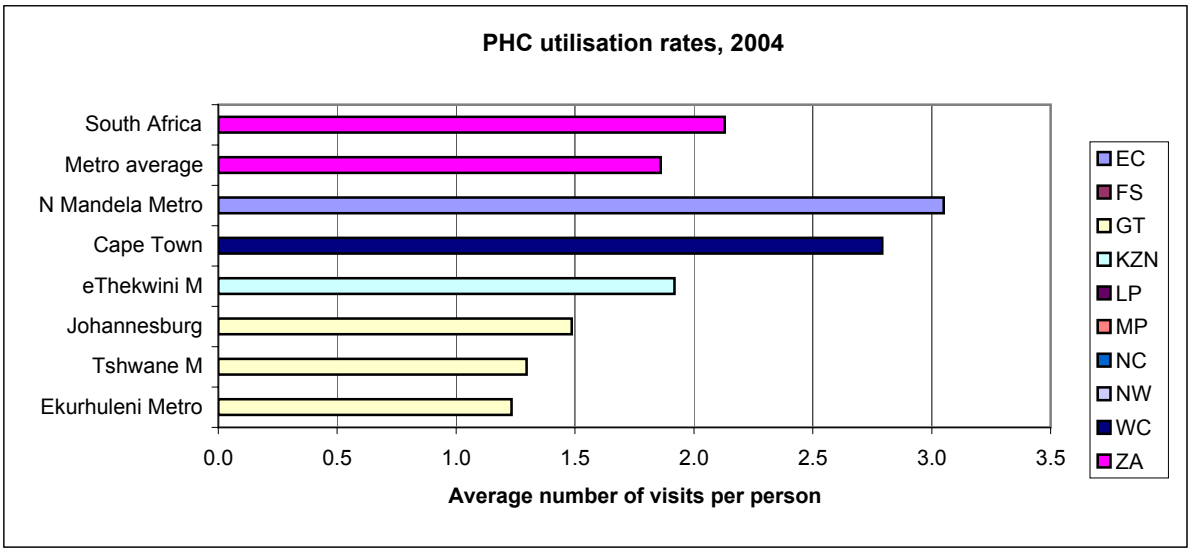
Rural Nodes: If the district with the best utilisation in the country, the Central Karoo (WC), is disregarded then the utilisation rates of the rural districts ranges from 1.5 in Alfred Nzo (EC) to 2.9 in Kgalagadi (NC). It is pleasing to see that facilities in these districts are being used although an increase in resources and staff will probably encourage greater utilisation.

Figure 38: PHC Utilisation Rates in the Rural Nodes



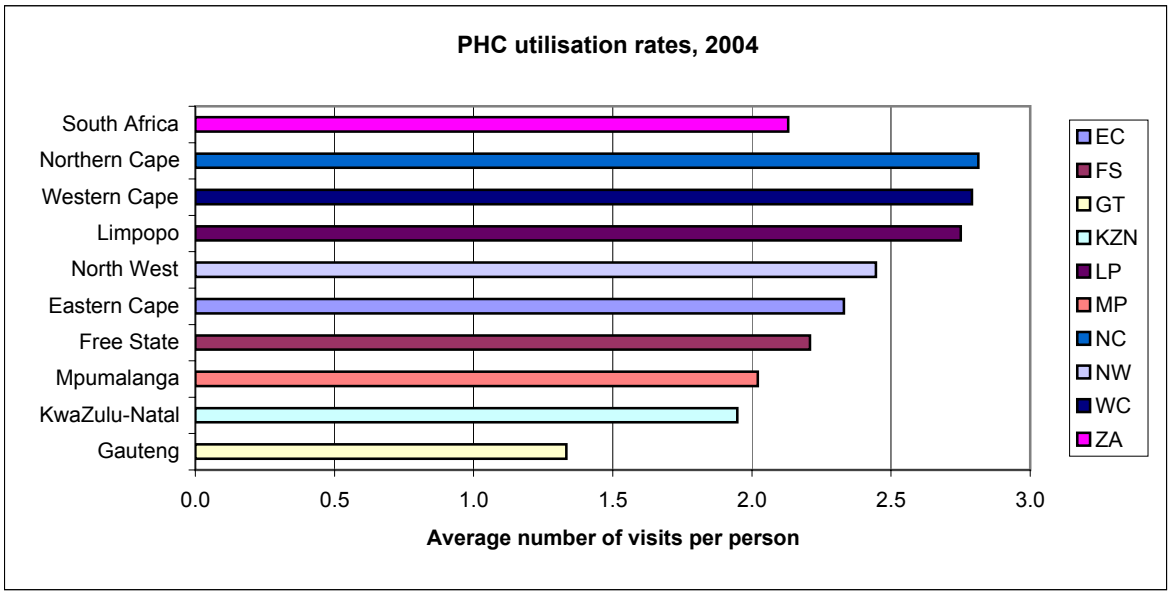
Metro View: In the metro districts, the three metros in Gauteng have the lowest utilisation rate. Nelson Mandela Metro and the Cape Metro have the highest utilisation rates at 3.0 and 2.8 respectively. Clearly there is some problem with utilisation in Gauteng and this requires further investigation.

Figure 39: PHC Utilisation Rates by Metro District



Provincial View: The utilisation rate across the provinces varies from a low of 1.3 in Gauteng to a rate of more than double this at 2.8 in the Northern Cape, Western Cape and Limpopo.

Figure 40: PHC Utilisation Rate compared by Province



4.2 Tuberculosis

The overall objective of the TB control programme is to reduce the amount of TB in South Africa. The means of undertaking this is to attack the source of infection, interrupt transmission and protect the susceptible population. Two of the most important ways of achieving this are to stop people from passing on the TB bacteria to people who are not infected and to cure those who are infected.

These two objectives are reflected in the two indicators chosen to illustrate how well the TB control programme is working in SA. These are:

- Smear Conversion Rate
- TB cure rate

The target for the TB cure rate set by the World Health Organization in 1991 is to cure 85% of newly detected cases of smear positive pulmonary tuberculosis. The corresponding target set for 2004/5 by the NDoH is 65%.[26] The smear conversion rate target set by the NDoH is 70%

One of the consequences of the HIV epidemic has been a large increase in the number of tuberculosis cases as a result of decreased resistance. Few tuberculosis programmes in high HIV prevalence countries, i.e. most countries in sub-Saharan Africa, are achieving adequate treatment outcomes and the WHO target remains elusive.

In South Africa the present situation regarding TB is demonstrated in a discussion about cure rate and smear conversion rate. Generally there is consistency in the performance of districts for both indicators.

26 Department of Health Annual Report 2004/5, page 38.

4.2.1 Smear Conversion Rate

When a person has the TB bacillus in their sputum when they cough, they are said to "smear positive". These are the people who are infectious and can pass the infection through coughing and sneezing into the air.

The smear conversion rate (SCR) measures the proportion of infectious people who no longer have the TB bacillus in their sputum after 2 months. SCR is the percentage of new smear positive TB cases who are smear negative after two months of TB treatment and therefore no longer infectious. This indicator is very important as it measures how effective the initial treatment is in helping to stop the transmission of TB. It is an important indicator of how well the health service is doing and makes information available to health workers much earlier than does the cure rate. For most patients this indicator should be available within 3 months of the diagnosis with TB.

The current national target for smear conversion rate is 70%. In 2004 the average SCR for South Africa was 60.9%.

Map 13: Smear Conversion Rate across South Africa, 2004

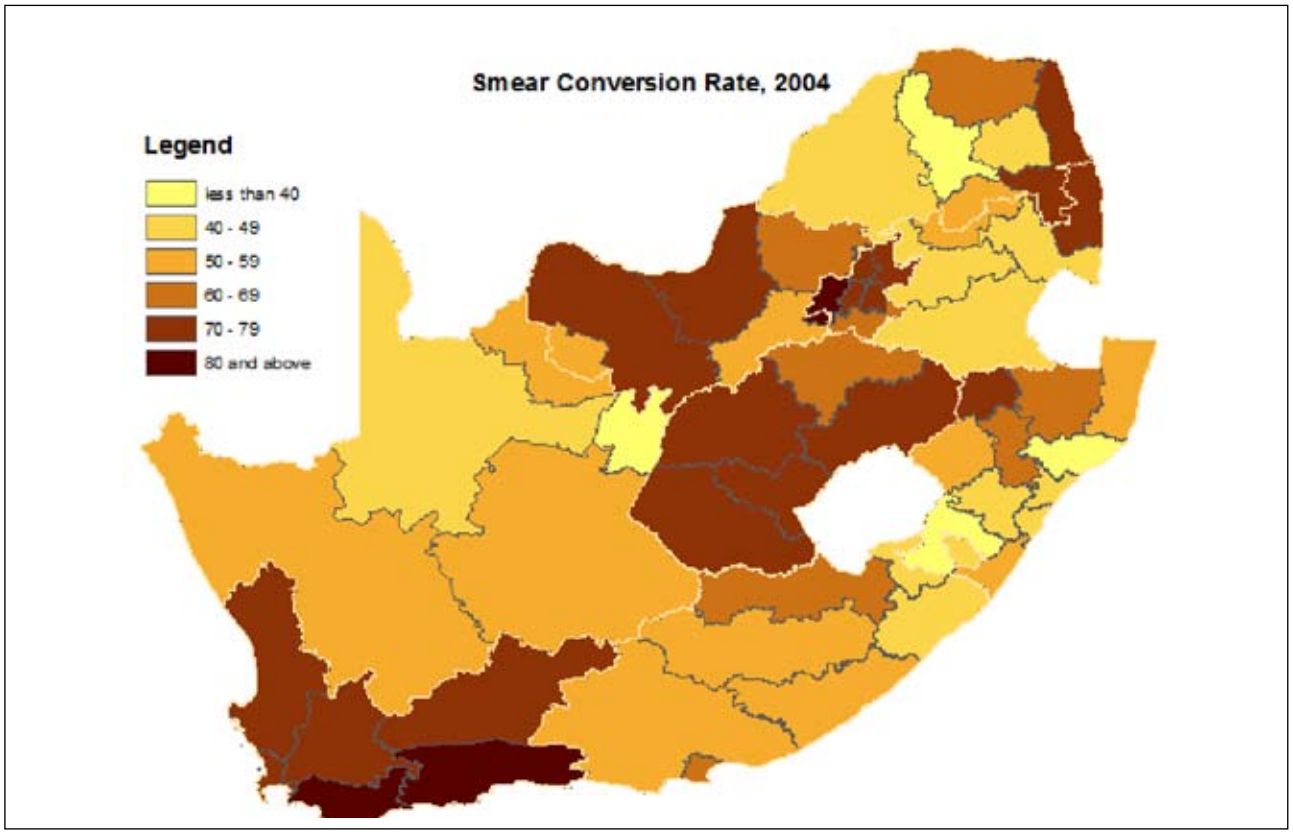
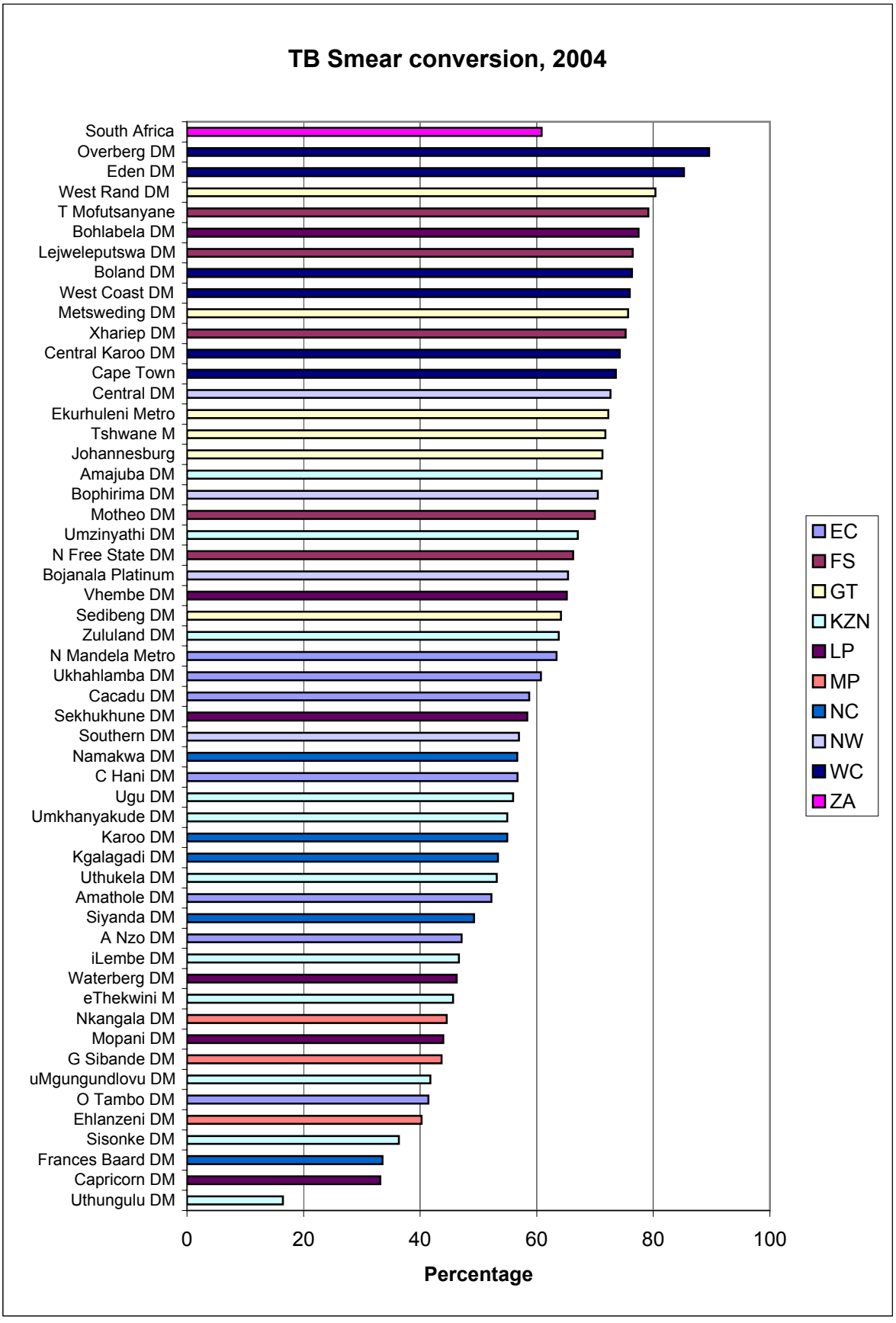


Figure 41: TB Smear Conversion Rate by District



District View:

The preceding map and graph illustrate the variation in smear conversion rate across the country. The graph shows the SCR across the 53 districts in the country from highest to lowest with ranges from 89.6% in the Overberg District (WC) to 16.5% in Uthungulu (KZN). It is encouraging to note that there are 19 districts with SCRs of 70% and above. In contrast it is concerning to note the four districts with SCRs of less than 40%.

Districts in the Western Cape show good SCRs. All 6 districts have SCRs above 73% and two of the districts (Overberg and Eden) have achieved the WHO target of a SCR of 85% or more. The districts in the Free State and Gauteng are around 70% and well above the national average. The West Rand in Gauteng demonstrates a notable SCR of 80.4%. There is also consistency in the districts in the Eastern Cape, North West and Northern Cape provinces though at much lower levels of success.

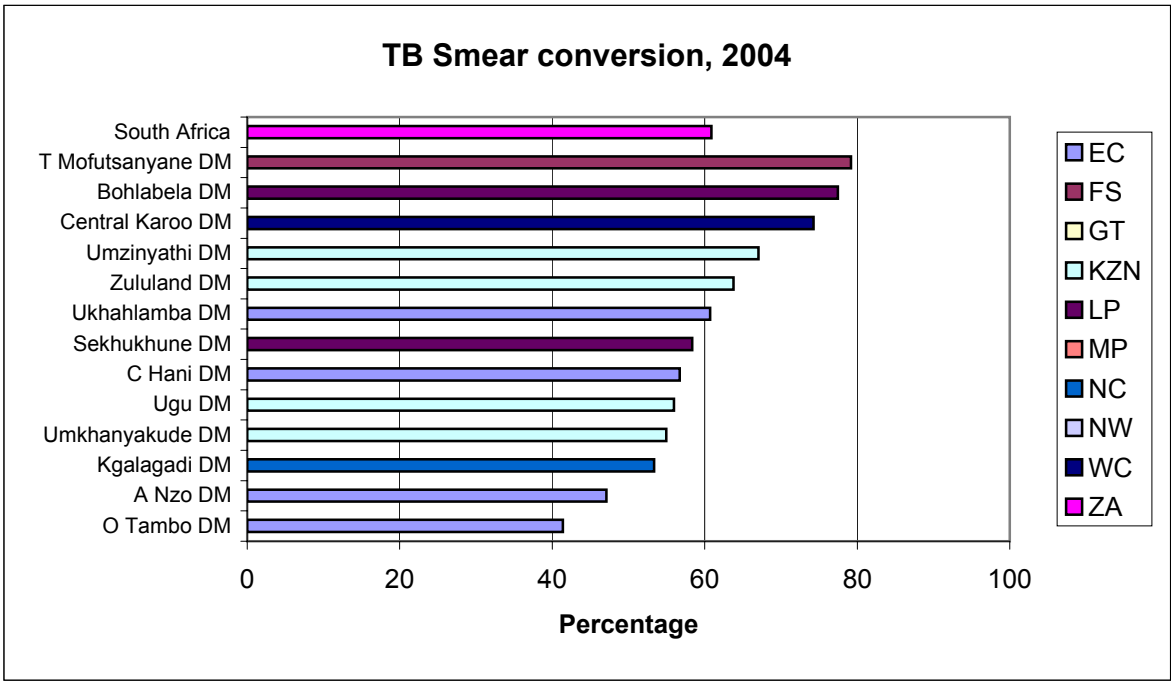
In contrast the three districts in Mpumalanga show consistently very low SCRs with averages between 40% and 45%. In Limpopo and KwaZulu-Natal the variation is considerable. In Limpopo the SCR of 77.5% in Bohlabela is double that of Capricorn which has the lowest SCR average in the province at 33.2%. In KwaZulu-Natal the SCR in Amajuba of 71.2% is more than four times better than Uthungulu (16.5%) and nearly twice that of Sisonke (36.4%).

There are four districts below 40%. Three of these are mentioned above and the fourth is Frances Baard in the Northern Cape. In Frances Baard the delivery of health services is complicated by cross-boundary issues. The revision of provincial boundaries within the next year will hopefully address service delivery issues and so improve indicators such as SCR.

Rural Nodes:

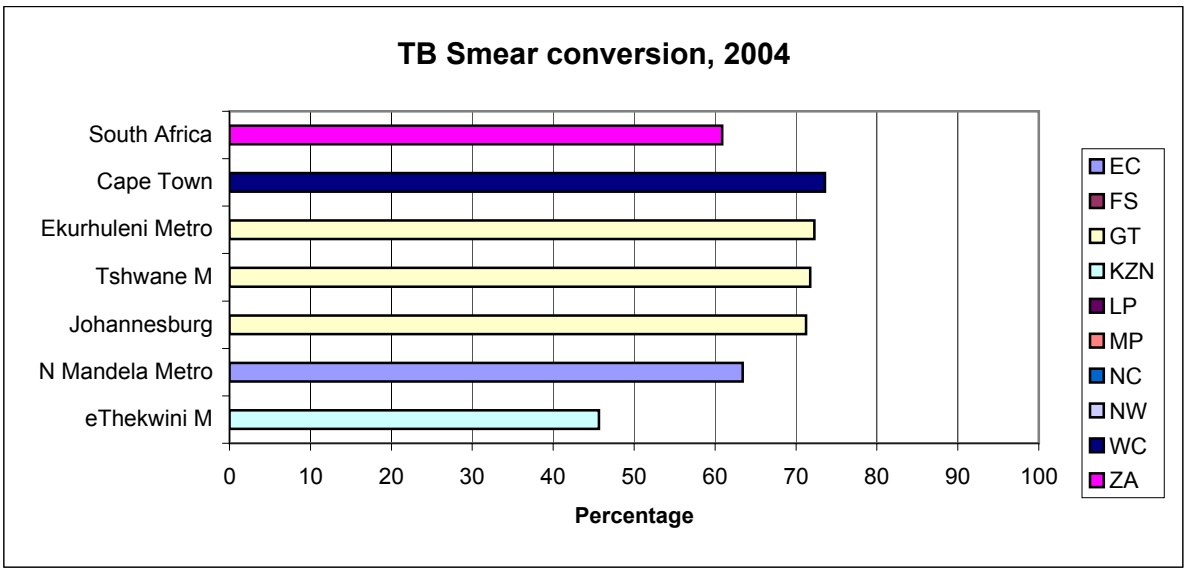
There is a wide range in SCR achieved in these districts. However, it is very encouraging to see how well some of the rural node districts have performed. Three rural nodes have SCRs of over 70% and in the Free State and Limpopo the rates for these nodes are the best in the province. In KwaZulu-Natal only three districts have SCRs of over 60% and two of these are the rural nodes of Umzinyathi and Zululand. These rates are a testimony to the commitment of staff and may suggest that the focus on integrated development in these nodes is bearing fruit. However they are also an indictment on the better resourced districts with more capacity and infrastructure which have low SCRs. In the Eastern Cape all of the districts had low SCR, with OR Tambo and Alfred Nzo having the lowest SCRs in the province.

Figure 42: TB Smear Conversion Rate in the 13 Rural Nodes



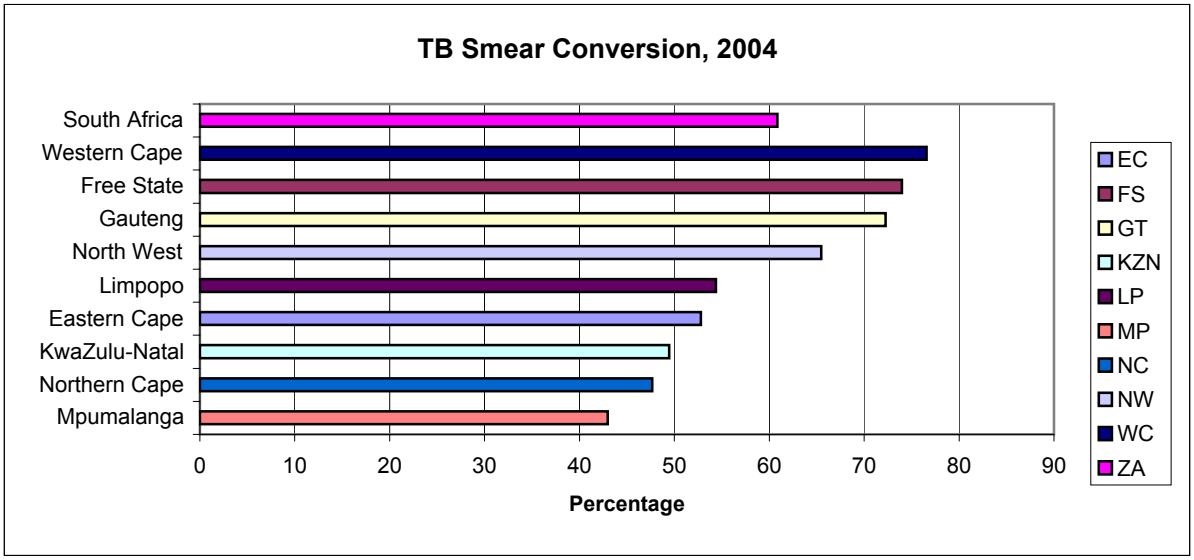
Metro View: Four of the six metros have average SCRs of over 70%. However the Nelson Mandela and eThekwini metros have performed poorly and have SCRs under 60%. Given the resources available within the metropoles and the achievements of some of the rural nodes, these rates could almost certainly be improved.

Figure 43: TB Smear Conversion Rate in the Metro Areas



Provincial View: In the Western Cape, Free State and Gauteng the average SCR for the province is over 70%. Only two districts in these three provinces (one in the Free State and one in Gauteng) have not achieved SCRs of over 70%. Mpumalanga, the Northern Cape and KwaZulu-Natal have performed consistently poorly and have SCRs under 50%. Almost certainly these provinces could do better and improve their performance of the National TB Control Programme.

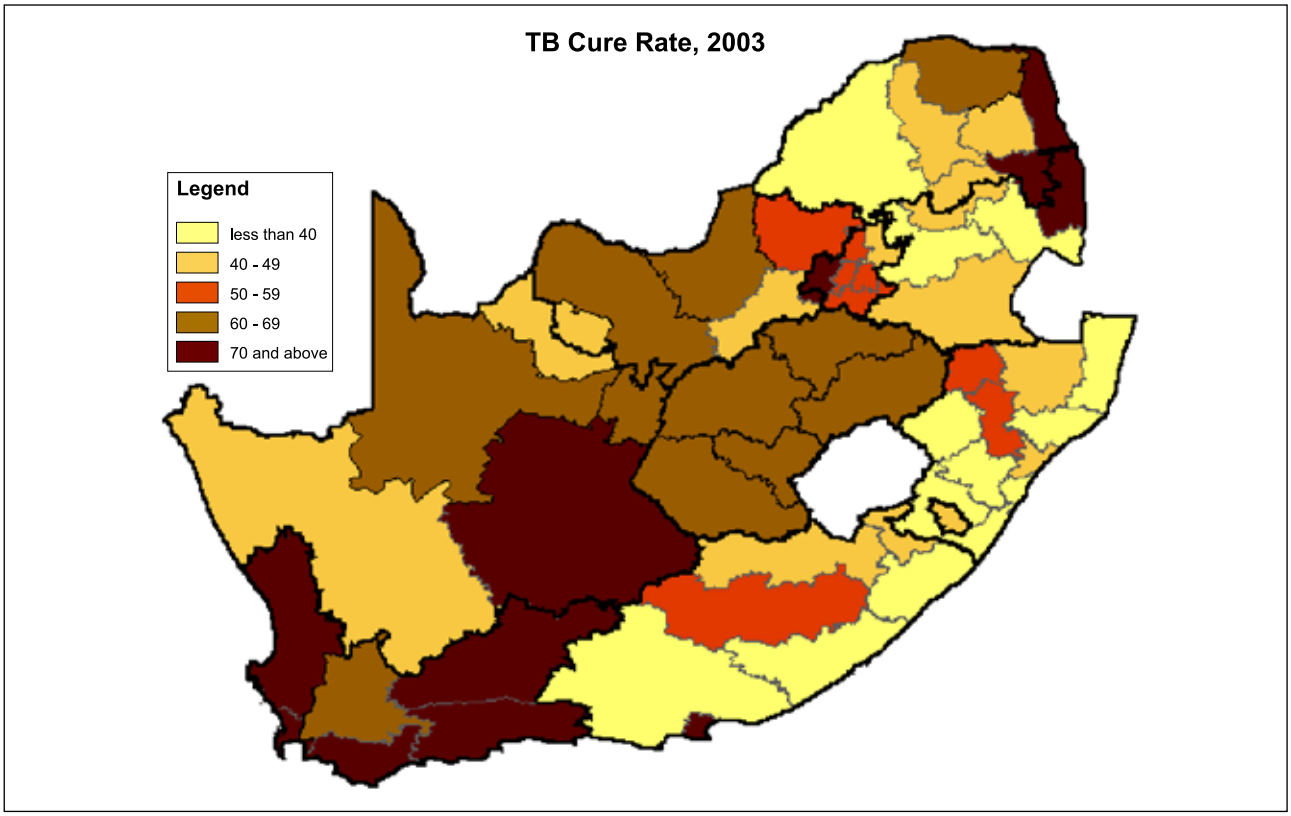
Figure 44: TB Smear Conversion Rate comparing Provinces



4.2.2 *TB Cure Rate*[27]

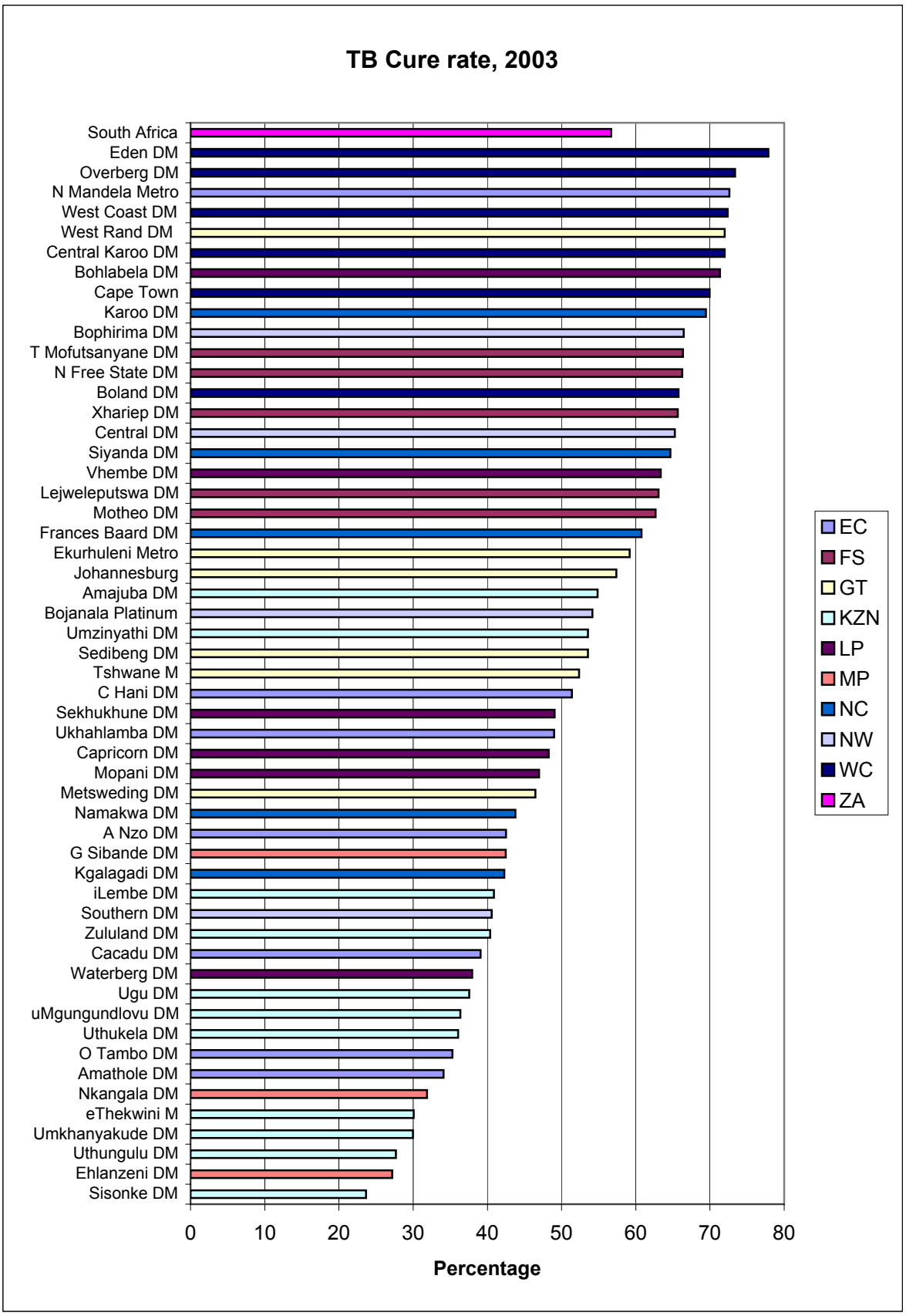
The cure rate is the proportion of new smear positive TB cases, who are shown to be smear negative at the end of six months of TB treatment. In other words, it measures what percentage of patients are cured who were diagnosed as being infectious with TB through having the TB bacillus in their sputum. The national target for cure rate is 65%[28] (with a global target set by WHO for countries with high levels of HIV at 80%). The average cure rate for SA in 2003 was 56.7%. Although this falls short of the national target, it is an improvement on the cure rate of 54.1% for 2002 and 53.7% for 2001.

Map 14: Map Illustrating TB Cure Rate by District, 2003



27 The latest available data for the TB cure rate from the South African National TB Register is for the year 2003.
28 Department of Health Annual Report 2004/5, page 38.

Figure 45: TB Cure Rate by Health District, 2003



District View:

In the map and graph the variation in the cure rates across the country can be clearly seen. Just over half of the districts, 28 out of 53 (53%) have cure rates over 50%. There are five districts with a cure rate of 30% or less, four of which are in KwaZulu-Natal.

It is encouraging to note that eight districts have cure rates of over 70%, with Eden having the highest cure rate at 77.9%. Five of the districts with cure rates over 70% are in the Western Cape. The other three districts are in the Northern Cape, Gauteng and Limpopo and are an example of what can be achieved by other districts in these provinces. As can be seen from the colour coding in the map, the performance across the districts in the different provinces is generally consistent.

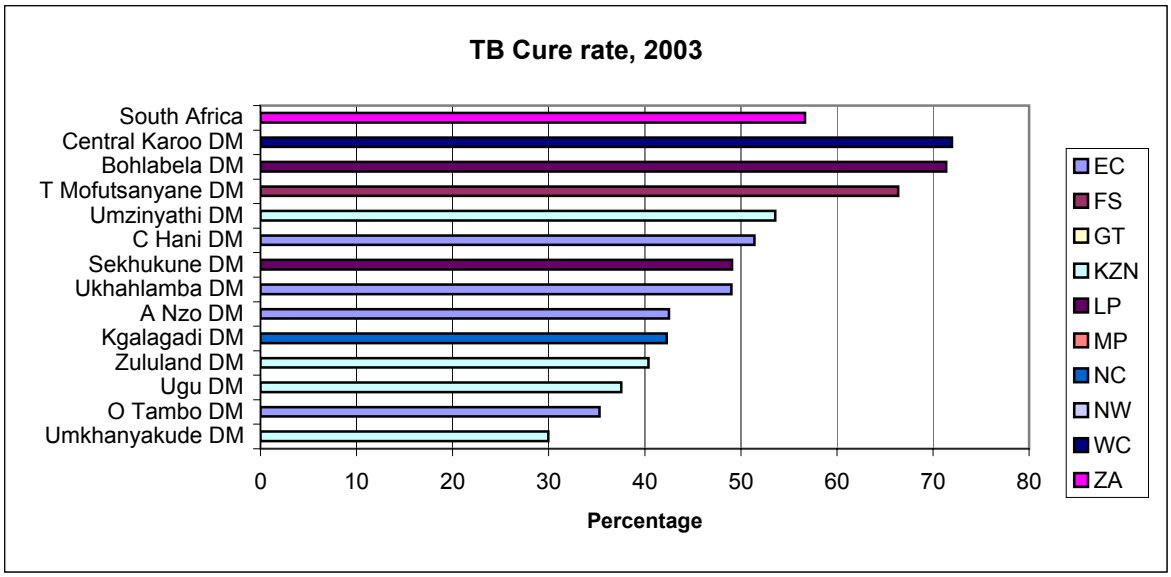
Mpumalanga, KwaZulu-Natal and the Eastern Cape demonstrate consistently low cure rates across their districts. This is of huge concern given that TB was declared a priority health issue in 1998 by the national department. The cure rate in Mpumalanga's three districts varies from a low of 27.2% to a high of 42.5%. In KwaZulu-Natal four of the districts have cure rates of 30% or less and only two districts have cure rates of over 50%. In the Eastern Cape three districts have cure rates of less than 40% and only one district has a cure rate of over 50%. Six of the ten worst performing districts are in KwaZulu-Natal with Sisonke district having the lowest cure rate at 23.7%.

It is concerning to note that in the Northern Cape all districts save one have cure rates which are higher than the Smear Conversion Rates. This suggests that there are problems with the recording and reporting procedures. This same problem is applicable to 2 districts in Limpopo.

Rural Nodes:

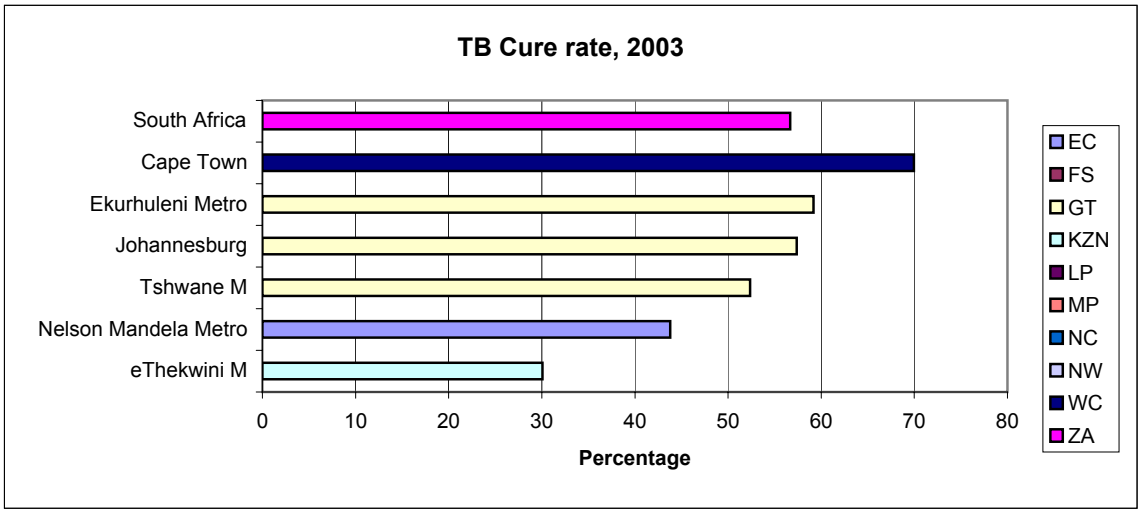
From the graph illustrating the cure rates in the rural nodes it can be seen that the cure rate varies from 30% in Umkhanyakude (KZN) to 72% in the Central Karoo (WC). Bohlabela (cross-boundary LP/MP) also has a cure rate of over 70%. Central Karoo and Bohlabela are in the top 10 districts in South Africa with Thabo Mofutsanyane (FS) in eleventh place. These districts have demonstrated that general poverty and low socio-economic status does not prevent good quality health service delivery around TB. They have set standards not only for other rural health districts but for all districts in SA. Five of the 13 rural nodes have cure rates of more than 50%. Three of the four rural nodes with the lowest cure rates are in KwaZulu-Natal.

Figure 46: TB Cure Rates in the Rural Nodes, 2003



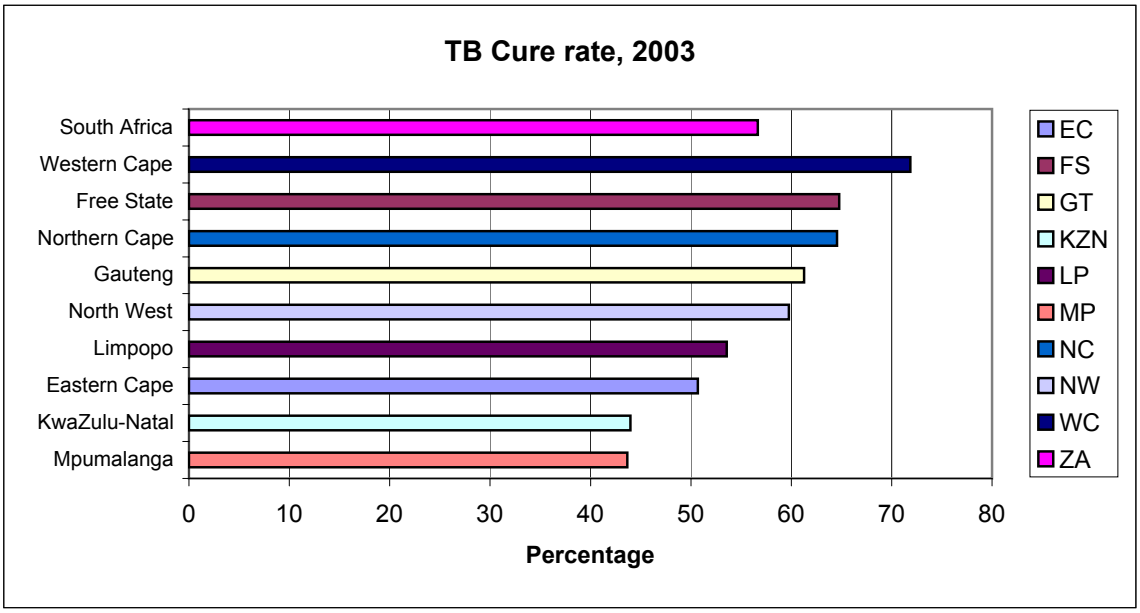
Metro View: As can be seen in the graph the average cure rates for the metros show a similar pattern to that for SCRs in the metros. The Cape Metropole has the highest cure rate at 70% and eThekwini the lowest at 30.1%. Both eThekwini and the Nelson Mandela Metropole have cure rates of less than 50%. By contrast more than half of the rural nodes have cure rates higher than these two metropoles. This should serve as an incentive to encourage the health managers and workers in these metropoles, who have far better infrastructure and more resources at their disposal, to achieve better results. These low rates demonstrate a lack of commitment to the TB control programme in populations where this should be a priority.

Figure 47: TB Cure Rate in the Metro Districts, 2003



Provincial View: The graph illustrating the average cure rates for the provinces shows that the Western Cape has an average cure rate of over 70% and both Mpumalanga and KwaZulu-Natal have average cure rates of less than 50%. Given that the prevalence of HIV-infection in Mpumalanga and KwaZulu-Natal is the highest in the country, these provinces should be prioritizing active case finding and treatment of infectious cases of TB in a bid to stem the dual TB-HIV epidemic. In contrast, the Free State which has the third highest HIV prevalence rate in the country, has the second highest cure rate of 64.8%.

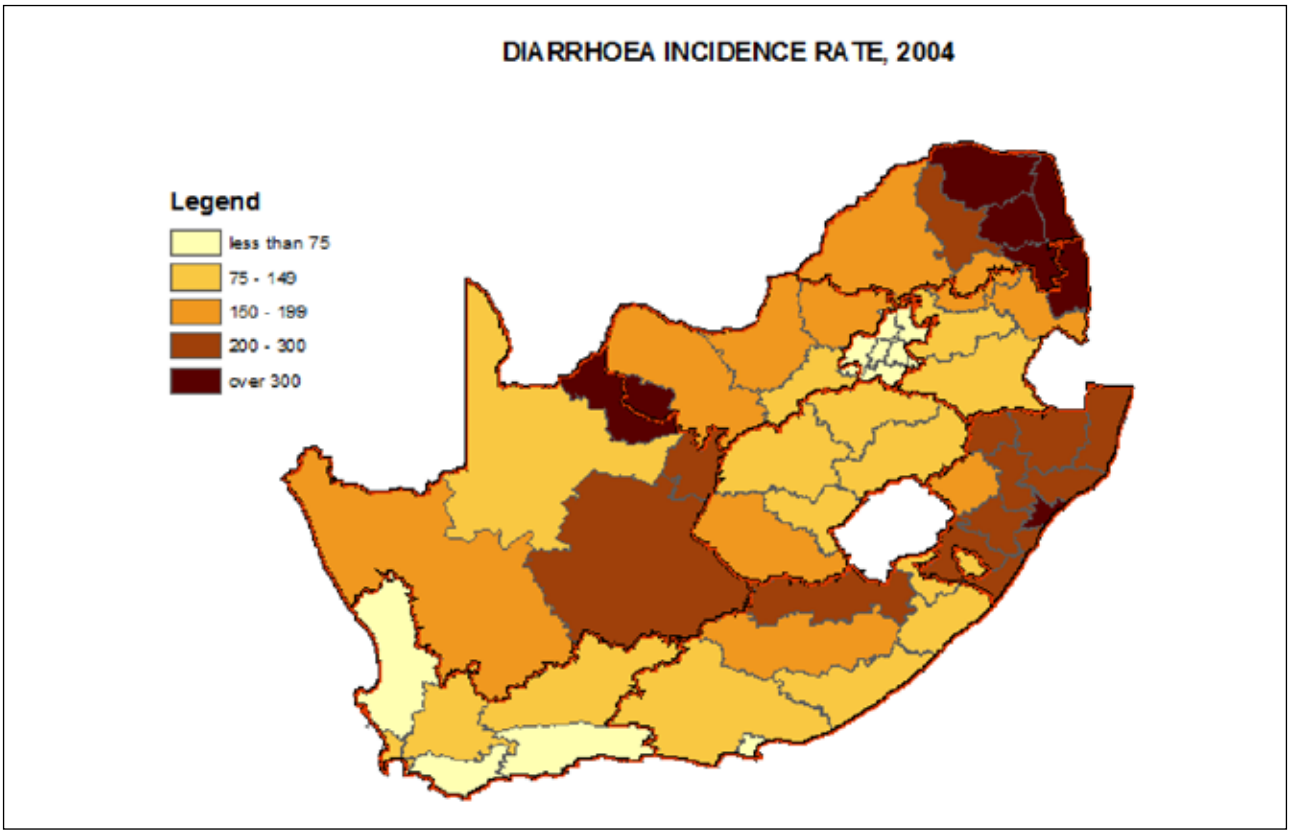
Figure 48: TB Cure Rate comparing the Provinces, 2003



4.3 Diarrhoea Incidence in Children Under 5 Years

Diarrhoeal disease is one of the major causes of death of children in developing countries. Consequently, measuring morbidity due to diarrhoeal disease in children under 5 remains an important indicator. Diarrhoea incidence under 5 measures the number of new cases of diarrhoea in children under 5 for every 1000 children under 5 years in the catchment population. Although diarrhoea is formally defined as 3 or more watery stools in 24 hours, in practice any complaint by the mother that the child is suffering from diarrhoea is used. This lack of standardization in the definition may make the indicator less reliable.

Map 15: Incidence of Diarrhoea in Children Under 5 by District in South Africa



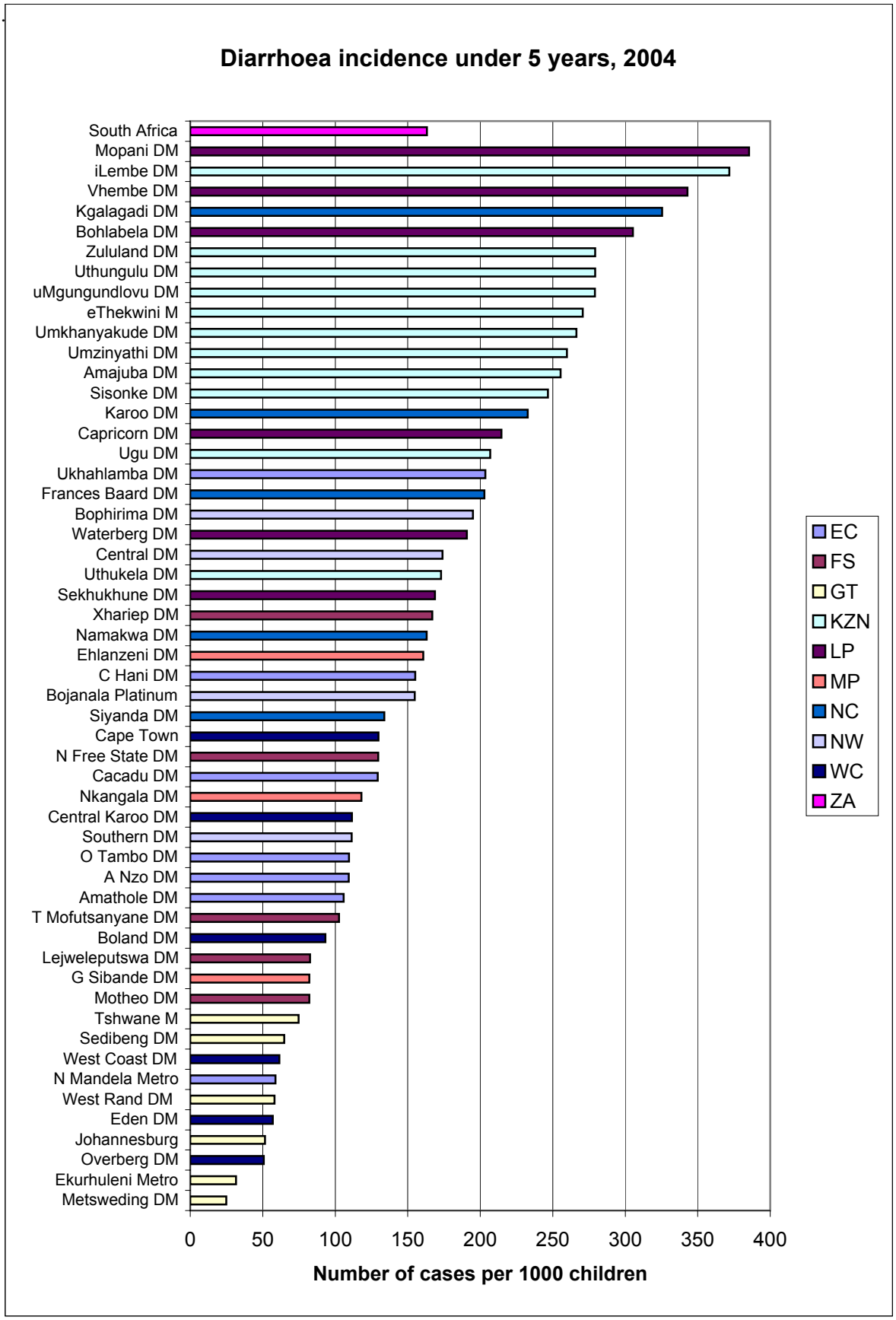
District View:

The variation in the incidence of diarrhoea is illustrated in the graph and map, from Mopani (LP) where the rate was 386 per 1000 to Metsweding (GT) where the rate was 25 per 1000. The average for the country was 164 per 1000. All of the districts with the 10 highest incidences are in rural areas (KwaZulu-Natal 6 districts; Limpopo 3 districts; NC/NW has 1).

The ten districts with the lowest diarrhoeal disease incidence, include all 6 districts of Gauteng as well as 3 from the Western Cape and 1 (Nelson Mandela metro) from the Eastern Cape.

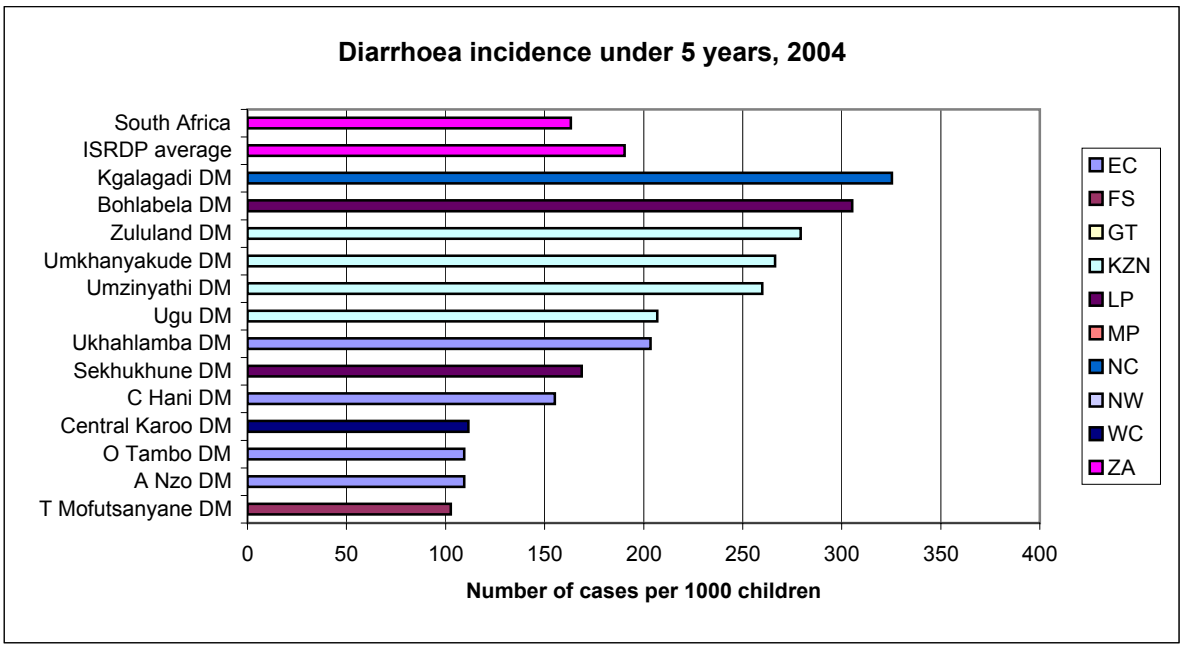
These differences point to the importance of access to a safe, good quality water supply in decreasing the diarrhoeal disease rates.

Figure 49: Diarrhoea Incidence in the Districts



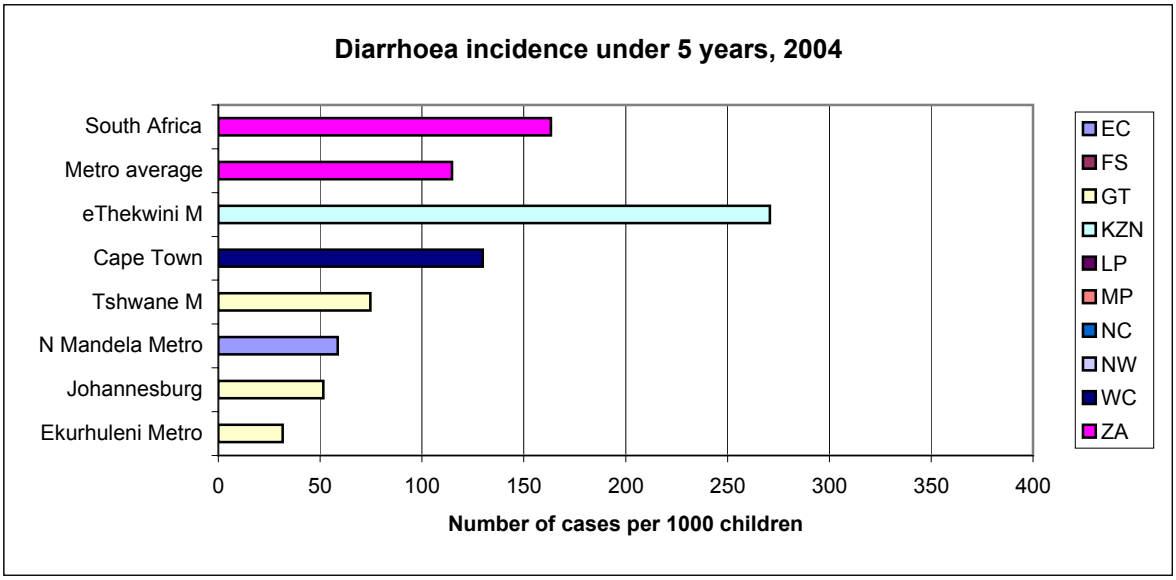
Rural Nodes: The incidence of diarrhoea in the rural nodes varies from 103 in T Mofutsanyane (FS) to 326 in the Kgalagadi (NC/NW).

Figure 50: Diarrhoea Incidence in the Rural Nodes



Metro View: As illustrated in the graph, five of the metros have diarrhoeal incidence rates of less than 130. eThekweni metro is exceptional in that it has a rate of 270, double that of the metro with the second highest rate.

Figure 51: Diarrhoea Incidence in the Metro Districts



Provincial View: The variation in incidence rates across the provinces is considerable, from Limpopo and KwaZulu-Natal which have rates of 275 and 264 respectively, to Gauteng which has an incidence rate of 48.

Figure 52: Diarrhoea Incidence by Province