

1 Finance

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Financing is essential for universal health coverage and the provision of district health services (DHS) and primary health care (PHC). Tracking expenditure on PHC is one measure to assess the importance governments place on PHC services. The South African Government has pledged its support to a strong PHC system and sees the re-engineering of PHC as one of the core building blocks of the National Health Insurance (NHI) reforms. The White Paper states that “PHC will be the heartbeat of the NHI. PHC starts in the communities and is the first level of contact with the health system by individuals, the family and community”.^a Analysing trends in the distribution of financial resources can give an indication of the adequacy of allocations and priorities of the health sector, and the extent to which these resources are equitably distributed and efficiently used. This chapter focuses mainly on three key indicators: (1) provincial and local government (LG) DHS expenditure per capita (uninsured population); (2) provincial and LG PHC expenditure per capita (uninsured population); and (3) provincial and LG PHC expenditure per PHC headcount. These three indicators give a sense of the overall allocation patterns and the individual utilisation and expenditure for those accessing the system.

The methodology used to calculate these indicators is described in detail in the introduction and overview section of this publication. In summary, provincial health expenditure up to 2017/18 was extracted from the National Treasury’s Basic Accounting System (BAS) database. Expenditure allocated to specific health facilities under the ‘Responsibility level’ hierarchy was coded to the latest District Health Information Software (DHIS) facility information in order to identify the district where the expenditure was incurred. All other expenditure that could not be clearly allocated to a specific district was allocated to each district in proportion to the population share of the areas involved. For example, provincial-level expenditure was allocated to each of the districts in the province. Unless otherwise stated, growth rates and historical expenditure in this chapter have been adjusted for inflation and are presented in real 2017/18 prices. Factors for inflation adjustments based on Statistics South Africa’s (Stats SA) Consumer Price Index (CPIX) were used to convert expenditure for all years to real 2017/18 prices. This means that increases in expenditure over time reflect greater availability of resources rather than merely increases to cover the rising cost of health care due to inflation.^b

Local government expenditure on health provided by the National Treasury was added to the expenditure retrieved from the BAS database. The population estimates used in the calculation of per capita (uninsured) indicators are from DHIS, which uses Stats SA population projections published in 2016 for 2002 – 2021. It is worth noting that the population estimates by province differ somewhat from Stats SA’s 2018 mid-year population estimates. It is possible that this has led to over- or understating expenditure per capita (uninsured) in some provinces and districts.

There is overwhelming international evidence that increased health expenditure is associated with better health outcomes^{c,d} – and PHC plays a pivotal role in improving the health of communities.^e Various benchmarks and targets for health expenditure have been developed but these are generally not specific for DHS or PHC. The most cited benchmark is that of the High Level Task Force on Innovative International Financing for Health Systems (HLTF), referred to in the 2010 World Health Report,^f which found that low-income countries need to spend \$44 per capita expressed in 2005 prices, to provide a basic package of health services, including hospital services. There are several international publications, which track health expenditure across countries, but again, these generally focus on overall expenditure and do not provide a breakdown by level of care. In Africa, overall government health expenditure more than doubled between 2000 and 2014, but remains very unequally distributed.^g The World Health Organization captures expenditure data for all its member states in the Global Health Expenditure Database (GHED).^h

In South Africa, the National Treasury publishes consolidated Estimates of Provincial Revenue and Expenditure (EPRE) annually. According to the 2018/19 EPRE,ⁱ expenditure on district health services increased from R63.8 billion in 2014/15 to R86.2 billion in 2017/18 (nominal prices). According to the calculations of the authors of this chapter, this equates to R1 411 per capita (uninsured) in 2014/15 and R1 815 in 2017/18. PHC expenditure (National Treasury’s estimate includes District

a Government Gazette. White Paper on National Health Insurance. Pretoria: National Department of Health. 2015.

b Massyn N, Padarath A, Peer N, Day C, editors. District Health Barometer 2016/17. Durban: Health Systems Trust; 2017.

c Jowett M, Brunal MP, Flores G, Cylus J. Spending targets for health: No magic number. Geneva: World Health Organization. 2016.

d Makuta I, O’Hare B. Quality of governance, public spending on health and health status in sub-Saharan Africa: A panel data regression analysis. BMC public health. 2015; 15(1):932.

e Starfield, B, Shi, L, and Macinko, J. Contribution of primary care to health systems and health. Milbank Q. 2005; 83: 457–502.

f World Health Organization. World health report: Health systems financing: The path to universal coverage. Geneva: World Health Organization; 2010.

g World Health Organization. Public financing for health in Africa: From Abuja to the SDGs. 2016.

h World Health Organization [Internet]. Global health expenditure database. World Health Organization Available at: <http://apps.who.int/nha/database/Select/Indicators/en>, [Accessed 5 September 2018].

i National Treasury [Internet]. Estimates of Provincial Revenue and Expenditure 2018/19. Available at: <http://www.treasury.gov.za/documents/provincial%20budget/2018/3.%20Estimates%20of%20Prov%20Rev%20and%20Exp/Default.aspx>. [Accessed 15 October 2018].

Management) increased over the same period from R44.0 billion (R951 per capita uninsured) to R58.0 billion (R1 192 per capita uninsured). National Treasury also regularly publishes a Provincial Budget and Expenditure Review (PBER), which includes a chapter focusing on budgets and expenditure of provincial departments of health. The most recent publication is from 2015^j and the 2017 PBER is expected to be published shortly.

Overview of district health services expenditure

District health services budgets are divided into nine sub-programmes, which are described in Box 1. In addition to these, LGs spend money from their own revenue on municipally-owned PHC facilities.

Box 1: District health services: sub-programme objectives

District management: Planning and administration of services, managing personnel- and financial administration and the co-ordinating and management of the Day Hospital Organisation and Community Health Services rendered by Local Authorities and Non-Governmental Organisations within the Metro and determining working methods and procedures and exercising district control.

Community health clinics: Rendering a nurse-driven primary health care service at clinic level including visiting points, mobile- and local authority clinics.

Community health centres: Rendering a primary health service with full-time medical officers in respect of mother and child, health promotion, geriatrics, occupational therapy, physiotherapy, psychiatry, speech therapy, communicable diseases, mental health, etc.

Community based services: Rendering a community-based health service at non-health facilities in respect of home-based care, abuse victims, mental and chronic care, school health, etc.

Other community services: Rendering environmental and part-time district surgeon services, etc.

HIV/AIDS: Rendering a primary health care service in respect of HIV/AIDS campaigns and Special Projects.

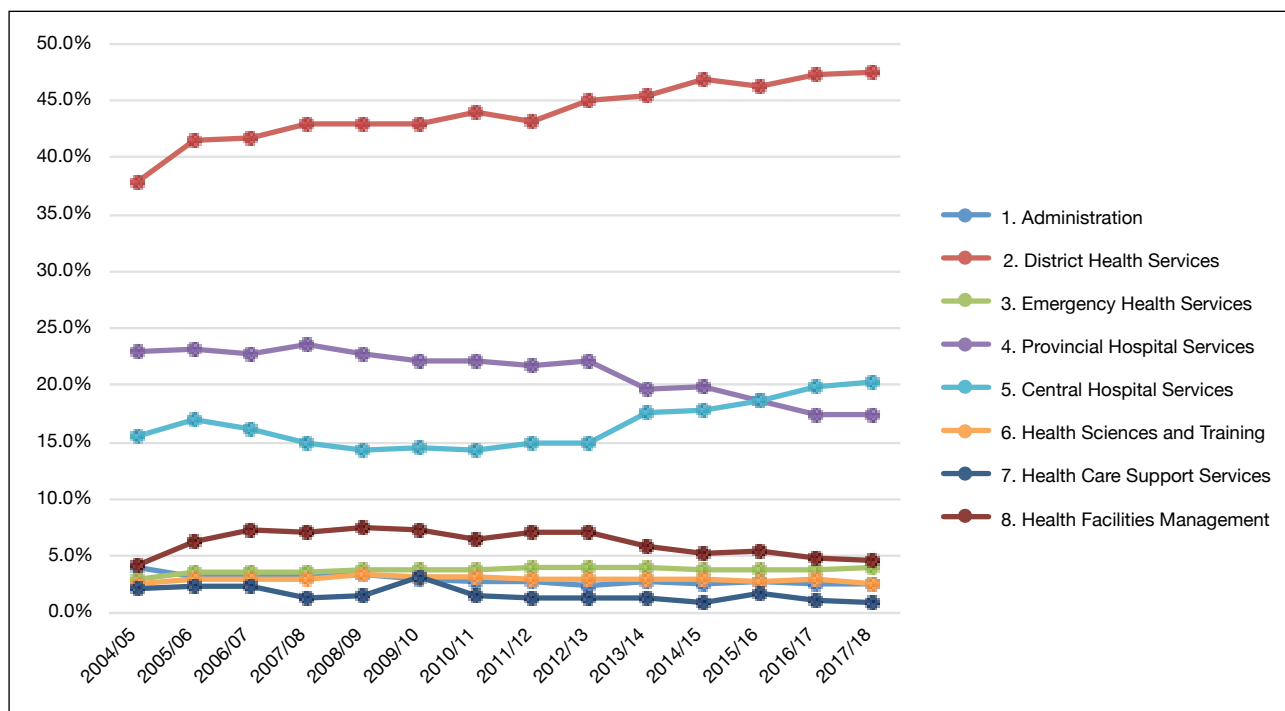
Nutrition: Rendering a nutrition service aimed at specific target groups and combines direct and indirect nutrition interventions to address malnutrition.

Coroner services: Rendering forensic and medico-legal services in order to establish the circumstances and causes surrounding unnatural death.

District hospitals: Rendering of a hospital service at district level.

Figure 1 shows that DHS (including LG health expenditure) makes up a large percentage of health expenditure and has grown from 37.9% in 2004/05 to 47.5% in 2017/18. There has been a marked reduction in relative expenditure on Provincial Hospital Services, while Central Hospital Services has increased since 2010/11. The Health Facilities Management proportion has decreased, since 2012/13, largely due to reductions to infrastructure budgets as a result of budget constraints.

Figure 1: Proportional health expenditure by programme, 2004/05 – 2017/18

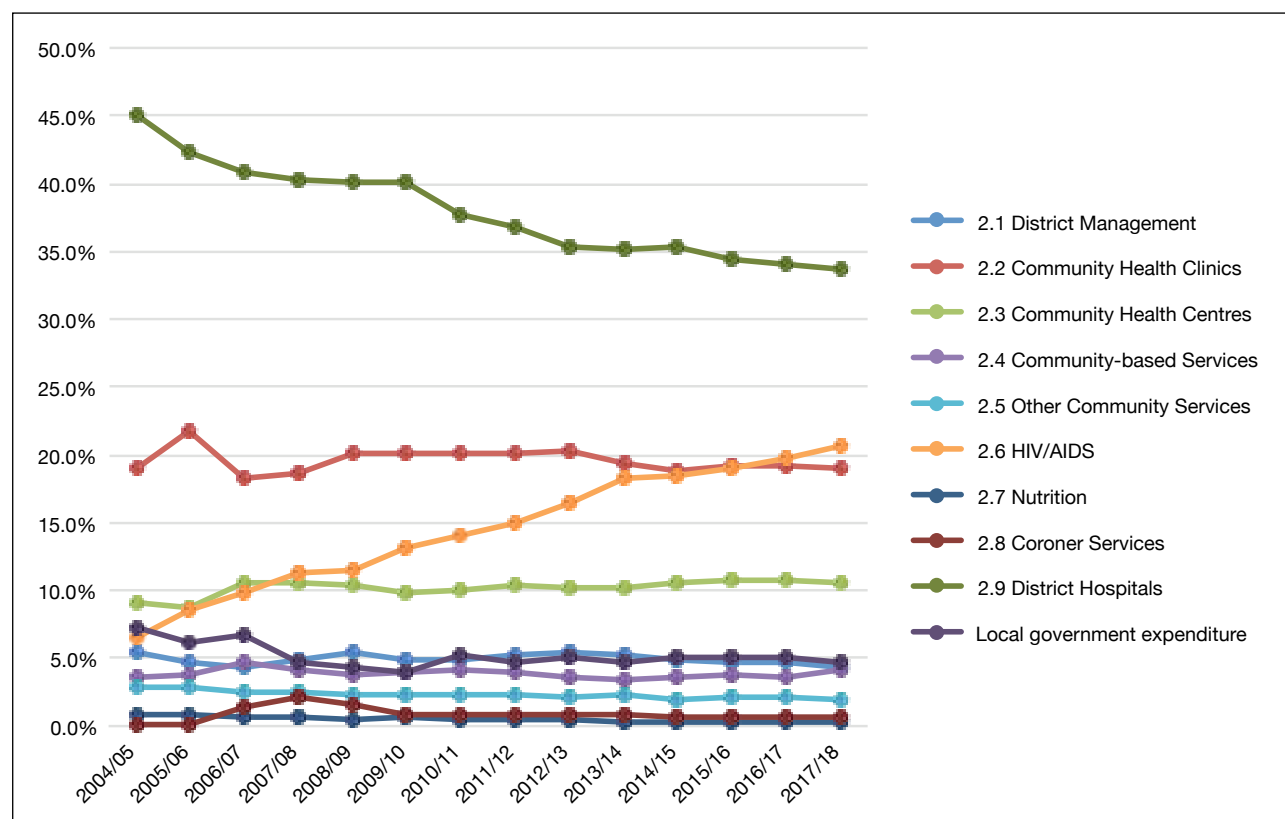


Source: National Treasury.

^j National Treasury. Provincial Budget and Expenditure Review, 2010/11–2016/17. Pretoria: National Treasury. 2015.

Focusing on the DHS programme specifically (Figure 2), there are two clear trends in the composition of its expenditure. Firstly, expenditure on Human immunodeficiency virus/Acquired immune deficiency syndrome (HIV/AIDS) programmes have increased dramatically as a percentage of total DHS expenditure, from 7.3% in 2004/05 to 20.7% in 2017/18. This is largely attributed to the growth of the antiretroviral treatment (ART) programme for which eligibility has been progressively expanded. South Africa now has the largest ART programme in the world with just over 4.2 million patients receiving treatment (as at July 2018).^k The second trend is the declining proportion spent on district hospitals. However, while expenditure on district hospitals has decreased as a proportion of total DHS expenditure, it has increased in real terms from R14.9 billion in 2004/05 to R29.6 billion in 2017/18 (both amounts stated in 2017/18 prices). This relative change is evidence of the move towards a more PHC-centric approach, while still funding district hospitals responsibly.

Figure 2: Provincial and local government district health services expenditure by sub-programme, 2004/05 – 2017/18



Source: National Treasury.

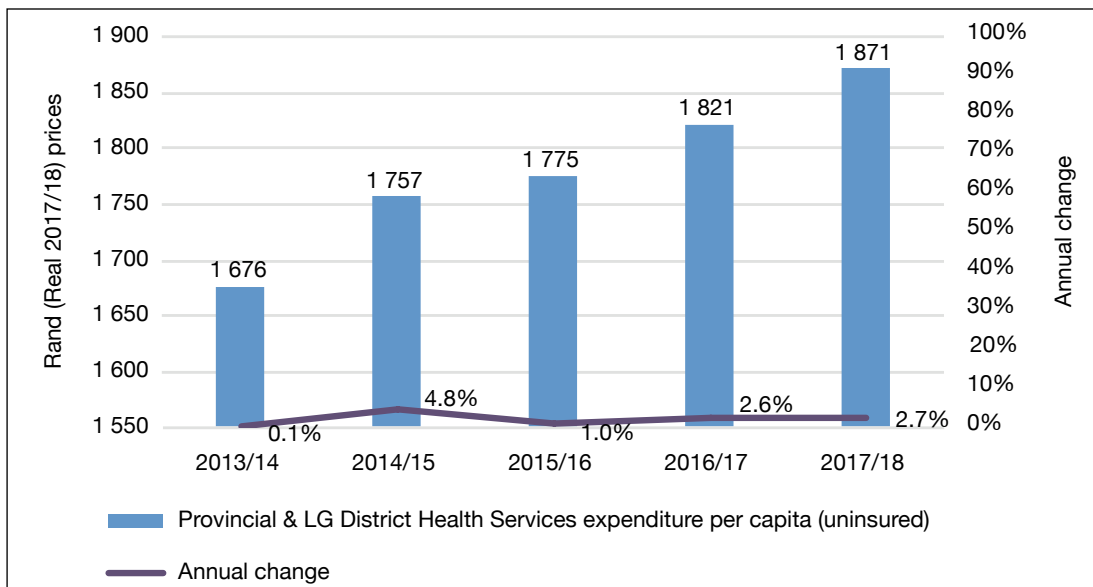
1.1 Provincial and local government district health services expenditure per capita (uninsured population)

Provincial and LG expenditure per capita (uninsured) on DHS is the total amount spent per uninsured person (i.e. not a medical scheme member or beneficiary). Overall, approximately 16% of South Africans are covered by medical schemes, although this percentage varies between provinces and districts. The numerator for this indicator is the sum of provincial and LG expenditure under the DHS programme (with the exception of the Coroner Services sub-programme, which is excluded). The denominator is the estimated uninsured population. The methodology used to develop these estimates was described in the 2016/17 *DHB*. Medical scheme coverage was updated using modelled estimates provided by Daniel Shapiro of Insight Actuaries and Consultants. The uninsured population was calculated using these coverage estimates and the population time series estimates in DHIS for all years. Overall, the coverage level has remained remarkably static at around 16% ± 1%. Therefore, for the purpose of this analysis, it was considered adequate to apply a single-year estimate of medical scheme coverage to the time series population, since the variation in coverage between districts is more relevant than changes in coverage over time.^b

District health services expenditure per capita (uninsured) increased by 2.7% in real 2017/18 prices from R1 821 in 2016/17 to R1 871 in 2017/18 (Figure 3). There has been a marginal but steady increase in this indicator over the past 5 years.

^k National Treasury. Adjusted Estimates of National Expenditure 2018. National Treasury; 2018.

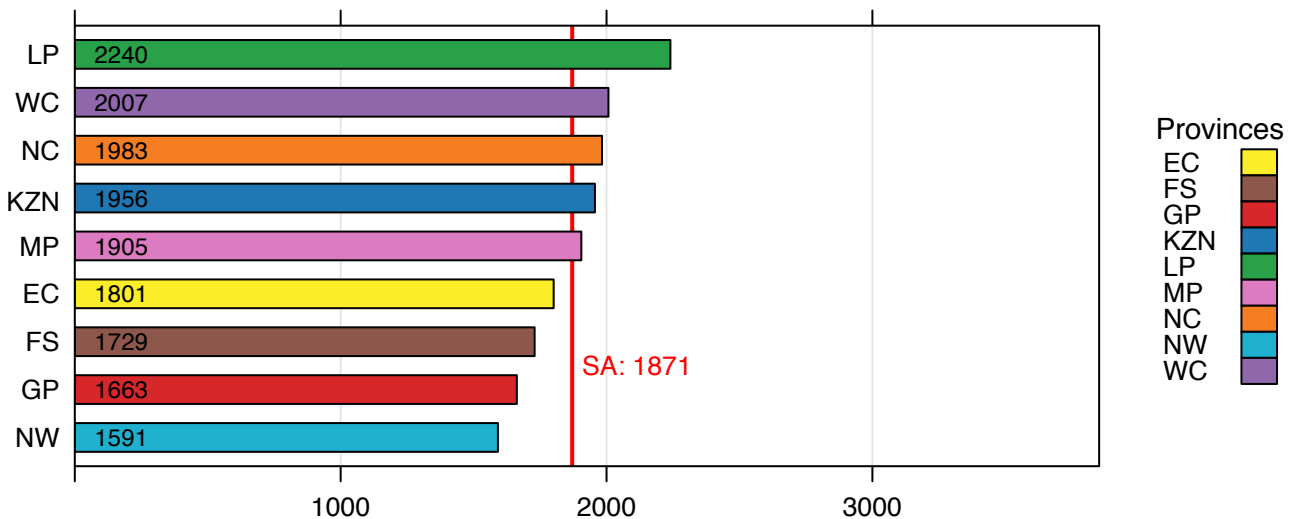
Figure 3: Provincial and local government district health services expenditure per capita (uninsured), 2013/14 – 2017/18



Source: National Treasury.

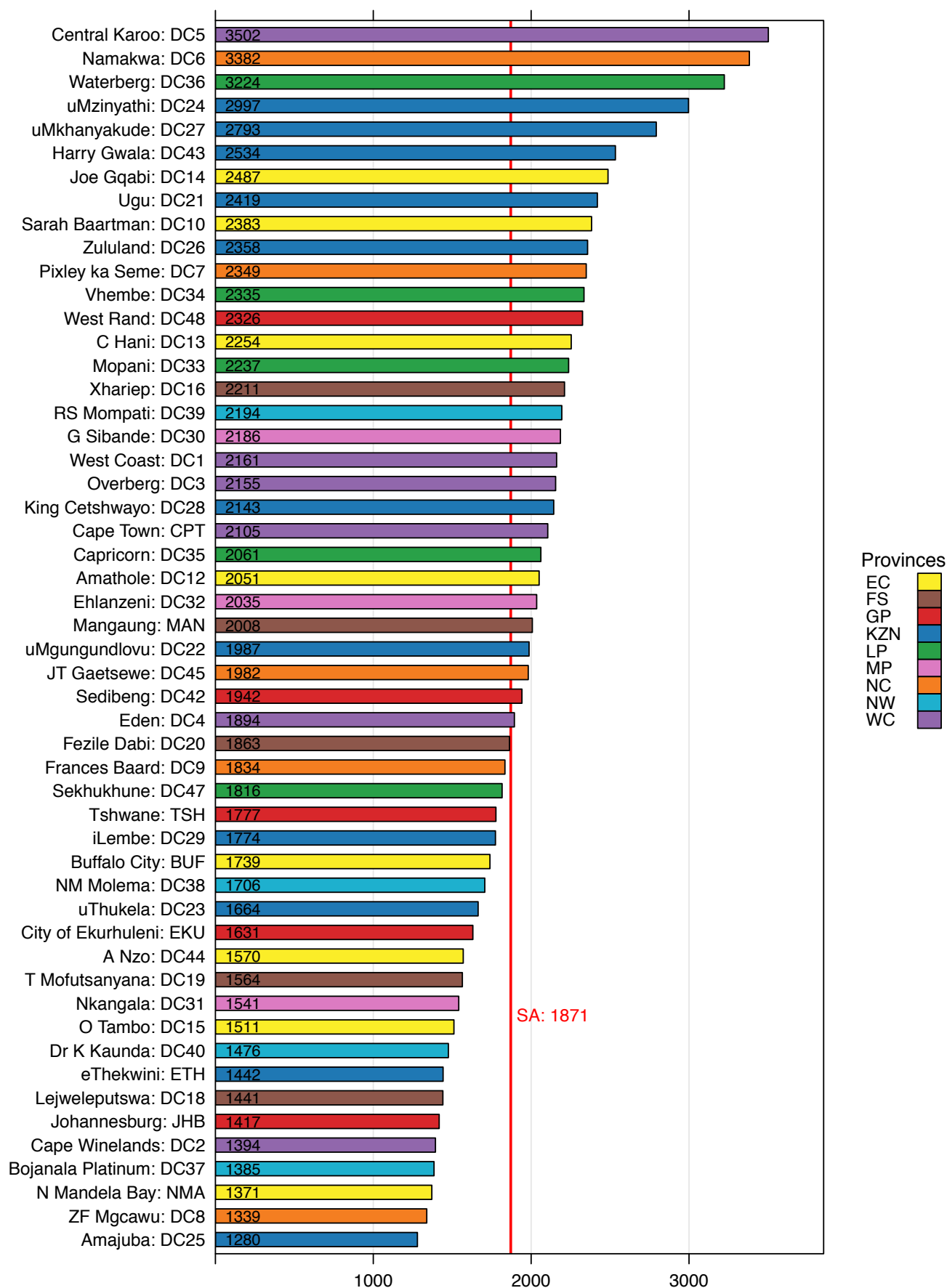
Figures 4 and 5 show a considerable spread in DHS expenditure per capita in 2017/18. By province it ranged from a low of R1 591 in North West (NW) to R2 240 in Limpopo (LP) and by district from R1 280 in Amajuba (KwaZulu-Natal – KZN) to R3 502 in Central Karoo (Western Cape – WC). Central Karoo had the highest expenditure per capita, also in 2016/17, while Amajuba was 3rd lowest in 2016/17. Although some variation can be motivated by differences in disease burden, one would hope for a smaller variation across the districts to ensure equity in terms of resource allocation according to population.

Figure 4: Provincial and local government district health services expenditure per capita (uninsured) by province, 2017/18 (Rand – real prices)



Source: BAS, DHIS, Stats SA.

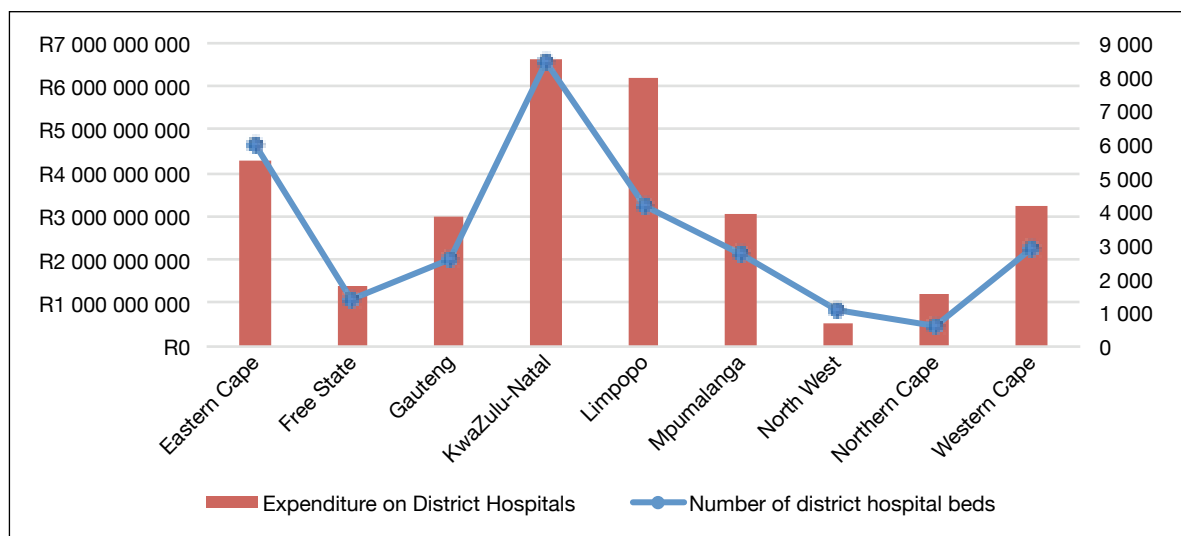
Figure 5: Provincial and local government district health services expenditure per capita (uninsured) by district, 2017/18 (Rand – real prices)



Source: BAS, DHIS, Stats SA.

It is important to monitor the level of expenditure on DHS because it makes up the largest provincial budget programme, and as the entry point to the health system for most people it is generally the most accessible level of care. However, caution should be taken when comparing geographical areas, as it is skewed by the uneven distribution of district hospitals across districts (and provinces). District hospitals make up the largest portion (33.7%) of DHS expenditure on a per sub-programme basis (Figure 2). Figure 15 in this chapter shows the extent to which sub-programme variations drive overall DHS expenditure and data on expenditure per patient-day equivalent in district hospitals is presented in chapter 3 of this publication. Figure 6 shows that expenditure on district hospitals is closely linked to the number of district hospital beds in each province. The number of district hospitals and district hospital beds in a district are influenced by many factors. These factors include the number of higher-level hospitals (most regional, and even tertiary, hospitals provide some district hospital services) and the number of district hospitals serving more than one district.

Figure 6: Expenditure on district hospitals against number of district hospitals beds, per province, 2017/18 (Rand – real prices)



Source: BAS and DHIS.

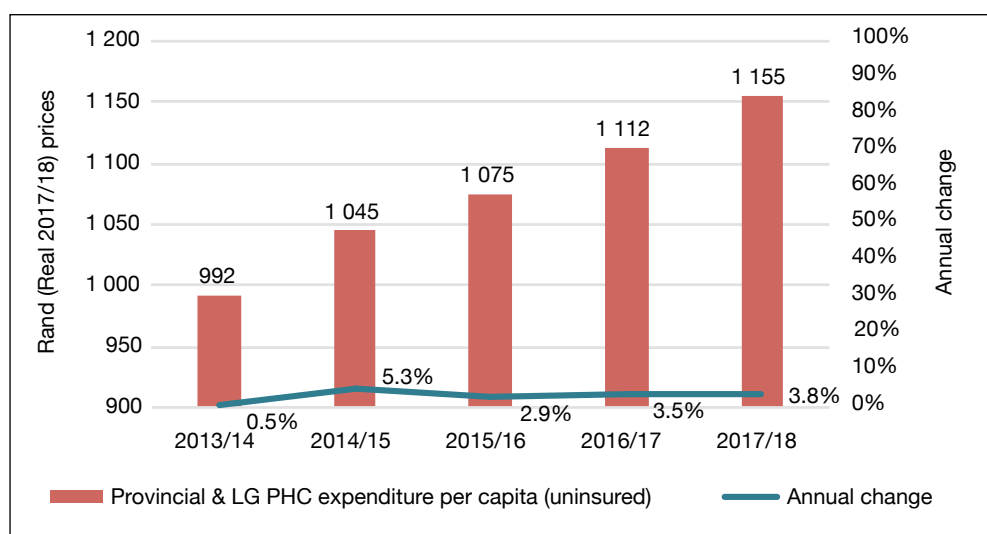
1.2 Provincial and local government primary health care expenditure per capita (uninsured population)

Provincial and LG PHC expenditure per capita (uninsured) is calculated the same way as the previous indicator, but excludes the sub-programmes District Management and District Hospitals. The numerator is thus made up of community health clinics, community health centres (CHC), community-based services, other community services, HIV/AIDS, nutrition and LG PHC expenditure and the denominator is the uninsured population.

Primary health care is the level of care that is the closest to the community and therefore has an important role in responding to the immediate healthcare needs of the community and preventing further ill health. Government has an explicit policy to re-engineer PHC to be more accessible and more responsive, and this level of care is seen as the fundamental building block of NHI. As with the DHS indicator above, given that the denominator is the uninsured population, one would hope to see somewhat similar levels of per capita spend across provinces and districts, as a reflection of allocative equity. Inequities in funding between provinces have been substantially reduced following the introduction of the provincial equitable share formula. While some differences persist, the inequities across districts are far wider than between provinces.

Primary health care expenditure per capita (uninsured) increased in real terms by 3.8% from R1 112 in 2016/17 to R1 155 in 2017/18 (stated in 2017/18 prices) and by 3.2% (year-on-year) and overall by 16.4% from 2012/13 (Figure 7).

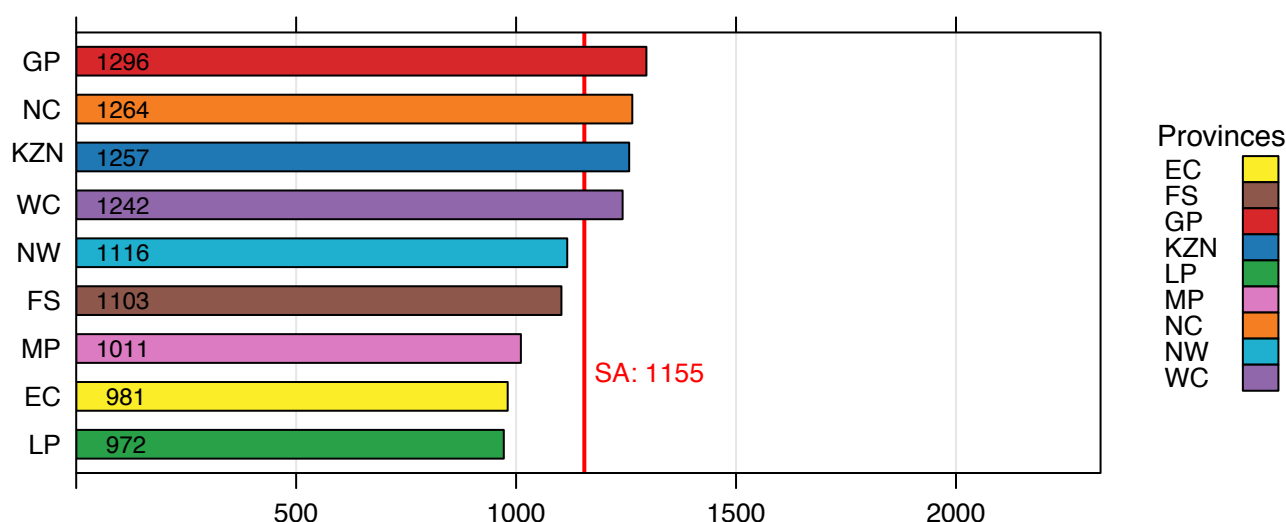
Figure 7: Provincial and local government primary health care expenditure per capita (uninsured), 2013/14 – 2017/18 (Rand – real prices)



Source: BAS, DHIS, Stats SA.

Gauteng (GP) had the highest PHC expenditure per capita in 2017/18 at R1 296, followed by Northern Cape (NC) and KwaZulu-Natal (Figure 8). Gauteng's expenditure increased by 5.9% in real terms from 2016/17, when it was the 3rd highest province on this indicator at the time. Whereas Limpopo (LP) was the highest spending province per capita on DHS in 2017/18 (Figure 4), it was the lowest on PHC spending (Figure 8). This is explained by high spending on district hospitals (Figures 6 and 15) and reliance on these to provide health services to its population. While still the lowest spender, Limpopo had a fairly high year-on-year growth on this indicator, at 7.6% in real terms. Only Mpumalanga's (MP) PHC expenditure grew faster at 9.6%, leading it to pass Eastern Cape (EC) in this ranking from the previous year. The difference between the highest and the lowest province narrowed somewhat to R324 from R347 in 2016/17.

Figure 8: Provincial and local government primary health care expenditure per capita (uninsured) by province, 2017/18 (Rand – real prices)



Source: BAS, DHIS, Stats SA.

Like in previous years, there is a significant spread in PHC expenditure per capita across districts (Figure 9). In fact, the gap between the highest and lowest spending districts widened in 2017/18, despite it narrowing on a provincial level. The highest-spending district, Namakwa (NC) spent 3.0 times as much per capita than the lowest-spending district, Alfred Nzo (EC), while in 2016/17 this ratio was 2.7. The real year-on-year change differed vastly across districts from a -12.6% decrease in Nelson Mandela Bay (EC) to a 13.7% increase in Chris Hani (EC). Eleven districts had a negative real growth and nine districts had a real growth of over 10%.

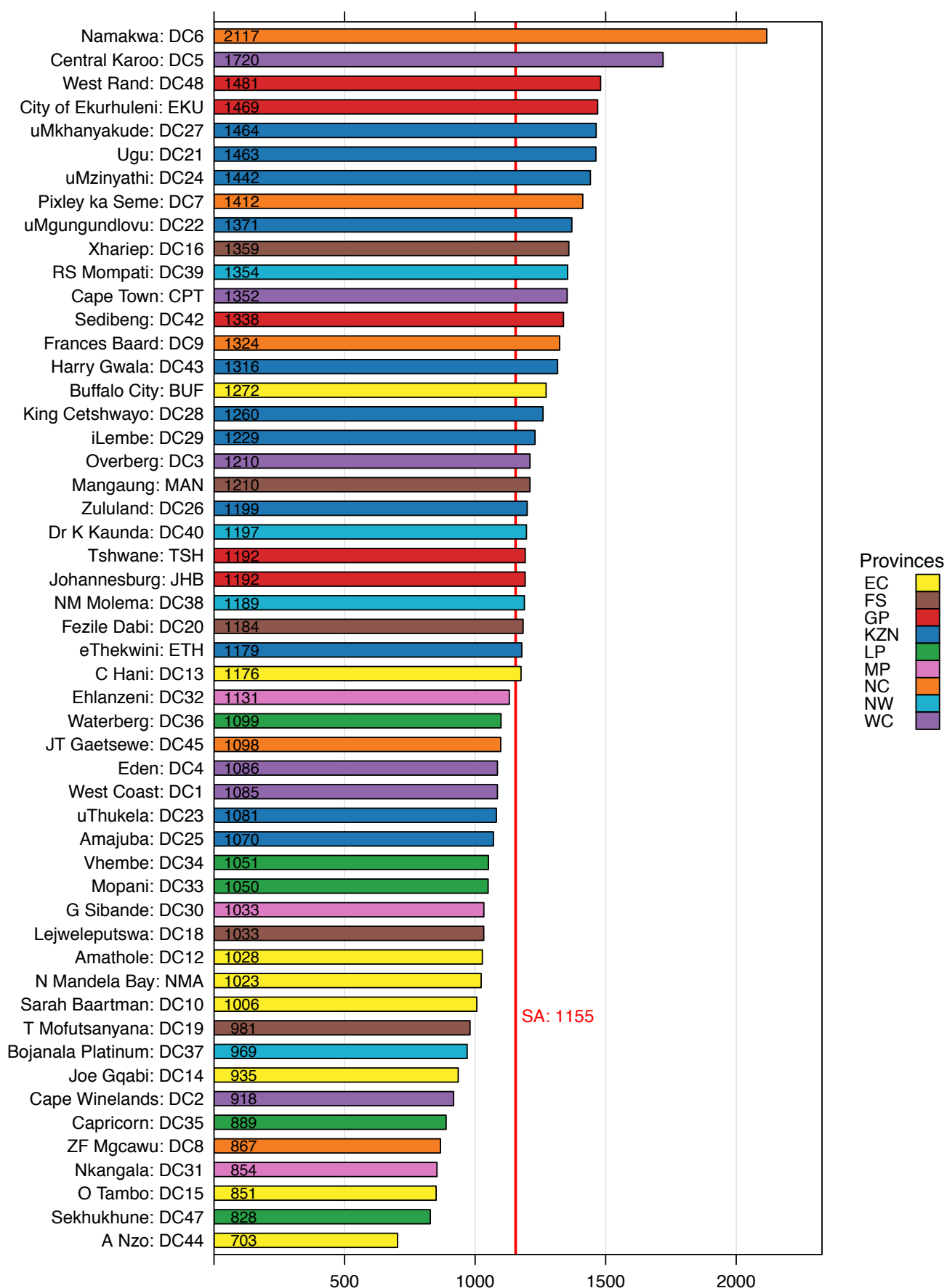
It is worth noting that Namakwa (NC), which was already the 3rd highest-spending district in 2016/17 grew by 11.4% to R2 117 in 2017/18, and is now considerably higher than the 2nd and 3rd highest districts (Central Karoo (WC) at R1 720 and

West Rand (GP) at R1 481). A common explanation for districts with high PHC expenditure per capita is low population density, which makes it costlier to deliver services to the population. This might partly explain the high expenditure in Namakwa and Central Karoo, which have 0.9 and 1.9 persons per km² respectively, as compared to a national average of 46.6 persons per km². However, the 3rd and 4th highest spending districts, West Rand (GP) (211.2 persons per km²) and Ekurhuleni (GP) (1 752.4 persons per km²), both have population densities far above the national average, and other several scarcely populated districts, such as Zwelentlanga Fatman Mgcawu (NC) and Sarah Baartman (EC), had below average spending. Population density can thus only partly explain certain districts' high expenditure.

Alfred Nzo (EC) remains the district with the lowest PHC expenditure per capita. This is despite an encouraging 11.4% real increase from 2016/17.

All metropolitan municipalities except for Nelson Mandela Bay had per capita expenditure above the national average. The high spending levels in the metros is partly due to their relatively stronger ability to raise their own revenue through local government and allocate it to health care.

Figure 9: Provincial and local government primary health care expenditure per capita (uninsured) by district, 2017/18 (Rand – real prices)

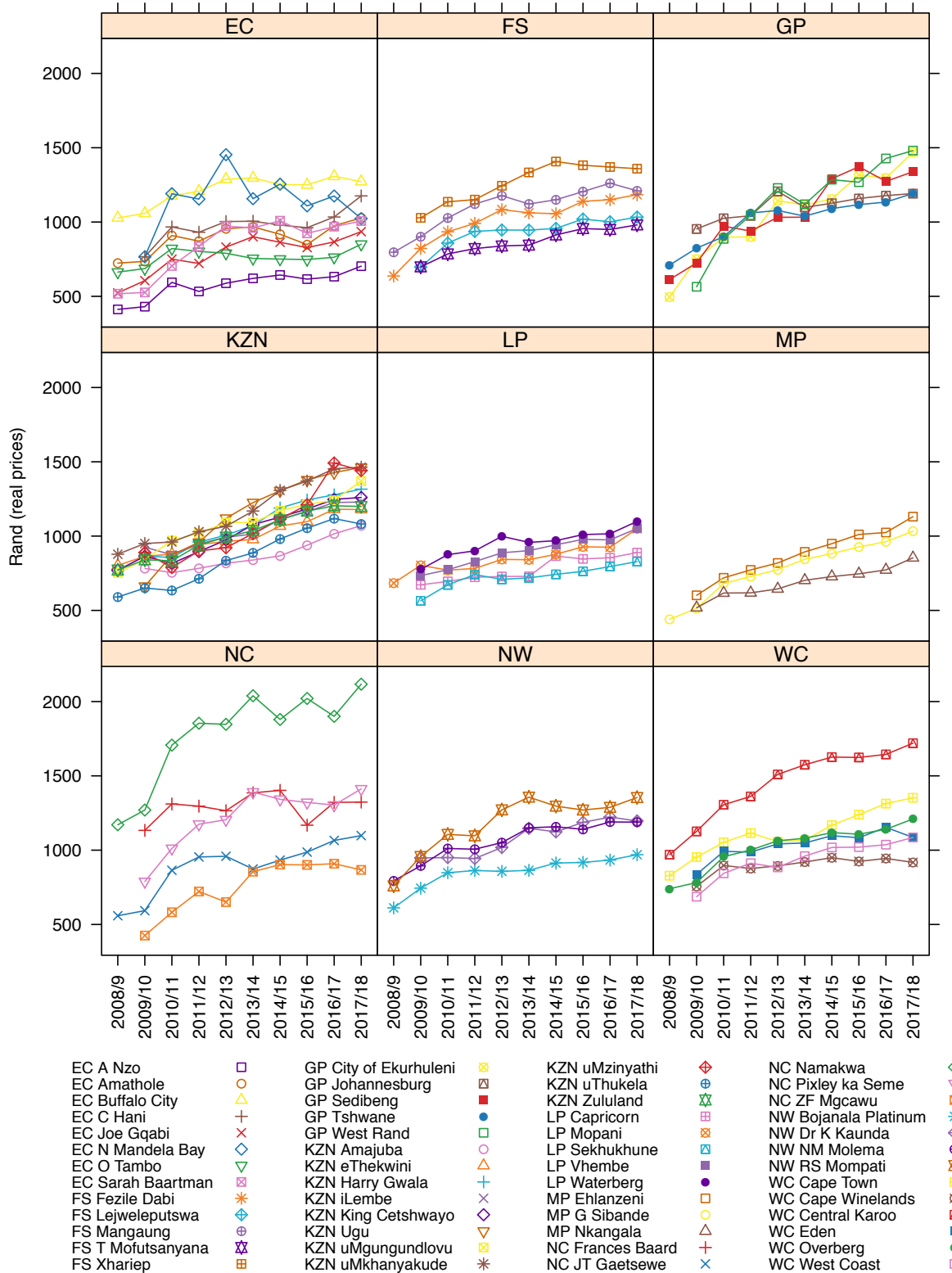


Source: BAS, DHIS, Stats SA.

Figure 10 shows this expenditure for each district, grouped by province, over the past seven years. There has been considerable real growth in all provinces over this time period, and while some provinces have seen a real decline during some years, 2017/18 saw growth in all provinces, ranging from 0.8% in Free State to 9.6% in Mpumalanga.

The Northern Cape, in particular, has a very wide spread across the districts in terms of how much is spent on PHC per person, ranging from a low of R867 in Zwelentlanga Fatman Mgcawu to a high of R2 117 in Namakwa. As discussed above, population density cannot be the only factor in explaining this difference. Other factors such as burden of disease would also need to be considered in a full analysis and allocation formulae.

Figure 10: Annual trends: Provincial and local government primary health care expenditure per capita (uninsured) by district, 2008/09 – 2017/18 (Rand – real prices)



Source: BAS, DHIS, Stats SA.

1.3 Provincial and local government primary health care expenditure per headcount

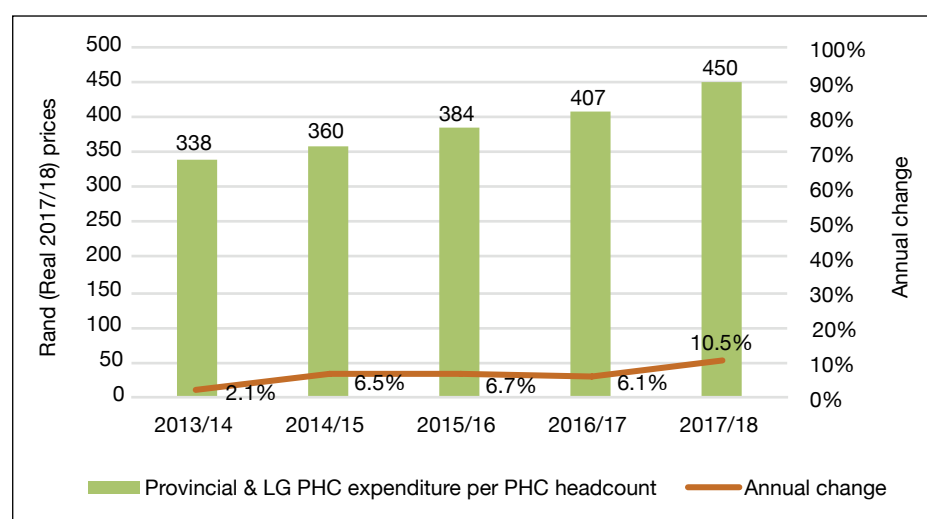
While PHC expenditure per capita can provide insight into equity in resource distribution and the prioritisation of PHC across districts, looking at how much was spent per headcount/visit shows how well districts are resourced in relation to their workload and might be a better measure to evaluate efficiency. Per capita expenditure is also dependent on accurate base population numbers and there is some uncertainty around facility drainage populations, which are not always aligned to district populations.

The numerator for this indicator is the same as in the previous indicator (community health clinics, CHCs, community-based services, other community services, HIV/ AIDS, nutrition and LG PHC expenditure) while the denominator is the number of PHC headcounts.

Growth in PHC expenditure per PHC headcount has outpaced that of expenditure per capita. Expenditure per PHC headcount increased by 10.5% from R407 in 2016/17 to R450 in 2017/18 (in real 2017/18 prices) and has had a growth rate above 6% for four consecutive years now (Figure 11). This represents a total real growth of 33.2% from 2013/14. This growth is driven by a combination of the growth in expenditure per capita shown in Figure 7, a changing case-mix with an increasing number of ART patients and a decline in PHC headcount since 2014. As discussed in the 2016/17 *District Health Barometer* (DHB),¹ the reasons for the decline in PHC headcounts are not entirely clear, but it may be due to health programmes offering outreach services such as the Centralised Chronic Medicines Dispensing and Distribution (CCMDD) model, the Ward-based PHC Outreach Teams, Integrated School Health Programme (IHSP) and other similar models may also have had an impact. It may also be due to improved data quality as a result of rationalisation of patient registers in recent years and the introduction of a new version of DHIS (WebDHIS) in 2017/18.

An increasing number of chronic patients (including ART patients) now collect their medicines at alternative pick-up points, instead of at a PHC facility, and are therefore excluded from the PHC headcount. Similarly, community healthcare outreach programmes may also reduce the need to visit a facility. It therefore may, in future, become necessary to change this indicator to include outreach headcounts and the patients using the CCMDD, to ensure we are able to still assess equity across districts and the overall utilisation of the public PHC system. By not doing so currently, it is not possible to say with certainty whether these programmes are exclusively the reason for the decreasing PHC headcount or whether the decrease is an indication of a true decline in the utilisation of PHC services.

Figure 11: Provincial and local government primary health care expenditure per headcount, 2013/14 – 2017/18 (Rand – real prices)



Source: BAS, DHIS.

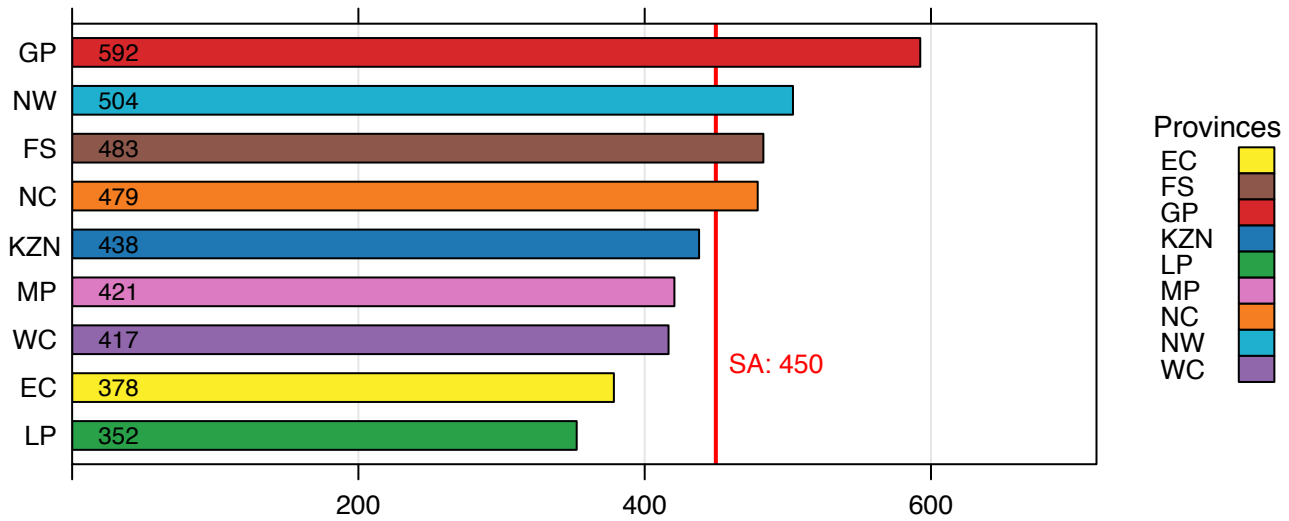
There are considerable differences in this indicator across provinces (Figure 12). Expenditure per headcount in Gauteng (R592) was exactly R240 (or 68%) higher than in Limpopo (R352) and 18% higher than the second highest province, North West at R504. While expenditure per headcount increased by 11.9% in Limpopo, it remains the lowest-spending province.

Eastern Cape and Mpumalanga had the highest year-on-year growth of 15.2% and Mpumalanga surpassed Western Cape in this ranking. Although Western Cape and KwaZulu-Natal had the lowest growth rates at 5.3% and 5.5% respectively, these rates are still relatively high given that these growth rates are stated in real prices.

¹ Massyn N, Padarath A, Peer N, Day C, editors. *District Health Barometer 2016/17*. Durban: Health Systems Trust; 2017.

Western Cape was above the national average in terms of PHC expenditure per capita, but below average on PHC expenditure per headcount.

Figure 12: Provincial and local government primary health care expenditure per headcount by province, 2017/18 (Rand – real prices)



Source: BAS, DHIS.

Figure 13 shows PHC expenditure per headcounts across districts. Four of the five highest spending districts were in Gauteng and even the province’s lowest spending district (Johannesburg) was R86 above the national average. The lowest PHC utilisation rate in South Africa is in Gauteng, which may explain the province’s high expenditure per headcount.

All districts in both the Eastern Cape and Limpopo were below the national average and expenditure was particularly low in Mopani (LP), Sekhukhune (LP), Amathole (EC), Vhembe (LP), Sarah Baartman (EC) and Alfred Nzo (EC). There has been some improvement in both these provinces through the overall provincial increase of 15.2% in the Eastern Cape and 11.9% in Limpopo and it is strongly recommended that the provinces seek to maintain this increase to ensure the PHC services are adequately resourced across their districts.

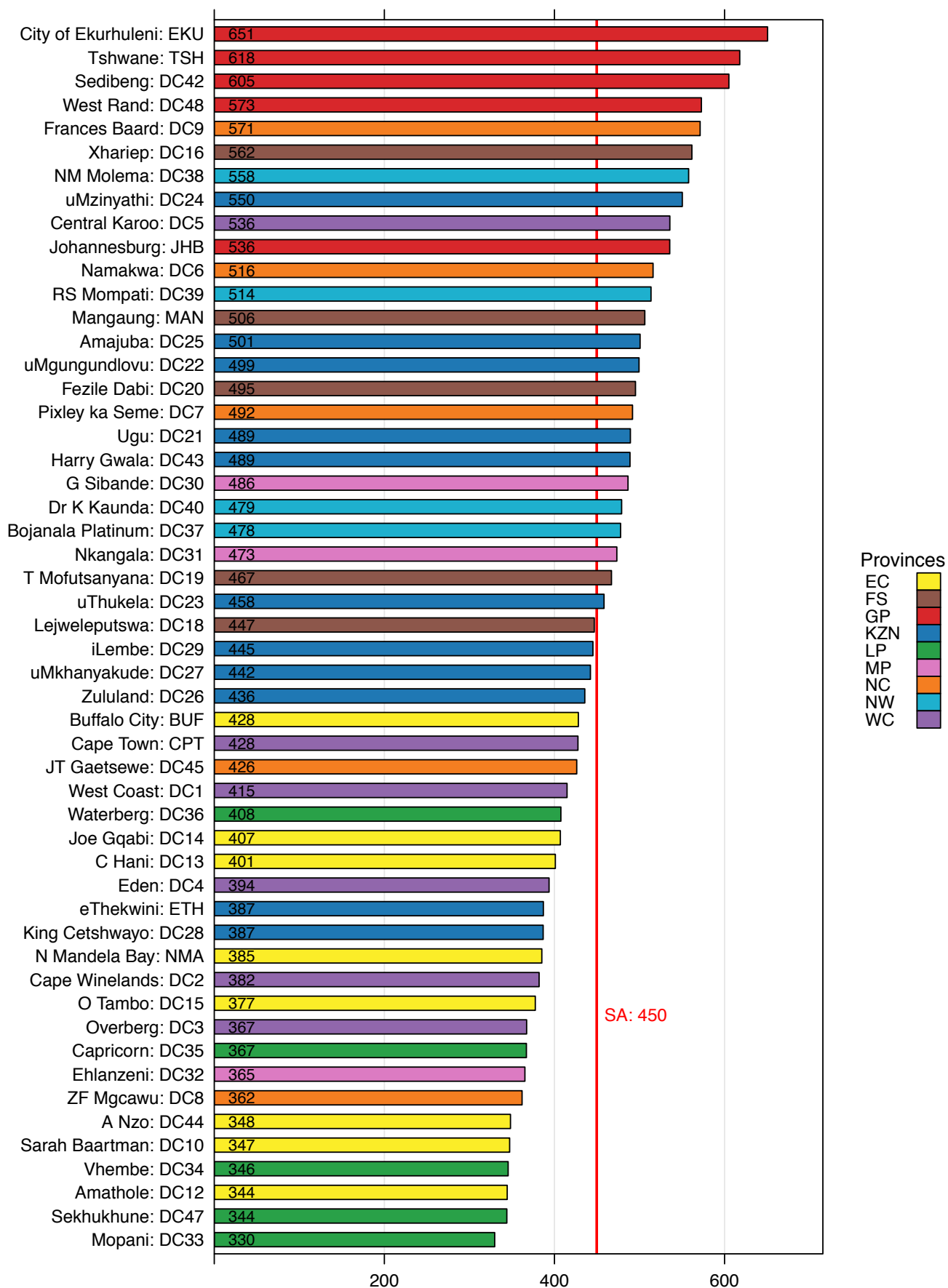
Namakwa (NC) was by far the highest spending district per capita but was only the 11th highest spender by headcount. It had the highest utilisation rate in the country, at 4.1 visits per uninsured person per year. This could be due to a higher burden of disease, especially considering rising non-communicable disease burdens or it could be due to systems challenges like drug stockouts, causing patients to have to return multiple times.

Figure 14 shows the 10-year trend in this indicator by district and also illustrates the spread across districts within each province. There has been a clear upward trend over the past 10 years, particularly in the Free State, Gauteng, Mpumalanga and Northern Cape. Individual districts with a particularly high increase in 2017/18 were Amathole (EC) (31% increase), Chris Hani (EC) (27% increase), OR Tambo (EC) (23% increase) Nkangala (MP) (23% increase) and Ekurhuleni (GP) (23% increase).

Northern Cape had the widest inter-district spread, with expenditure ranging from R362 in Zwelentlanga Fatman Mgcawu to R571 in Frances Baard. North West, on the other hand, has had a very narrow spread throughout the entire 10-year period.

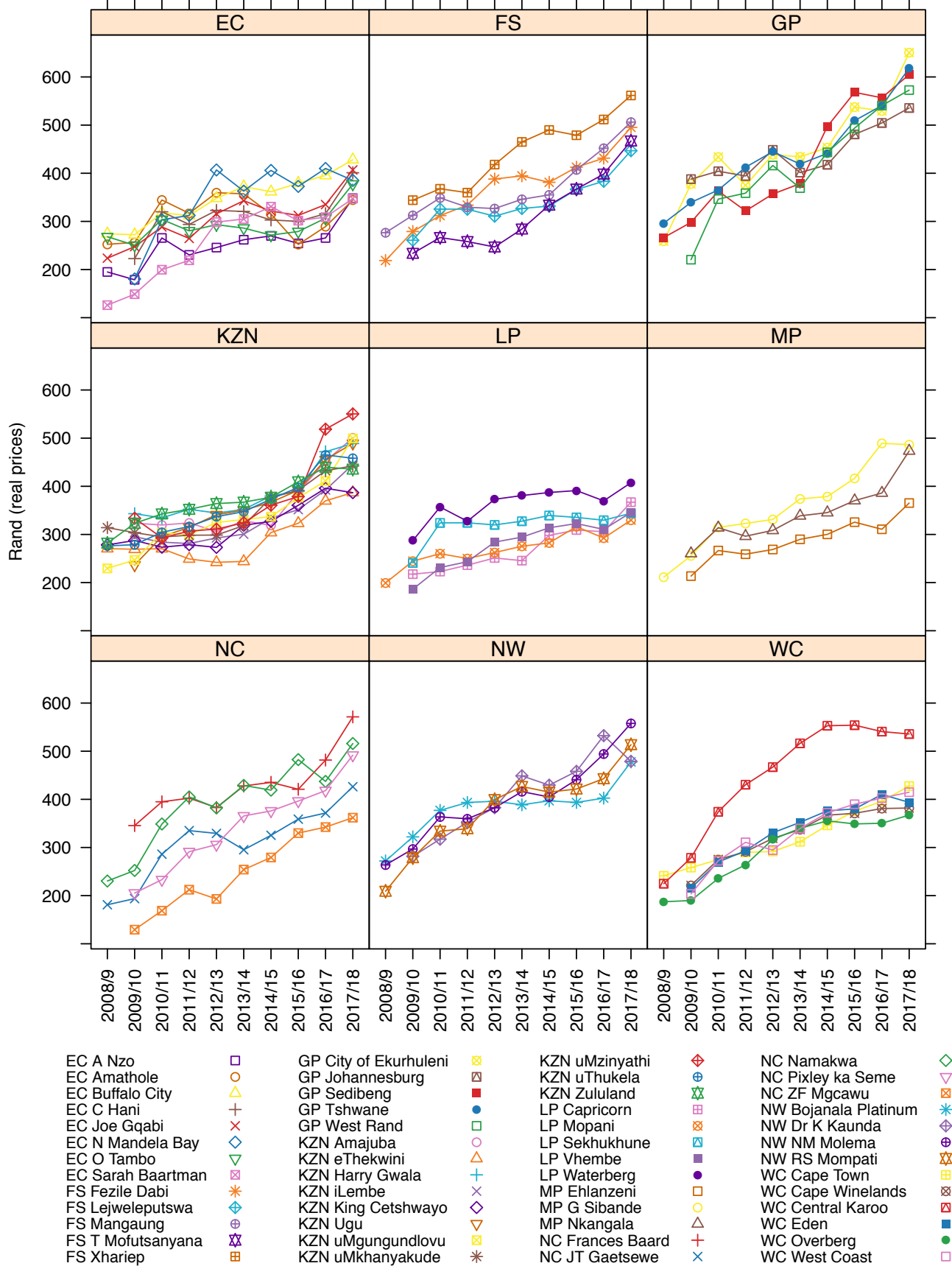
The only district that diverges significantly from other districts in the same province is Central Karoo (WC), which is 28.5% higher than the province as a whole, although the spread has been narrowing in recent years.

Figure 13: Provincial and local government primary health care expenditure headcount by district, 2017/18 (Rand – real prices)



Source: BAS, DHIS.

Figure 14: Annual trends: Provincial and local government primary health care expenditure per headcount by district, 2008/09 – 2017/18 (Rand – real prices)



Source: BAS, DHIS.

Detailed breakdown of district health services expenditure

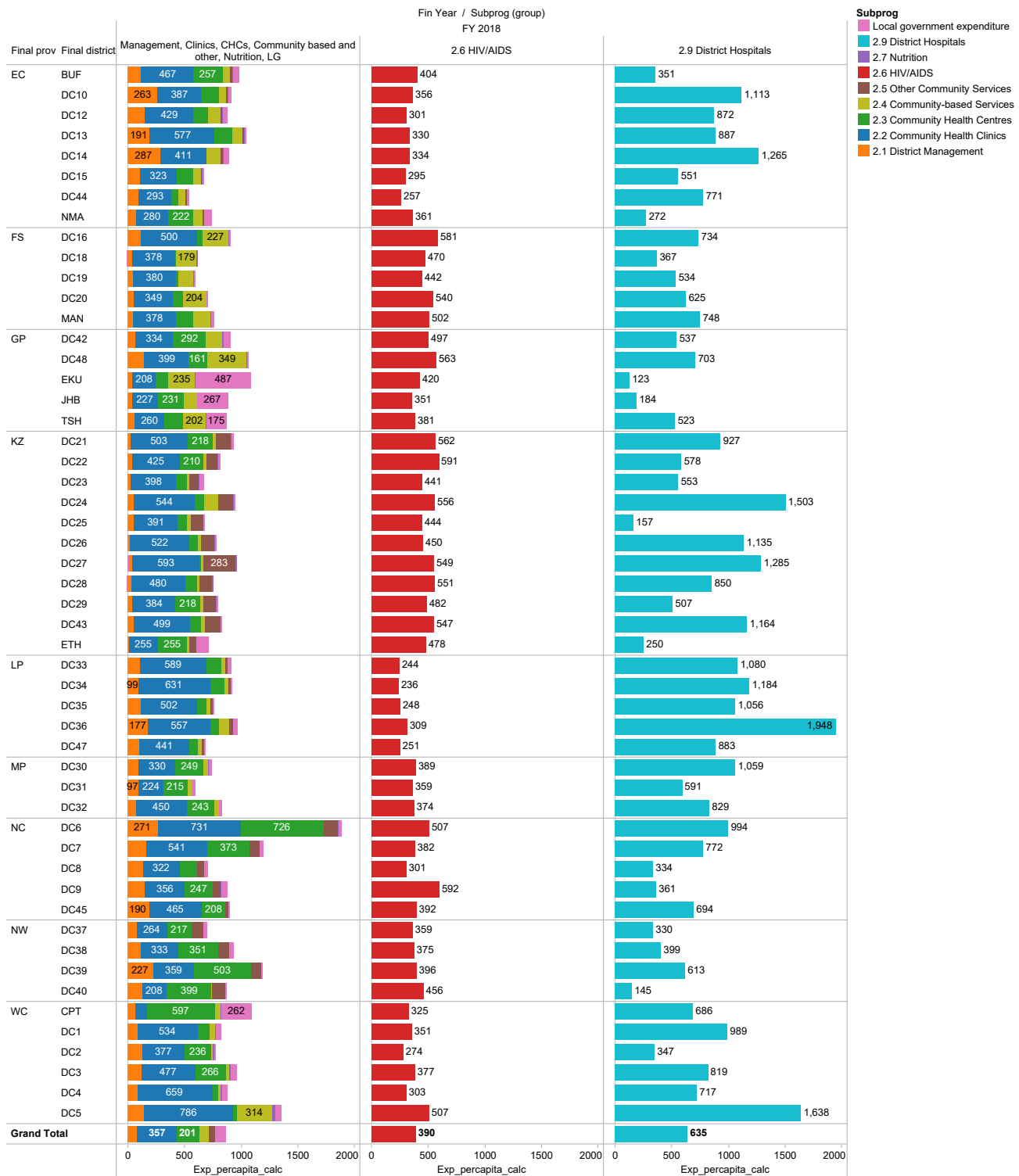
Figure 15 shows per capita expenditure on DHS by sub-programme. The proportion of DHS expenditure on District Hospitals ranges by province from 18.8% in Gauteng to 51.5% in Limpopo and by district from 7.6% (R123) in Ekurhuleni (GP) to 60.4% (R1 948) in Waterberg (LP).

It is only the metropolitan municipalities where own local government funding makes up a substantial proportion of DHS spending. However, even amongst the metros there is a great variation, as LG funding makes up less than 5% in Mangaung (FS), Nelson Mandela Bay (EC) and Buffalo City (EC), while Ekurhuleni's (GP) own contribution was R487 per capita, making up 29.9% of total DHS expenditure.

The Finance chapter of the *DHB 2016/17*^k noted that HIV/AIDS expenditure per capita does not seem to be entirely correlated to HIV prevalence. For example, it was noted that all districts in Mpumalanga had per capita HIV expenditure below the national average, despite the fact that the province has the second highest HIV prevalence in the country. This included Gert Sibande, which, in fact, has reflected the highest antenatal prevalence in certain years. In contrast, the Northern Cape, with the lowest HIV prevalence in the country, had relatively high HIV expenditure per capita, particularly in Frances Baard. This year this analysis was not done to the same level of detail, but it is noticeable that HIV expenditure per capita is still below the national average in all Mpumalanga districts.

Finally, there is considerable variation in spending on district management. KwaZulu-Natal only spent 1.6% of its DHS expenditure on district management and all its districts were below 5%, while the Northern Cape spent 8.9% on this sub-programme. In four districts, expenditure per capita exceeded R200, namely Joe Gqabi (EC), Sarah Baartman (EC), Pixley Ka Seme (NC) and Dr Ruth Segomotsi Mompati (NW). While this might partly be explained by higher travel costs for managers in rural districts and incorrectly classifying services expenditure under district management, it is recommended that districts with very high district management costs investigate how to streamline their management offices to free up resources for front-line service delivery. In some cases, however, district management teams need to be strengthened for the districts to be able to function more competently.

Figure 15: Per capita expenditure on DHS by sub-programme, 2017/18 (Rand – real prices)



Source: BAS, DHIS, Stats SA.

Key findings and implications

Summary by province

The section below discusses key findings and implications by province.

Eastern Cape

In 2016/17, the Eastern Cape turned around a 3-year downward trend and showed an increase for all three indicators presented in this chapter for the 2017/18 financial year.^l However, it still remains low, particularly expenditure on PHC (making up 53.8% of DHS expenditure), when compared with other provinces. The province appears to have prioritised growing expenditure per capita in some of the lowest-funded districts, such as OR Tambo (11.5% growth), Alfred Nzo (11.2% growth) and Joe Gqabi (7.9% growth), while it reduced expenditure in its highest-funded districts, Nelson Mandela Bay and Buffalo City, by -12.9% and -2.7% respectively. Nevertheless, Alfred Nzo remains the lowest-funded district in the country in terms of PHC expenditure per capita (Figure 9) and the 6th lowest in expenditure per headcount (Figure 13) and it is recommended that the province continue to prioritise this district. Expenditure per PHC headcount grew by 15.2% in 2017/18, which, together with the Northern Cape was the highest growth in the country. However, this is partly explained by a significant drop in PHC headcounts by 8.6% from 15.2 million in 2016/17 to 13.9 million in 2017/18.

Free State

Free State expenditure remained relatively stable, both per capita and per PHC headcount. There appears to have been some reprioritisation between districts, as the two highest-spending districts (Xhariep and Mangaung) saw real declines in PHC expenditure while the other three districts increased. Despite a relatively small increase in PHC expenditure per capita, expenditure per headcount grew by 14.7% as the number of PHC headcounts decreased by -11.5% from 5.2 million in 2016/17 to 4.6 million in 2017/18. The province should analyse its utilisation and ensure that its population is still being covered sufficiently to maintain and improve health outcomes.

Gauteng

Gauteng had the highest PHC expenditure in the country, both per capita and per headcount. In 2016/17 it was the third highest-spending province per capita, but in 2017/18 it surpassed KwaZulu-Natal and Northern Cape, as a result of a 5.9% real growth rate in this indicator. This was primarily driven by a 13.3% growth rate in Ekurhuleni, which is now the third highest-spending district per capita in the country. This considerable increase was despite a decrease in PHC headcount of -3.3% in the past year. 29.9% of Ekurhuleni's PHC expenditure is funded by own local government revenue. Gauteng's expenditure per headcount remained the highest in the country by far and the four highest spending districts were in Gauteng. This is a result of PHC expenditure per capita above the national average combined with a low PHC utilisation rate at 2.2 compared to the national rate of 2.8. Relative expenditure on district hospitals was the lowest in Gauteng, which is in all likelihood partly due to the high concentration of tertiary hospitals, and by implication, the population of Gauteng accessing higher levels of care for health services offered by District Hospitals. These hospitals generally have higher unit costs than district hospitals and Gauteng should consider reviewing its hospital configuration and packages of care to ensure efficiency and optimisation of its service platform.

KwaZulu-Natal

In 2016/17, KwaZulu-Natal had the highest year-on-year growth in PHC expenditure per capita at 6.9%, but in 2017/18 it had the second lowest growth in the country at 1.3%. As the province with the highest HIV prevalence in the country, it receives the largest portion of the HIV conditional grant, which is the main driver of growth in PHC expenditure. It is therefore somewhat concerning that overall PHC expenditure growth is not higher and it is possible that growth in other sub-programmes, such as clinics and CHCs is very low. The past two *DHB* publications have highlighted that KwaZulu-Natal's expenditure on "Other Community Services" is the highest in the country and this remained the case in 2017/18. Much of the expenditure in this sub-programme was for inputs generally classified elsewhere in other provinces.^m Expenditure on District Management as a proportion of total DHS expenditure was found to be well under control, with it being the lowest in the country. The province is encouraged to continue containing these costs, to enable prioritisation of frontline services.

Limpopo

Previous Finance chapters of the *DHB* have noted that Limpopo appears to rely heavily on district hospitals to provide health services and this pattern remained in 2017/18, where 51.5% of total DHS expenditure was on district hospitals. This appears to be at the expense of PHC expenditure which was the lowest in the country per capita uninsured. In 2016/17,

m Massyn N, Peer N, Padarath A, Barron P, Day C, editors. *District Health Barometer 2015/16*. Durban. Health Systems Trust. October 2016.

expenditure per PHC headcount dropped by 3.8% in real terms.^l In 2017/18, there was an increase of 11.9%, but the province was nevertheless the lowest spending province per headcount at R352, which is almost R100 less than the national average. Expenditure per headcount was particularly low in Mopani, Sekhukhune and Vhembe districts. The province also had the lowest PHC expenditure per capita at R972, as compared to the national average of R1 155, and Sekhukhune is now the second lowest funded district in the country.

Mpumalanga

Mpumalanga had the highest real year-on-year growth in PHC expenditure per capita in 2017/18 at 9.6%, which is the continuation of a 10-year trend with an average real growth rate of 8.8%. However, despite this steady increase it is the third lowest spending province (2nd lowest in 2016/17) at R1 011 per capita, which is R144 below the national average. This may partly relate to relatively low overall health spending for the province. Expenditure was particularly low in Nkangala district with only R854 per capita. Expenditure per PHC headcount increased by 14.6% to R421 in 2017/18, with increases in Nkangala and Ehlanzeni of 22.6% and 17.5% respectively, but a real decrease of -0.6% in Gert Sibande. Mpumalanga spent a relatively large proportion of DHS expenditure on district hospitals (42.4%), but had relatively low expenditure per capita on HIV/AIDS, despite having the country's second highest antenatal HIV prevalence.ⁿ This may indicate that the province does not receive a fair share of the Comprehensive HIV/AIDS and TB Conditional Grant, and the National Department of Health should consider reviewing the formula used for the horizontal allocation of this grant.

Northern Cape

Northern Cape was above the national average for all three indicators covered in this chapter. High expenditure in Northern Cape is often attributed to its low population density (3.2 persons per km²), making it costlier to deliver services. While this is generally true, the district in Northern Cape with the highest expenditure per headcount (Frances Baard at R571) was the district with the highest population density (29.6 persons per km²). While PHC expenditure per capita increased by a moderate 2.9% in 2017/18, growth in expenditure per PHC headcount was the highest in the country (together with Eastern Cape) at 15.2%. This is explained by a 10.3% drop in headcounts from 2.5 million in 2016/17 to 2.2 million in 2017/18. Despite this drop, the Northern Cape showed some of the highest PHC utilisation rates in the country. There was a considerable spread across districts, both in terms of PHC expenditure per capita ranging from R867 in Zwelentlanga Fatman Mgcawu to R2 117 in Namakwa, and expenditure per headcount ranging from R362 in Zwelentlanga Fatman Mgcawu to R571 in Frances Baard. While some variation might be motivated by population density, burden of disease, socio-economic factors etc., the province should consider whether such wide differences are warranted or if resources can be distributed more efficiently and equitably across districts.

North West

District Health Services expenditure in North West was below the national average in 2017/18 and it also declined slightly in real terms by -0.5%. The low DHS expenditure is largely explained by relatively low expenditure on district hospitals (see Figure 15). Despite somewhat low expenditure per capita, North West had the second highest expenditure per PHC headcount at R504, due to relatively low PHC utilisation rates of 2.2 for the province. The PHC headcount in the province decreased from 6.5 million in 2016/17 to 6.1 million in 2017/18.

Western Cape

Western Cape was above the national average in terms of both DHS and PHC expenditure per capita (uninsured), while below the national average for expenditure per PHC headcount. The Western Cape had an average PHC utilisation rate of 3.0, which is above the national average of 2.7. This indicates good access to PHC services. As in previous years, its most scarcely populated district, Central Karoo, was a clear outlier through its high expenditure on both overall DHS and PHC. While expenditure per headcount in Central Karoo has declined in recent years, expenditure per capita continues to increase. The PHC utilisation rate for Central Karoo district is 3.2 and this relatively high rate could be the reason for the low expenditure per PHC headcount and this may warrant some analysis and reallocation.

Continued increase in expenditure per PHC headcount

Real expenditure per PHC headcount increased on average by 6.4% between 2014/15 and 2016/17. In 2017/18 this increase jumped to 10.5%, which is a real increase of R43 per headcount. The 2016/17 *DHB*^l discussed potential explanations for this, including:

ⁿ National Department of Health. The 2015 National Antenatal Sentinel HIV and Syphilis Survey. Pretoria: National Department of Health; 2017.

- ◆ Greater prioritisation/better resourcing of primary healthcare and the Ideal Clinic Programme
- ◆ Rising input costs
- ◆ Changing case mix
- ◆ Levelling off and decrease in PHC headcount numbers at fixed PHC facilities, partly due to growth in outreach programmes, such as CCMDD and Ward-based Outreach Teams.

While the explanation of the increasing expenditure per PHC headcount is in all likelihood a combination of all these factors, it also seems likely that the decrease in headcounts has had a particularly strong impact in recent years. Between 2014/15 and 2017/18 the total PHC headcount declined by 9.7 million visits and during the same period expenditure per headcount increased in total by R90 above inflation. This trend was particularly marked in 2017/18, when headcounts dropped by 5.9 million and expenditure per headcount increased by 10.5%.

The drop in PHC headcount among patients above 5 years of age may, as discussed, be partially explained by an increasing number of chronic (including ART) patients that collect their medicines at sites other than PHC facilities through CCMDD. However, as can be seen in Table 1, there has been a 2 million (9.3%) decrease in headcounts among children under 5 as well, and this group is not part of the CCMDD programme or the ISHP, that targets children in Grade R, 1, and 8 (older than 5 years). This is a significant change from previous years when the headcount in this group has remained relatively stable between 22 million and 23 million visits per annum and this is thus unlikely to be the reason for this decrease. Another possible explanation is that the sector changed its version of the DHIS in 2017/18, which may have affected data collection, quality and reporting. Given the number of vaccinations done in children under five years, this decline is worrying in terms of population health and child health. Provinces are encouraged to review their immunisation coverage rates and conduct mass campaigns in districts where there are dips in coverage to below 75%.

Table 1: PHC headcount and expenditure per PHC headcount, 2008/09 – 2017/18 (Rand – real prices)

Financial year (FY)	Under 5		Over 5		Total		Expenditure		
	PHC headcount ('000')	Change	PHC headcount ('000')	Change	PHC headcount ('000')	Change	PHC expenditure (R'1000')	Exp. per PHC headcount	Exp. per PHC headcount change %
2008	22 582		93 155		115 737		27 636 282	239	
2009	23 567	985	96 816	3 661	120 383	4 646	32 279 068	268	12.3%
2010	22 751	-817	96 912	96	119 663	-720	37 017 737	309	15.4%
2011	23 156	405	104 040	7 128	127 196	7 533	39 289 504	309	-0.1%
2012	22 712	-444	106 248	2 207	128 960	1 764	42 651 661	331	7.1%
2013	22 689	-23	106 203	-45	128 892	-68	43 524 597	338	2.1%
2014	22 412	-277	107 024	821	129 436	544	46 536 748	360	6.5%
2015	22 171	-241	104 598	-2 426	126 769	-2 667	48 630 210	384	6.7%
2016	22 290	119	103 343	-1 255	125 633	-1 136	51 111 705	407	6.1%
2017	20 222	-2 068	99 483	-3 860	119 705	-5 928	53 831 727	450	10.5%

Source: BAS, DHIS.

Towards capitation-based payments for PHC

The NHI White Paper^a envisages significant reforms in terms of how healthcare providers are paid. For PHC providers, the main mechanism for provider payment will be risk-adjusted capitation, which is a method of payment whereby the provider receives a set amount in advance to provide a defined set of services to an individual for a defined period of time (usually a year), and where this amount is adjusted for demographic and other variables, such as age and gender. The capitation payment does not change based on how many times an individual seeks care during the period. Capitation payments also always include the total enrolled population and not just those who choose to use the service.

PHC spending per uninsured person in South Africa was R1 155 in 2017/18, but varied significantly across districts, from a low of R703 in Alfred Nzo (EC) to a high of R2 117 in Namakwa (NC). If one excludes the two highest funded districts, which are outliers, and compares Alfred Nzo to West Rand, the difference is somewhat smaller but still more than two-fold. Moving towards risk-adjusted capitation has the potential to improve equity in geographical resource distribution through the use of a standardised methodology for allocating PHC resources per person per year. As some of the costs, such as district management, medicines, laboratory services etc. may fall outside the capitated payments, the PHC expenditure per capita is not directly translatable to a capitation base rate, but still provides a useful benchmark for the proposals that are currently being jointly developed by National Treasury, National Department of Health and other stakeholders. National Treasury will also work with the National Department of Health to develop a resource allocation formula for health districts.

Growth in PHC expenditure excluding HIV/AIDS

As shown in Figure 2, HIV/AIDS is the sub-programme that has by far the highest growth rate in DHS and PHC and is thus a key driver of the increases in PHC expenditure per capita. Given that this funding is dedicated to prevention and treatment of a specific disease, it is of interest to also look at trends in expenditure for general PHC services. Table 2 shows PHC expenditure per capita (uninsured) excluding the HIV/AIDS sub-programme. The overall real growth rate from 2016/17 to 2017/18 was 2.8%, somewhat lower than the growth rate including HIV/AIDS, which was 3.8%. Free State's real non-HIV PHC spending per capita decreased by 4% and in KwaZulu-Natal it showed no growth. Seen over a longer period, Eastern Cape's spending has also decreased, by an average of -1.2% per year from 2012/13 to 2017/18, compared to the national average growth of 1.6%. The reliance on the HIV/AIDS conditional grant to provide PHC services is an important area for attention, especially as the country moves towards the 90-90-90 targets and prevention initiatives such as Pre-Exposure Prophylaxis (PrEP),^o which would provide medicine to people who do not have HIV.

Table 2: PHC expenditure per capita (uninsured) excluding the HIV/AIDS sub-programme, by province, 2012/13 – 2017/18 (Rand – real prices)

Real 2017/18 SAR	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	Annual growth 2016/17 – 2017/18	Annual growth 2012/13 – 2017/18
Eastern Cape	672	639	624	579	619	631	2.1%	-1.2%
Free State	625	608	588	629	637	612	-4.0%	-0.4%
Gauteng	599	499	540	576	583	625	7.3%	0.9%
KwaZulu-Natal	599	628	659	690	714	714	0.0%	3.6%
Limpopo	626	605	648	662	664	709	6.8%	2.5%
Mpumalanga	487	508	575	624	595	617	3.7%	4.8%
Northern Cape	773	790	781	744	765	789	3.1%	0.4%
North West	657	684	695	704	705	709	0.6%	1.5%
Western Cape	699	680	710	718	732	747	2.0%	1.3%
SA	623	603	629	645	657	675	2.8%	1.6%

Source: BAS, DHIS, Stats SA.

Conclusions

District health services and PHC expenditure per capita continued to grow in 2017/18, despite increasingly constrained government budgets. This is partly driven by the expenditure in the HIV/AIDS sub-programme, which has been growing in order to sustain the expansion of the antiretroviral programme through the 'universal test-and-treat' policy^p implemented since September 2016, but there was fairly strong growth in PHC expenditure per capita even when excluding HIV/AIDS expenditure. It is worth noting is that there were 11 districts with negative real growth rates in PHC expenditure per capita, and this may warrant further investigation.

Due to a decline in PHC headcount and increase in the number of ART patients, expenditure per PHC headcount grew considerably above expenditure per capita. It has grown by an annual average of 7.4% over the past four years and reached R450 in 2017/18. This decline in headcounts needs to be researched further, particularly to what extent it can be explained by expansion of services that are not facility-based, such as CCMDD and Ward-based Primary Healthcare Outreach Teams.

Primary health care expenditure remains unevenly distributed across provinces and districts. Although certain variation is likely motivated by population density (demography), disease burden (epidemiology) and socio economic status (poverty, unemployment, etc.), the wide differences between the lowest and highest funded districts need to be addressed to ensure equitable access to PHC services.

Recommendations

- ◆ Improve equity and efficiency of resource allocation: provinces and districts are encouraged to look at utilisation of public health services within and outside of fixed PHC facilities and ensure allocations are responsive to the demand for services. Provinces should consider reviewing how they can improve efficiencies, particularly in districts where expenditure is high in relation to service utilisation. Conversely, lower spending districts are potentially under-funded and provincial departments of health should consider reprioritising funding towards such districts. Given the limited finances for health, areas for reducing overheads and reprioritising toward service delivery should take the focus. Provinces are encouraged to develop district health resource allocation formulae and National Treasury

^o National Department of Health. Guidelines for Expanding Combination Prevention and Treatment Options for Sex Workers: Oral Pre-Exposure Prophylaxis (PrEP) and Test and Treat (T&T). Pretoria: National Department of Health; 2016.

^p National Department of Health. Implementation of the Universal Test and Treat Strategy for HIV Positive Patients and Differentiated Care for Stable Patients. Pretoria: National Department of Health; 2016. Available at: <http://www.sahivsoc.org/Files/22%208%2016%20Circular%20UTT%20%20%20Decongestion%20CCMT%20Directorate.pdf>. [Accessed 5 September 2018].

should work together with the National Department of Health on this at a national level. Such formulae should include adjustments for need, such as burden of disease.

- ◆ Investigate the declining PHC headcounts and improve reporting on non-facility-based services: there is a need for greater clarity on why the PHC headcount is declining. Part of the reason might be increased usage of non-facility-based services, which makes it difficult to consolidate overall usage of the primary health care services for the public health sector. It would be important for the sector to consolidate measurements and collection points into one system to allow for more nuanced analysis.
- ◆ Harmonise expenditure classification: there still appears to be inconsistencies in terms of how expenditure is classified on BAS (an example is the unique high spending on 'other community services' in KwaZulu-Natal). The sector should come together to harmonise how expenditure is classified in order to enable better inter-district and inter-provincial comparisons and review the budget programme structure if required.
- ◆ Improve clinical data reporting: neither DHIS nor the Health Patient Registration System (HPRS) provide adequate data on patient diagnosis and treatment because these systems do not have such capability and clinical coding is not used by health professionals at PHC facilities. The NHI Bill and the NHI White Paper^a both speak to the need for an improved patient records system with the appropriate clinical coding.
- ◆ Linking expenditure to health outcomes: while analysing and comparing expenditure levels has merits of its own, there is also a need to better link expenditure to health outcomes. Research into the correlation between expenditure levels and health sector performance and health outcomes has the potential to generate better knowledge about the quality and efficiency of spending.

