

# PROVINCIAL AND DISTRICT SPENDING ON HIV IN SOUTH AFRICA (2013/14)

Undertaken for the South African Investment Case PHASE II, with  
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## Abbreviations

AFR	Annual financing reports (Global Fund)
ART	Anti-retroviral therapy
CCMDD	Chronic care medicine distribution and delivery
CEGAA	Centre for Economic Governance and Accountability in Africa
CHBC	Community and home-based care
DCS	Department of Correctional Services
DOD	Department of Defence
DOE	Department of Basic Education
DOH	Department of Health
DSD	Department of Social Development
EA	Expenditure Analysis (PEPFAR's reports)
EC	Eastern Cape
EFR	Enhanced Financial Report (GF PRs)
EPWP	Expanded Public Works Programme
ES	Equitable share
E&S	Earmarked and specific
ETB	Extra-pulmonary tuberculosis
FY	Financial year
FS	Free State
GF	The Global Fund to Fight AIDS, Tuberculosis, and Malaria
Gov't	Government
GP	Gauteng
GSA	Government of South Africa
HCT	HIV counselling and testing
HE2RO	Health Economics and Epidemiology Research Office (Wits University)
HFG	USAID's Health Finance and Governance Project
HSRC	Human Sciences Research Council
IC	Investment Case
IP	Implementing partner (PEPFAR)
KZN	KwaZulu-Natal
LP	Limpopo
MMC	Medical male circumcision
MDR-TB	Multidrug-resistant tuberculosis
MP	Mpumalanga
MTEF	Medium Term Expenditure Framework
NASA	National AIDS Spending Assessment
NC	Northern Cape
n.d.	Not disaggregated
NDOH	National Department of Health
NFM	New Funding Model (Global Fund)
NHA	National Health Accounts
NHI	National Health Insurance
NIMART	Nurse-initiated and managed ART
NSP	National Strategic Plan
NW	North West
OI	Opportunistic infection
OOPE	Out-of-pocket expenditure
OVC	Orphans and vulnerable children
PEP	Post-exposure prophylaxis
PEPFAR	President's Emergency Plan for AIDS Relief (USG)
PFIP	Partnership Framework Implementation Plan (PEPFAR)
PLHIV	Person or people living with HIV
PMTCT	Prevention of mother-to-child transmission

PR	Principal recipient (Global Fund)
PrEP	Pre-exposure prophylaxis
PTB	Pulmonary tuberculosis
R4D	Results for Development
SA	South Africa
SANAC	South African National AIDS Council
SAPS	South African Police Service
SBCC	Social and behaviour change communication
SDA	Service Delivery Area (Global Fund)
SDC	Step-down care
TB	Tuberculosis
USG	United States Government
WC	Western Cape
XDR-TB	Extensively drug-resistant tuberculosis

## 1. Introduction and rationale for the provincial and district analysis

In 2015, the government of South Africa (GSA), led by the South African National AIDS Council (SANAC) and the National Department of Health (NDOH), and in collaboration with UNAIDS and other development partners, developed an Investment Case (IC)<sup>1</sup> for HIV and TB. The South African HIV and TB IC borrowed elements of the UNAIDS investment framework (Schwartlander 2011<sup>i</sup>, UNAIDS, 2011<sup>ii</sup>), such as the consideration of high impact biomedical and behavioural programmes, alongside strategic enablers of the HIV response and development synergies. For HIV, the SA IC also added the category of the technical efficiency<sup>2</sup> (TE) factor, which relates to the efficiency of only one programme (whereas enablers and synergies often aim at improving the efficiency or uptake across several programmes). The SA IC (SANAC, 2016<sup>iii</sup>) therefore proposes a package of programmes and the associated resources required to achieve the 90-90-90 targets<sup>3</sup> promoted by the NDOH, by calculating the most cost-effective mix of such programmes and enablers, to inform allocative decisions and domestic and donor budgets. The SA IC comprised of three phases – the first focused on the national-level estimates, the second on provincial-level results, and the third phase is planned to generate district level investment case analysis.

One component of the SA IC involved a review of previous spending on HIV and TB in South Africa from 2011/12 to 2013/14, from three funding sources: the GSA, the United States Government (USG) funding via the President's Emergency Plan for AIDS Relief (PEPFAR); and The Global Fund (GF). This review aimed to show where the key funders had been directing their resources, and whether these were allocatively optimal according to the IC proposed package. The findings of the Phase I expenditure tracking at the national level were presented and analysed in depth (see Guthrie et al, 2015<sup>iv</sup> for the consolidated national report), while this subsequent report presents the provincial- and district-level data analysis. However, the district level analysis was limited to only the DOH and GF spending on HIV in 2013/14, while TB expenditure was excluded as it could not be split by district due to data limitations in estimating out-patient spending (explained in detail the national report). At the time of the analysis, the PEPFAR expenditure data for HIV was also not coded by district.

This report seeks to (1) demonstrate how past HIV expenditures in South Africa were distributed across programmes at the provincial and district levels in 2013/14, (2) identify which programmes were prioritized with regard to financial allocation, and (3) assess whether these allocations reflected the priorities of the Investment Case.

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<sup>1</sup> Refer to the full Investment Case report for further details and findings.

<sup>2</sup> Technical efficiency in the context of the SA IC analysis refers to the maximisation of output (for example, HIV tests done) given a set level of inputs (for example, healthcare staff).

<sup>3</sup> UNAIDS Paris Declaration, Dec 2014. 90% of people know their HIV status, 90% of people who know their HIV-positive status are on treatment, 90% of people on treatment with suppressed viral loads.

## 2. Expenditure tracking scope and methodology

### Scope

This expenditure review covers SA government financial year (FY) 2013/14<sup>4</sup>, and includes all SA government funding for HIV channelled through the Department of Health (DOH)<sup>5</sup> (conditional and voted funds), as well as GF and PEPFAR contributions. The SA government DOH data could be split by province and district. The PEPFAR data could only be split by province since their EA dataset was not disaggregated by district in the year of study. Similarly, the GF principal recipient (PRs) did not originally report their spending by geographic location in 2013/14, hence they were requested to subsequently split their spending by district (see methods and estimations below). Going forwards, the PEPFAR data will be split by district and it is hoped that the GF PRs will do the same. The Results for Development (R4D) team under the Health Financing and Governance (HFG) Project with the Centre for Economic Governance and AIDS in Africa (CEGAA) and the Health Economics and Epidemiology Research Office (HE<sup>2</sup>RO) under the FINCAP project, funded by USAID, will continue with this important analysis for the years 2014/15 through 2016/17.

### Sources of data and estimations

For all DOH public spending, the Basic Accounting System (BAS) provided expenditure details for every transaction, mostly coded by the regional identifier (indicating the province and district) and those that were labelled as HIV/AIDS could be easily traced. This labelling of expenditure is routine for the Comprehensive HIV/AIDS conditional grant (CG) for the DOH but is done less systematically for the voted (equitable share) spending of the DOH. For some of the DOH voted funds, only the HIV/AIDS label was provided, with no detail of the intervention (sub-programme) and hence these had to be labelled as HIV not disaggregated.

The data for PEPFAR's spending came from PEPFAR's Expenditure Analysis tool (EA), which contains spending reported by PEPFAR's implementing partners (IPs) for 2013/14, when the EA data was split only by province and not by district. In the most recent EA data (2015/16), the IPs have reported their expenditure by district.

The GF expenditure data came from the GF's PRs' Enhanced Financial Reports (EFRs), which captured actual expenditure for each of their Service Delivery Areas (SDAs) (programme areas). However, the PRs were not required to split their spending by province or district, and hence they were subsequently asked to estimate these splits. This took the PRs some effort and assumptions had to be applied, based on some rational such as staff proportions per district, or by ART patient numbers

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<sup>4</sup> Although the national level estimation included the FYs 2011/12 to 2013/14, the provincial and district analysis was undertaken only for FY 2013/14, due to the amount of effort involved for this in-depth analysis.

<sup>5</sup> The provincial and district analysis could only be undertaken for the DOH spending, and the other departments are omitted here – refer to the consolidated national report for their contributions.

reached with ARVs funded by the GF via the CCMDD<sup>6</sup> mechanism. Not all GF spending could be disaggregated.

### Exclusions

Missing from this analysis are other external donor sources that accounted for 3% of the total HIV spending in 2009/10 (such as the UN agencies, other bilateral agencies and foundations) and private sources (voluntary insurances and company contributions) which formed around 8%, according to the most recent National AIDS Spending Assessment (NASA). There has been no recent attempt to collect data from all these smaller sources. The patients' own out-of-pocket expenditure (OOPE) on their health needs was not captured, but these may be assumed to be relatively small due to the free roll-out of ART in South Africa, and therefore mostly related to transport costs (as found by Guthrie, 2010<sup>v</sup>, and Rosen et al, 2007<sup>vi</sup>). The Demographic and Health Survey does not investigate respondents' spending on health in general, nor did South Africa's most recent National AIDS Spending Assessment collect data on OOP spending by households<sup>vii</sup>. The NHA currently underway should give greater insight into the magnitude of OOPE for health care.

In addition, in- and out-patient costs related to the treatment of opportunistic infections (OIs) could not be identified since they are embedded in the general health care spending of the DOH, and it was beyond the scope of this project to attempt to estimate these costs. As noted above, the TB out-patient treatment spending which had to be estimated based on the numbers of patients, could not be disaggregated by district level because the patient data are only available at the provincial level, and therefore is also omitted from the analysis (refer to the consolidated report for the national and provincial level TB spending).

The other public departments' (such as the Departments of Social Development, Basic Education, Correctional Services and Defence) that have HIV spending could also not be disaggregated by district. This data was presented in the national report, at the national level only.

### Categories of interventions and cross-walking challenges

The SA government, PEPFAR and the GF use different categorisations for their HIV and TB interventions and programmes. This required a crosswalking (matching as closely as possible) between the three datasets, as well as matching these to the agreed-upon IC programmes. The development of a crosswalk required in-depth understanding of each sources' programmes, their definitions and coding, and involved discussions with programme managers to find the best match.

Before the GF and PEPFAR data could be matched to the SA government's programme categories in its Basic Accounting System, the BAS categories had to be consolidated into a core common list.

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<sup>6</sup> Central Chronic Medicines Dispensing and Delivery mechanism.

This was necessary because the BAS labels for the programmes were not standardised across programmes, across provinces, and even within provinces. There was also variation in the naming of the core set of programmes for the DOH HIV conditional grant, sometimes with different spellings (or errors) of the same interventions. In addition, the required detail of the activity was usually labelled under one or two variables in the BAS dataset, but some provinces did not use the same variable (BAS Objective levels 6 and 7). Therefore, the entire BAS dataset and all its possible variables had to be searched for potential information on the activities, so that the expenditure could be labelled to the correct intervention, and then a standardised sub-set of ‘common BAS codes’ of all the HIV activities was developed to categorize all public spending according to a reduced list of activities. Over 300 different codes were found for all the public HIV activities, and these were collapsed into 38 common BAS codes (refer to Appendix B in the full consolidated report). These formed the basis against which all the PEPFAR and GF activities were then matched (see Appendix C and D in the full consolidated report). Once activities were matched to the BAS categories, they could be more easily matched to the IC programmes, and to the NASA and System of Health Accounts (SHA) categories for global comparisons as well as to the new GF New Funding Model (NFM) Modular Template categories.

The PEPFAR EA data uses a few aggregated categories that could not be disaggregated to the level available in the BAS data, and hence some estimations based on PEPFAR’s suggestions had to be computed. For example, their category ‘Facility-Based Care, Treatment and Support’ included ART and TB/HIV activities and these were split 75% and 25% respectively (as per a previous analysis undertaken by Results for Development, 2014<sup>viii</sup>). The other PEPFAR categories were mostly directly matched, such as their male circumcision spending which was matched to the BAS medical male circumcision (MMC), and similarly for condoms, counselling and testing. Refer to Appendix B in the full consolidated report for the PEPFAR-BAS crosswalk in more detail.

The GF Service Delivery Areas (SDAs) were sometimes broad and could contain more than one programme or activity. Unfortunately, the detailed spending on these sub-programmes could not be disaggregated from the EFRs. In such cases, the entire spending was attributed to the one activity that was assumed to be the most common. For example, ‘HIV and TB case finding’ had to all be matched to HIV counselling and testing (HCT) in the common BAS codes, since the TB testing spending could not be extracted. Sometimes the Objective detail in the EFRs provided some insight into the SDA label. For example, the SDA label ‘care for the chronically ill’ was matched to ‘community and home-based care’ category in the BAS classifications, since its objective was to increase access to support for rural communities. But there may have been some inaccurate matching, since the PRs can define the content of their activities differently under the same SDA labels, as there was no standardized definition of SDAs. This has subsequently been corrected in the new Funding Modules. Refer to Appendix C in the full consolidated report for the GF SDA crosswalk to the matching BAS category.



## Limitations of the data and analysis

### ***South African government data***

Only the DOH expenditure data were disaggregated according to the geographic location (the regional identifier) in the BAS dataset. The other departments' data were not labelled by geographic location and therefore could not be included in this analysis. Some provincial DOHs (PDOHs) labelled every financial transaction by district and sub-district, such as Gauteng (GP), KwaZulu-Natal (KZN), Western Cape (WC) and Northern Cape (NC). The data from the other provinces were very weak in this regard: Eastern Cape (EC), Free State (FS), Limpopo (LP), Mpumalanga (MP) and North West (NW), and therefore analysing their expenditure by district became meaningless due to the large proportions that were labelled as 'whole province' spending.

### ***PEPFAR data***

As noted above, the PEPFAR expenditure data for 2013/14 was only split according to the provincial level, and therefore no district level analysis was undertaken. However, going forwards, the PEPFAR EA data will be split by district, adding another important layer to this consolidated analysis.

### ***GF data***

The PRs (apart from the WC DOH) for the GF in South Africa were not labelling, nor reporting, their expenditure by province or district, at the time of the study. The PRs were requested to split their expenditure based on some logical assumption, such as proportion of staff per programme operating in known districts. Most of the PRs managed to do this, but for all PRs, some portion of their expenditure could not be disaggregated. The NDOH, which had the largest portion of the GF funds, struggled to undertake a logical split of their expenditure. To estimate their purchase of ARVs with GF money (the largest portion of their grant allocation), the CCMDD's data on patients' locations was used, as far as possible (see Appendix B). However, in 2013/14 the CCMDD was recently established and those data were not provided, but only for 2014/15 and 2015/16. Therefore the 2014/15 split of patients by location was applied to the 2013/14 ARV spending, assuming that there was no change in the patients' locations between the two years, which is unlikely.

Overall, the analysis of the GF spending by district is highly uncertain because the PRs were not required to report their expenditure by location. Going forwards, **it is strongly suggested that the GF require their PRs to add a regional identifier to every transaction, preferably applying the district coding used by the country and BAS, to allow for easier consolidation.**

### ***District-level epidemiological data***

The provincial HIV prevalence data was provided by the Thembisa model (Johnson, 2016<sup>ix</sup>). Recently (April 2017), preliminary district-level HIV-prevalence data was modelled by Bhatt<sup>x</sup> for 2015, and was

applied to the 2013/14 district populations (obtained from the District Barometer, HST, 2014). At the time of this analysis, these were still un-validated estimates of district HIV populations, and we had to assume similar HIV prevalence in 2013 as in 2015, but in the absence of more accurate district HIV prevalence data, these have enabled a rough comparison of spending per PLHIV across districts, as some measure of equity of spending according to the burden of disease.

Table 1. Summary of Expenditure Data Availability for FY 2013/14

Data Source	Lowest Level of Disaggregation Available
GSA DOH HIV	District (for some provinces)
GSA DOH TB	District (for some provinces)
GSA DSD HIV	National
PEPFAR	Provincial
Global Fund Principal Recipients	District (indicative splits provided by PRs)

### ***Other data limitations***

Interpretation of findings is challenging because there is insufficient data to determine, for example, whether higher observed expenditure in one district compared to another stems from terrain factors, inefficiency, inequitable distribution of resources, or better service quality.

### **Provincial level findings**

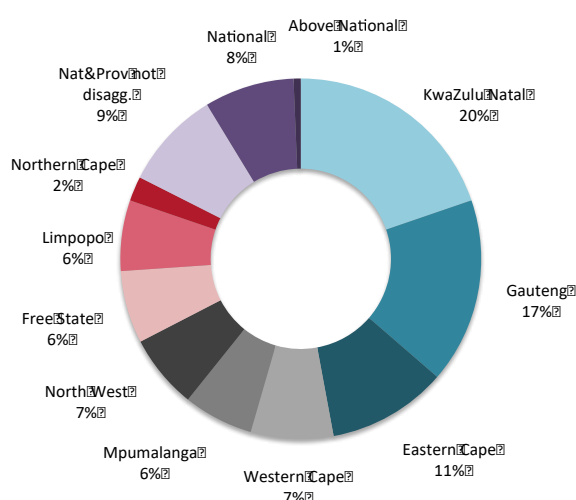
In 2013/14, the total spending on HIV in South Africa, from GSA, PEPFAR and GF sources was R 18.2 billion (approximately US\$ 1.82 billion), of which 78% was from public revenue, 18% from PEPFAR and 4% from GF.

Figure 1 shows the provincial split of HIV spending. The bulk of the funding went to KwaZulu-Natal (KZN, 20%), Gauteng (GP, 17%), and Eastern Cape (EC, 11%). The smallest amounts went to Limpopo (LP), Free State (FS), Mpumalanga (MP) (all with 6%), and Northern Cape (NC, 2%). The public spending that went via the Department of Social Development (DSD), the Department of Correctional Services (DCS), the South African Police Service (SAPS) and the Department of Basic Education's (DOE) Lifeskills programme could not be disaggregated by province and is therefore included in the 'National and Provincial Not Disaggregated' category. Some of the GF spending was also not disaggregated and is captured in the same not-disaggregated category. PEPFAR had a small amount of spending that occurred outside the country, but was considered to benefit South Africa (e.g. on non-South African-based consultants doing work on South Africa), and this was labelled as 'above national' in Figure 1.

Figure 2 indicates the total amount spent per province on HIV (on the left axis), by DOH, the GF PRs and the PEPFAR implementing partners (IPs). Additionally, the spending per PLHIV is depicted on the right axes, to give some indication of equity in spending based on the burden of disease.

Although KZN and GP had the highest HIV spending in 2013/14, when their large HIV-positive population is considered, it appears that their spending per PLHIV per annum (R2,737 and R2,136 respectively) were below the national average (R3,240 per annum) (Figure 2). EC and FS expenditures were the closest to the national average spent per PLHIV (R3,619 and R3,981 respectively). The other provinces showed some variation around the average, with NC having the highest HIV spending at R6,522 per PLHIV in 2013/14. This can be explained, to some extent, by the greater costs of delivering services to the sparsely populated province.

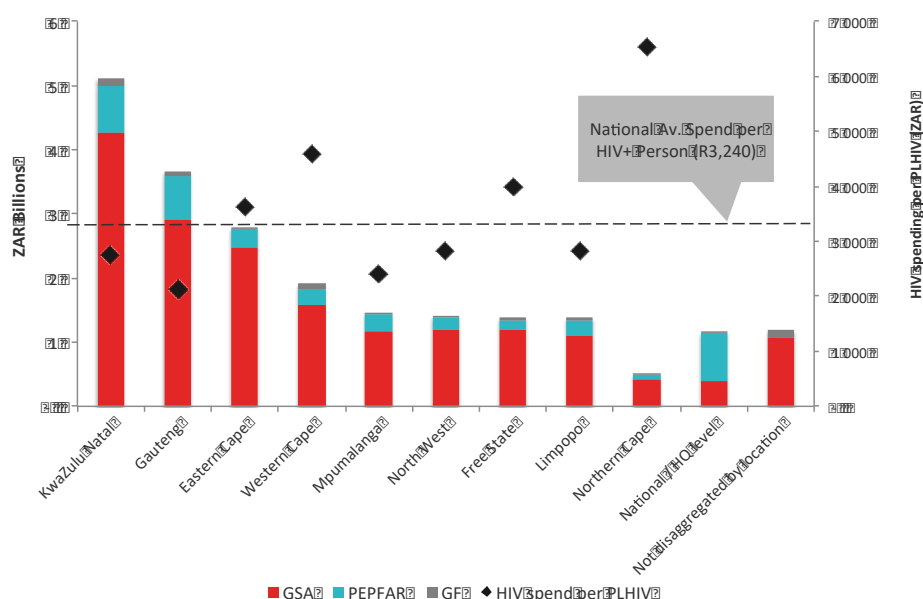
Figure 1. Proportional split of HIV spending by province in South Africa (FY 2013/14, %)



Sources of data: PDOH BAS records: CG and voted funds, 2013/14. PEPFAR EA report, 2014. GF PRs' EFRs, 2013/14.

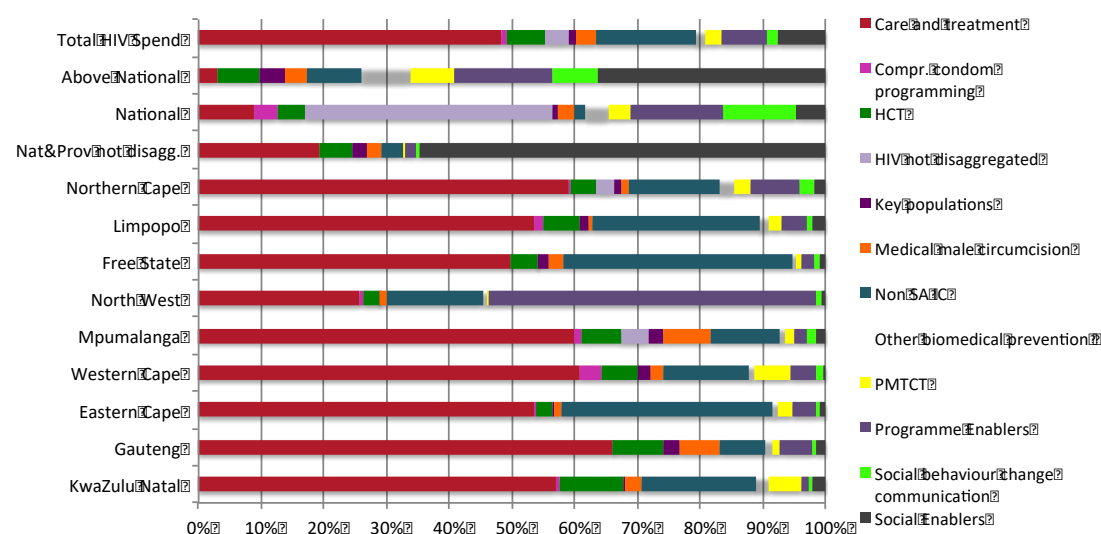
When provincial HIV spending by intervention is examined, it is not surprising that care and treatment consumed the largest portion of the provinces' spending in 2013/14, on average 48% (Figure 3). Some provinces spent proportionally more than the average: NC (59%), MP (60%), WC (61%), GP (66%) and KZN (57%), while NW was far below the average at 26% of their spending for care and treatment, the reason for which could not be ascertained.

Figure 2. HIV spending per province by source and per PLHIV (ZAR, FY 2013/14)



Sources of data: PDOH BAS records: CG and voted funds, 2013/14. PEPFAR EA report, 2014. GF PRs' EFRs, 2013/14.

Figure 3. HIV spending per province by intervention (% , FY 2013/14)



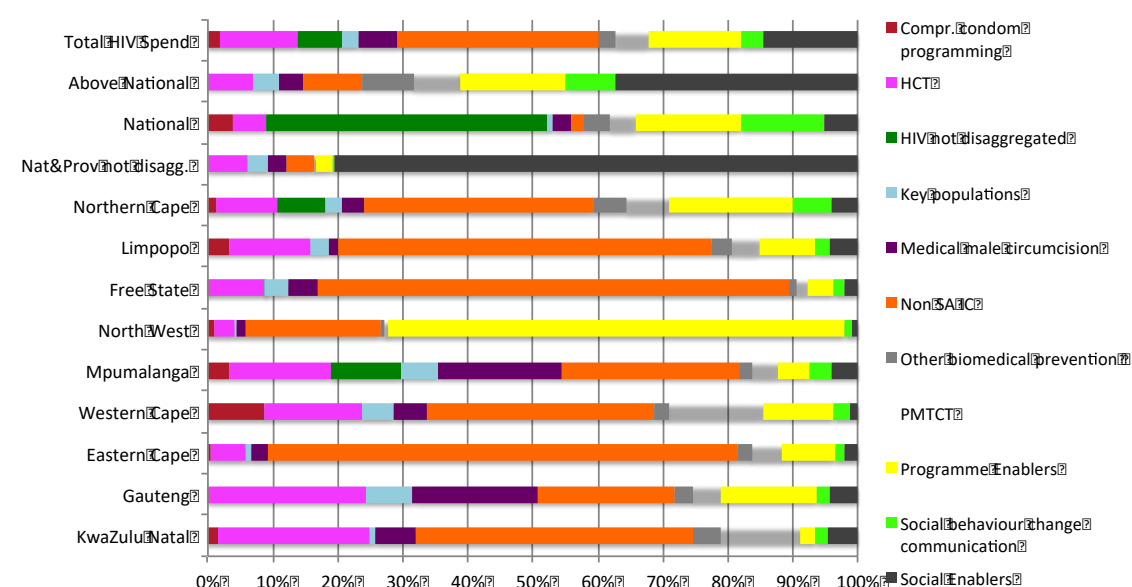
Sources of data: PDOH BAS records: CG and voted funds, 2013/14. PEPFAR EA report, 2014. GF PRs' EFRs, 2013/14.

No particular trends or similarities are to be seen for non-treatment HIV spending across provinces (Figure 4). The non-SA IC category that accounted for 16% of total HIV spending and was particularly large in certain provinces, including FS, EC, LP and KZN, and was primarily spent on home-based care. Despite its low cost-effectiveness in the SA IC modelling, provinces have been spending considerable amount of both their CG and equitable share funds on home-based care, which is labour intensive and therefore can be costly when large numbers of care givers are employed. HCT accounted for 6% of HIV spending on average, with KZN and GP spending 10% and 8% respectively, while NW and EC only spent 2% each. There was interesting variation in the proportional spending on MMC in the provinces,

with GP and MP spending 7% and 8% respectively of their total HIV spending on MMC, while most of the other provinces spent 2% or less, with the national average at 3%. PMTCT accounted for only 3% of the total HIV spending on average in 2013/14 (excluding the ARV costs for the mothers), with WC and KZN spending slightly more than the average, 6% and 5% respectively on PMTCT. For greater understanding of these provincial variations, further provincial-level exploration would be required.

The proportional spending in 2013/14 on interventions across provinces is not directly comparable to the SA IC estimated costs and proportional spending estimated for 2014/15, being different financial years. In addition, the 2013/14 data does not take into account the recent policy changes such as the adoption of the 90-90-90 targets and the test and treat all policy. Nevertheless, Figure 5 indicates that increased funding for care and treatment, both nominally and proportionally, would have been required in 2014/15, and likely more so due to policy changes thereafter. The TB spending appeared to be close to the estimated need, while spending for other interventions demonstrated a larger funding gap.

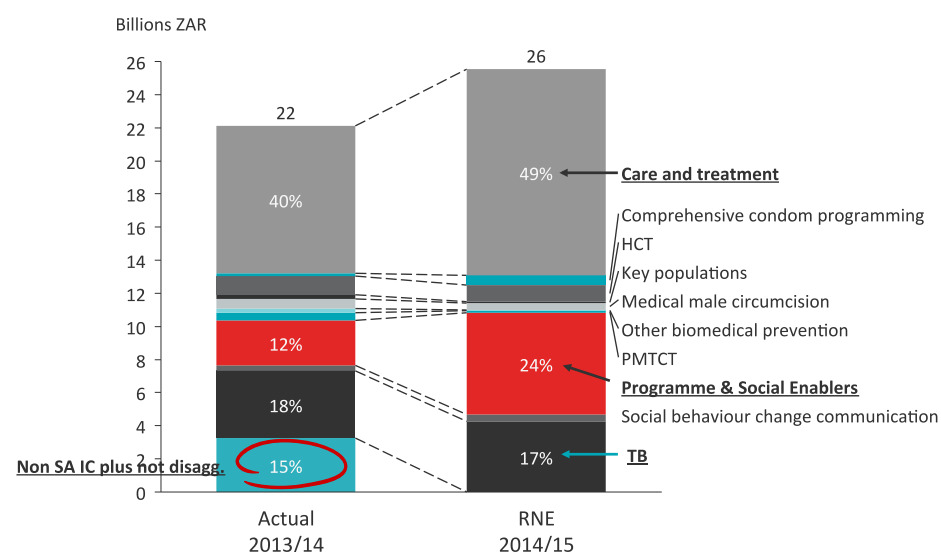
Figure 4. Provincial HIV non-treatment spending (% of total HIV spending, FY 2013/14)



Sources of data: PDOH BAS records: CG and voted funds, 2013/14. PEPFAR EA report, 2014. GF PRS' EFRs, 2013/14.

The apparent 'shortfall' for the programme and social enablers could be due to the approach taken for costing these interventions, which are difficult to define, and on the expenditure data side, may not have been easily identified as HIV-specific. Further exploration would be required. It is difficult to comment meaningfully on the other programmes requiring and consuming fewer resources, but they appear to be proportionally according to need, except for key population interventions and condoms, which appear to be on the low side.

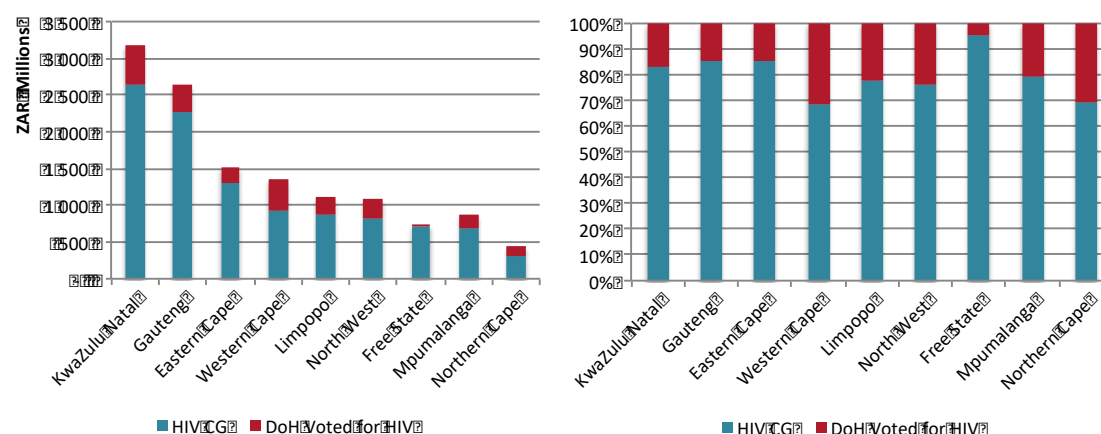
Figure 5. Comparing past (FY 2013/14) HIV & TB spending with future (FY 2014/15) IC priority intervention resource needs estimates (ZAR billions)



Sources of data: PDOH BAS records: CG and voted funds, 2013/14. PEPFAR EA report, 2014. GF PRs' EFRs, 2013/14. SA Investment Case, 2015.

Examining DOH spending on HIV in more detail, Figure 6 shows the total CG and ES contributions made by each province, in nominal and proportional terms, with variation among the provinces in terms of the additional top-ups made from their ES sources. WC and NC showed the highest proportional contribution: 30% of their total spending came from ES funds, while FS had the least (less than 5%). ES contributions for other provinces varied around 15-20%. These shows important additional commitments made by the PDOHs to their HIV programmes. It will be interesting to see if similar amounts are sourced from their ES going forwards, as their CG allocations continue to expand (as per the recent Estimates of National Expenditure, 2017<sup>xi</sup>).

Figure 6. DOH CG and ES for HIV per province (ZAR millions, %, FY 2013/14)



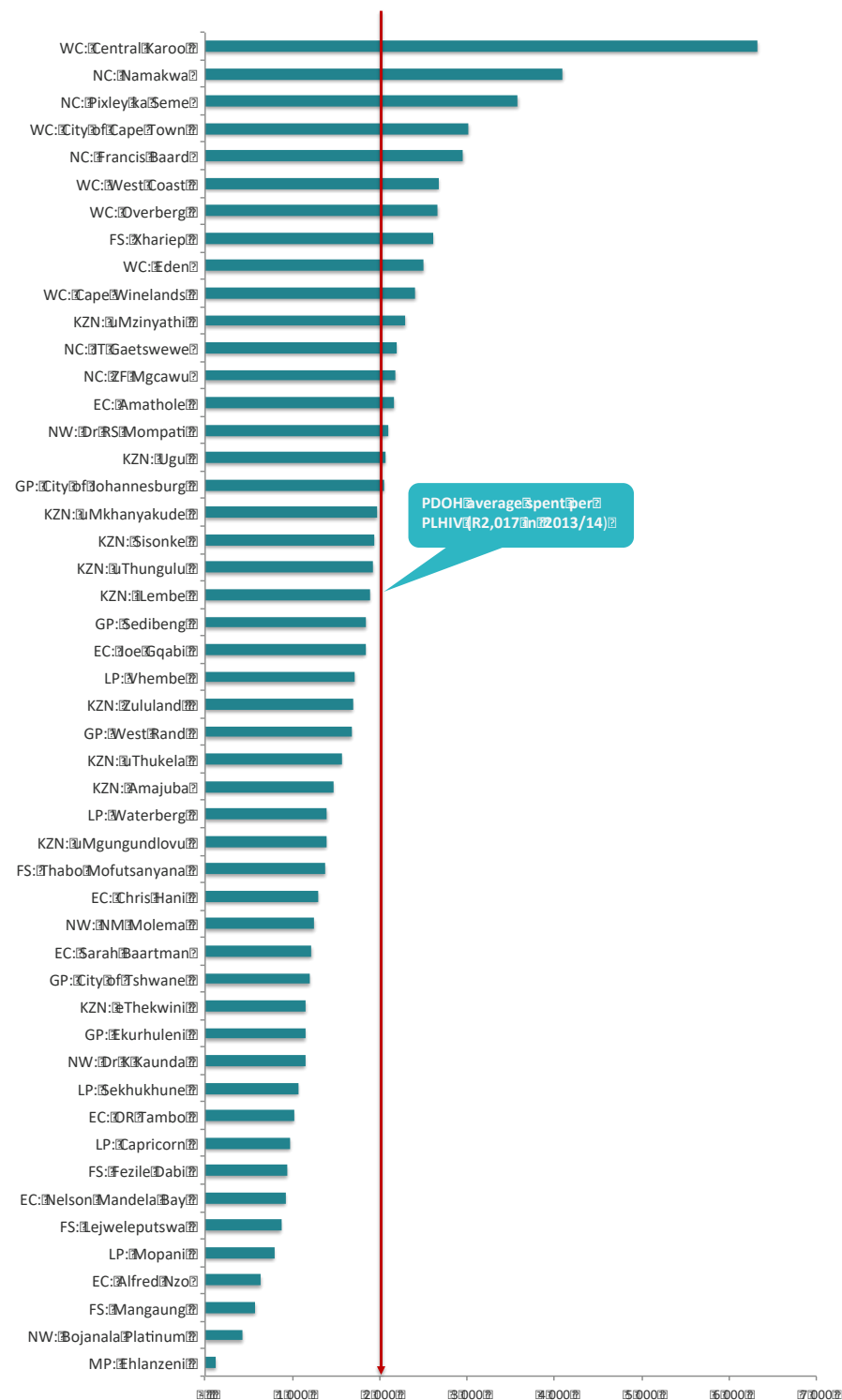
Source of data: PDOH BAS records: CG and voted funds, 2013/14.

The following section presents the district-level spending of the PDOHs and the GF PRs (excluding the other departments' and PEPFAR's spending which could not be disaggregated by district), for the provinces where the data were adequate to undertake this analysis, noting again the limitations in the data described above.

### 3. District level findings

The spending by district is first presented by the PDOH public sources, and then by the GF PR's funding, and finally combined. Figure 7 presents the PDOH spending per district.

Figure 7. PDOH HIV spending per district per PLHIV, from public sources only: DOH CG and voted funds (ZAR, FY 2013/14)



Sources of data: PDOH BAS records: CG and voted funds, 2013/14. Bhatt (2017): District HIV prevalence.



## Provincial Department of Health spending per district

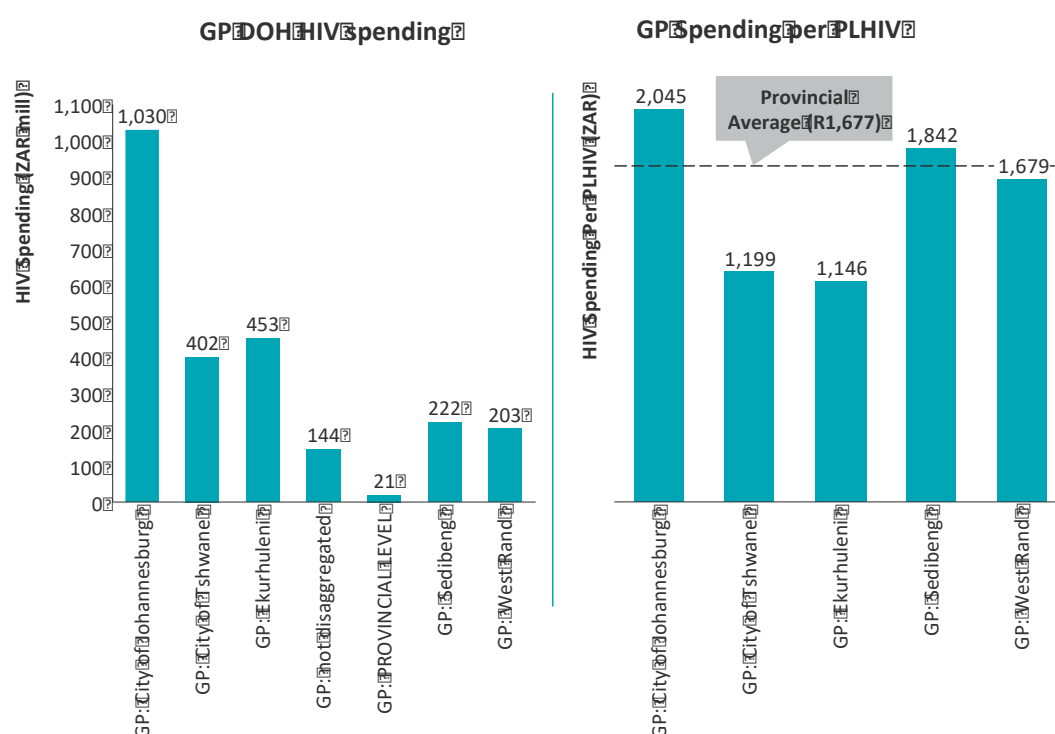
Examining spending on HIV per PLHIV only by the provincial departments of health, the figure above indicates that capturing the PDOHs' CG and ES on HIV (excluding the national DOH level spending), shows an average spending of R1,964 per PLHIV. This varies across the districts significantly, but it must be noted that certain provinces (MP, EC, FS, LP and NW) did not systematically code all their expenditure by district (regional identifier in BAS).

We now examine the district-level DOH HIV spending in more detail in the provinces that adequately labelled their spending by the BAS regional identifier: GP, KZN, NC and WC.

### Gauteng DOH

The HIV spending per district by the Gauteng Department of Health from both the comprehensive HIV/AIDS conditional grant (CG) and voted funds is shown in Figure 8 below. The GP DOH had very little spending that was labelled as provincial level, or that was not disaggregated (only 7%).

Figure 8. Gauteng DOH CG & voted HIV spending per district (ZAR millions) and per PLHIV (ZAR) (FY 2013/14)



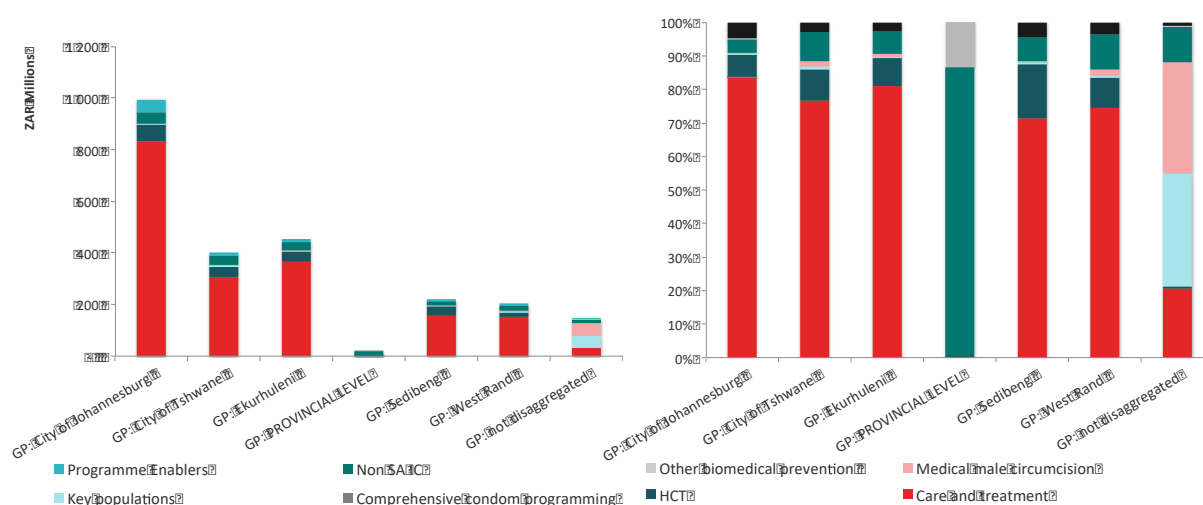
Sources of data: PDOH BAS records: CG and voted funds, 2013/14. Bhatt (2017): District HIV prevalence.

The Gauteng DOH spent the most (42%) of its HIV funding in the City of Johannesburg – just over R 1 billion in 2013/14. City of Johannesburg also had the highest spending per PLHIV at R2,045 in 2013/14. This was followed by Sedibeng at R1,842, and West Rand at R1,679. The City of Tshwane and

Ekurhuleni, received the next greatest shares (16% and 18% respectively) of Gauteng DOH HIV spending but they had the lowest spending per PLHIV at R1,199 and R1,146 which was quite a bit lower than the provincial average spending of R1,677 per PLHIV.

In terms of spending by intervention, Figure 9 shows that care and treatment took the largest share of the spending in every GP district in 2013/14, while HCT took the next largest share. The non-IC category was mostly home-based care (HBC), while the VMMC and key population spending were not disaggregated by district (captured under 'ND').

Figure 9. Gauteng DOH HIV spending per district per intervention (ZAR billions, %, FY 2013/14)



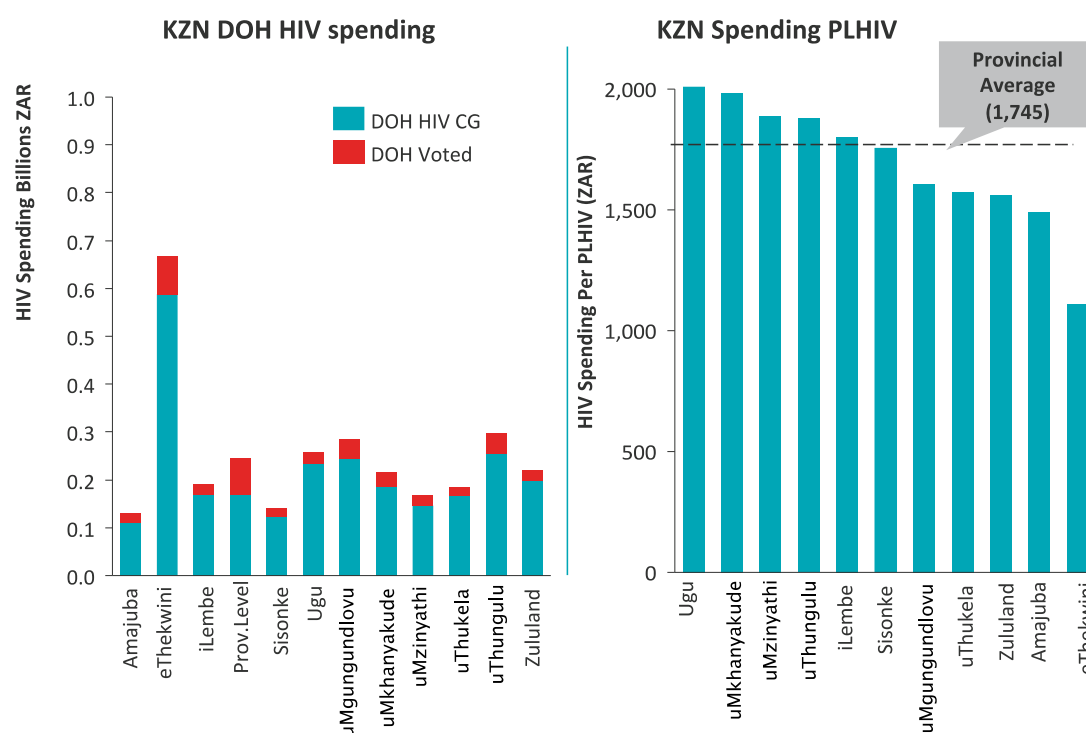
Source of data: PDOH BAS records: CG and voted funds, 2013/14.

### KwaZulu-Natal DOH

In KZN, the PDOH spent R1,745 per PLHIV on average from its CG and voted funds in 2013/14 (Figure 10). The district spending varied slightly around this mean, with eThekweni having the lowest spending per PLHIV at R1,153, despite having the highest total spending at R650 million (22% of the total HIV expenditure in KZN). This is because eThekweni has the highest number of PLHIV in KZN (close to an estimated 580,000 in 2013/14). uMzinyathi had the highest spending at R2,292 per PLHIV, but third lowest in nominal amounts of total HIV spending (5%), after Amajuba (5%) and Sisonke (4%). Refer to the appendices for the detailed figures.

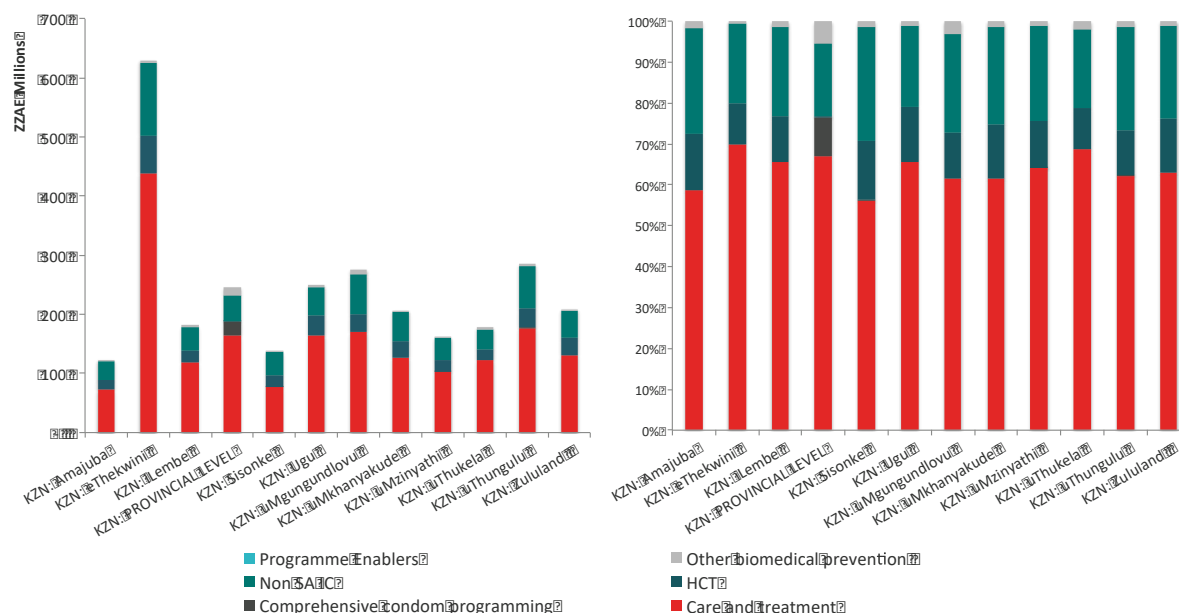
In terms of spending by intervention, Figure 11 shows again that care and treatment took the largest share of the spending in every KZN district in 2013/14, while the non-IC category (mostly HBC), took the next largest share, followed by HCT. The VMMC and condoms spending were captured at the provincial level.

Figure 10. KZN DOH HIV spending per district (ZAR millions) and per PLHIV (ZAR) (FY 2013/14)



Sources of data: PDOH BAS records: CG and voted funds, 2013/14. Bhatt (2017): District HIV prevalence.

Figure 11. KZN DOH HIV spending per district per intervention (ZAR billions, %, FY 2013/14)

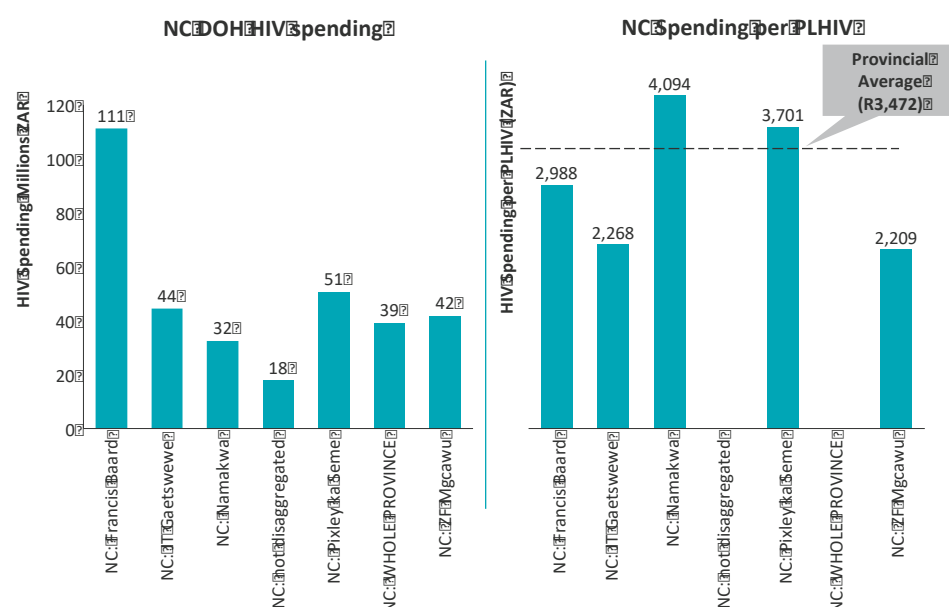


Source of data: PDOH BAS records: CG and voted funds, 2013/14.

## Northern Cape DOH

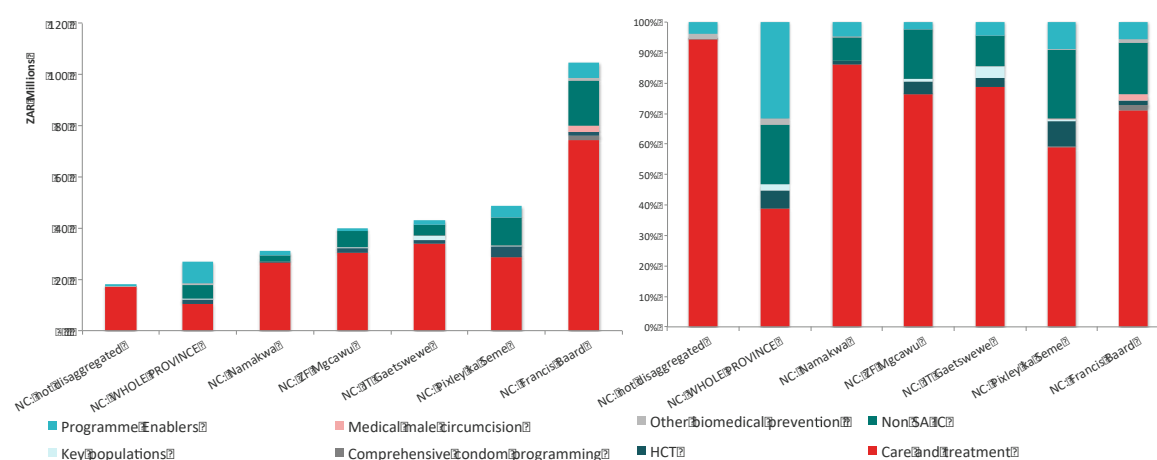
The NC DOH labelled most of its HIV spending, both the CG and voted funds, according to district level, with only 6% not disaggregated and 12% captured as spending at the provincial level (Figure 12). The largest share of the funding went to Francis Baard (R 111.2 million making up 32% of the total DOH HIV spending), and with its higher number of PLHIV (estimated at around 37,000 in 2013/14), its spending per PLHIV was R2,988. Namakwa district, although having the smallest share of the total funding (5%) had the highest spending per PLHIV at R4,094, probably due to its lower number of PLHIV as well as its remote location and higher service delivery costs. The provincial average spending of the CG and voted, including the not-disaggregated and the provincial spending was R3,472 per PLHIV.

Figure 12. NC DOH HIV spending per district (ZAR millions) and per PLHIV (ZAR) (FY 2013/14)



Sources of data: PDOH BAS records: CG and voted funds, 2013/14. Bhatt (2017): District HIV prevalence.

Figure 13. NC DOH HIV spending per district per intervention (ZAR billions, %, FY 2013/14)



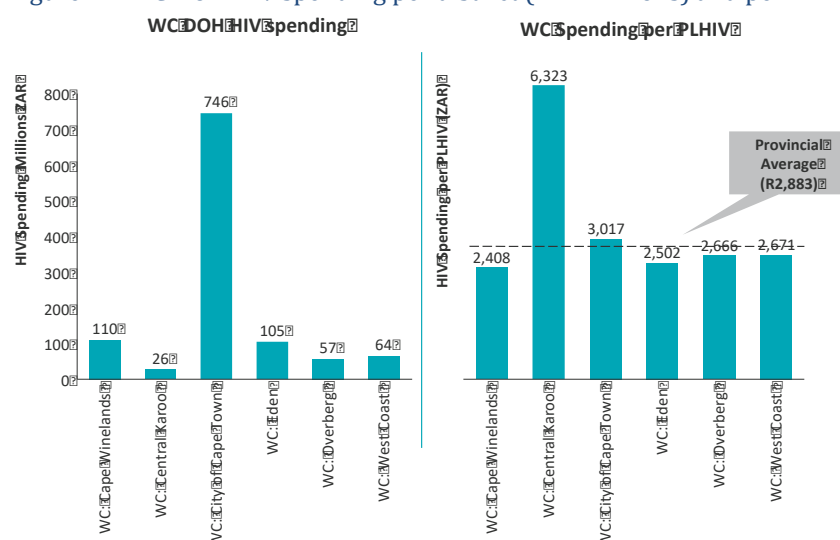
Source of data: PDOH BAS records: CG and voted funds, 2013/14.

In terms of the spending per intervention per district, the NC DOH was also spending the majority on care and treatment, followed by HBC (labelled as non-IC in the Figure 13). There appeared to be no spending labelled as HCT but this may have been due to an error in coding of the expenditure.

### Western Cape DOH

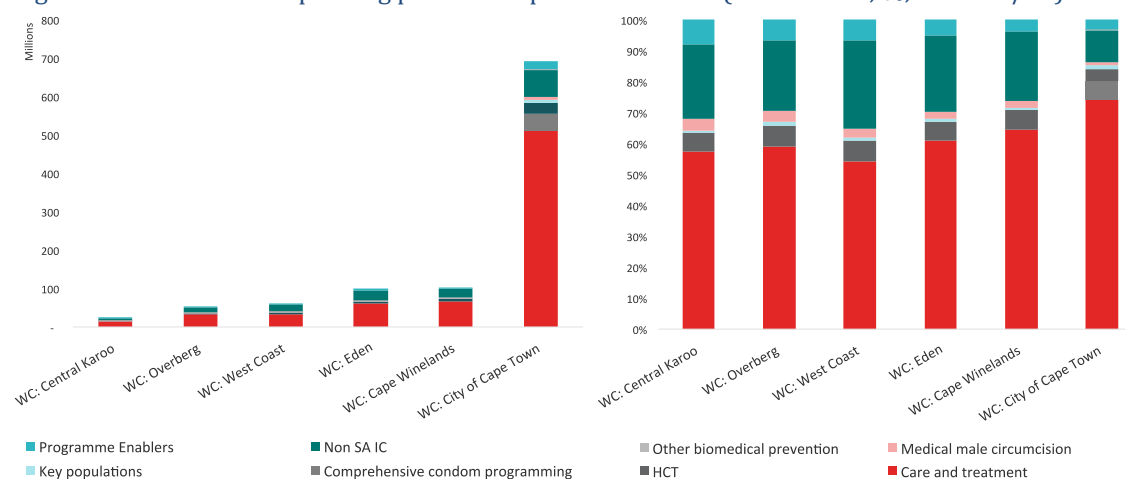
The WC DOH spending on HIV from CG and voted funds was the greatest in the City of Cape Town, at R746 million in 2013/14, and when adjusted for their HIV-positive population (estimated at nearly 250,000), their spending per PLHIV was R3,017. This was slightly higher than the provincial average of R2,883 per PLHIV, and most other districts were close to this mean, except for the Central Karoo which had the highest spending per PLHIV of R6,323. However, Central Karoo also had the lowest total HIV spending (R25.9 million) in 2013/14 and the smallest HIV-positive population (estimated at only around 4,000 persons). There did not appear to be any spending labelled at provincial level spending in the WC, but it was probably labelled as the City of Cape Town (Figure 14).

Figure 14. WC DOH HIV spending per district (ZAR millions) and per PLHIV (ZAR) (FY 2013/14)



Sources of data: PDOH BAS records: CG and voted funds, 2013/14. Bhatt (2017): District HIV prevalence.

Figure 15. WC DOH HIV spending per district per intervention (ZAR billions, %, FY 2013/14)



Source of data: PDOH BAS records: CG and voted funds, 2013/14.

The WC DOH HIV spending went primarily to care and treatment, followed by HBC (non-IC) interventions. HCT, programme enablers, key populations and VMMC received small portions as well (Figure 15).

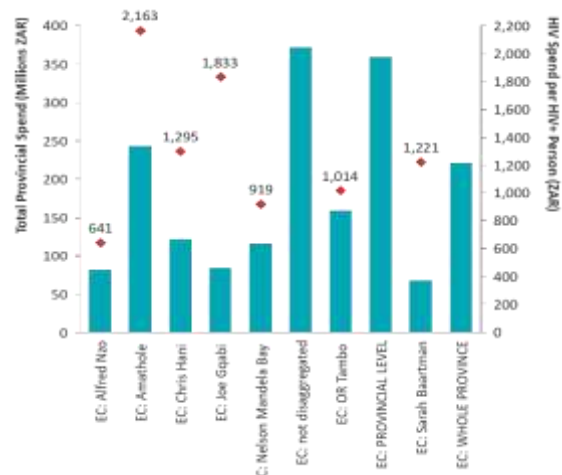
***Other provincial DOHs' spending that was not disaggregated by district***

The other provinces did not consistently label all their HIV expenditure according to the regional identifier in the BAS records and hence the district analysis cannot go more granular than the total district spending, as per the examples in Figure 16 below. The provincial average HIV spending (CG and voted) per PLHIV ranged from R1,612 in Mpumalanga to R3,077 in the Free State, as shown in Figure 16 below.

In summary, the PDOHs spent varying amounts per district on HIV, from their CG and voted funds, in 2013/14. Some provinces consistently labelled their expenditure by the regional level in BAS to identify the district, namely: GP, KZN, NC and WC. These provinces showed some similar levels of spending per PLHIV per district, with some variation around the average and with the harder-to-reach districts incurring greater expenditure, as would be expected. The remaining provinces (EC, FS, LP, MP, NW) did not consistently label the bulk of their HIV expenditure according to the district, making the analysis of their district spending per PLHIV meaningless. It would be of value for these provinces to attempt to label every financial transaction according to the district that benefitted from the expenditure, so as to assess if funds are being equitably distributed to those areas with greater need.

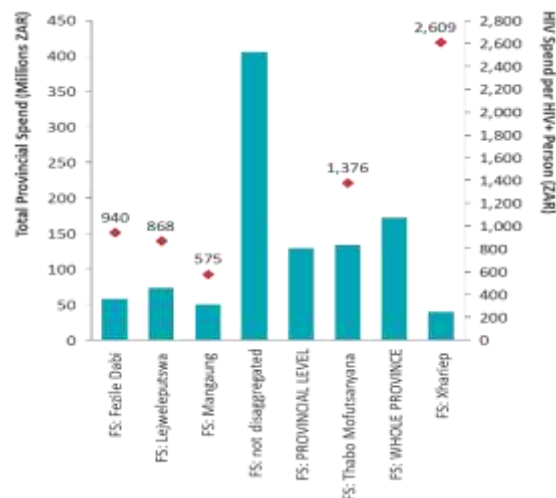
Figure 16. DOH HIV spending, not disaggregated by district: EC, FS, LP, MP, and NW (ZAR millions, FY13/14)

### i. Eastern Cape



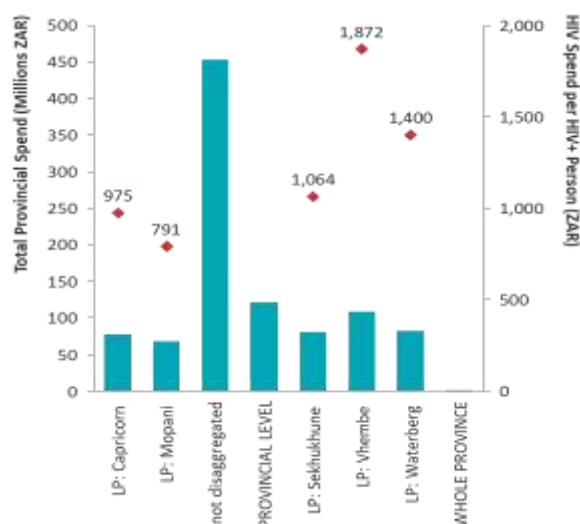
EC DOH Average Spent Per PLHIV: R 2,546

### ii. Free State



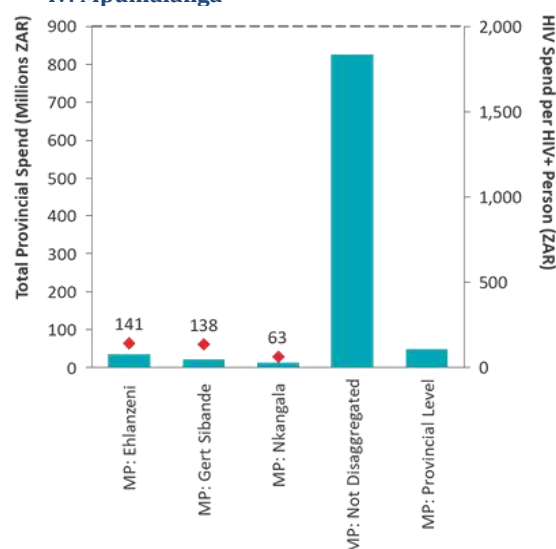
FS DOH Average Spent Per PLHIV: R 3,077

### iii. Limpopo



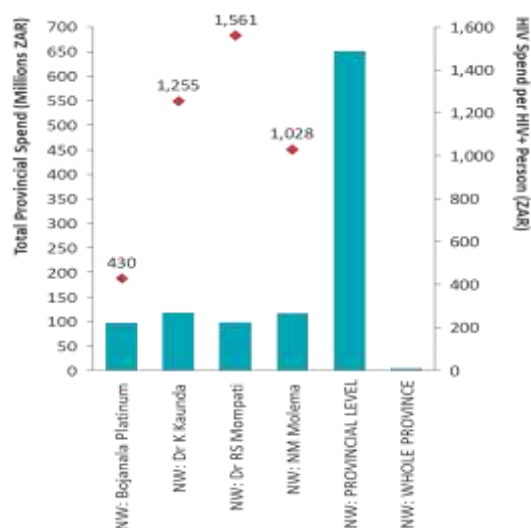
LP DOH Average Spent Per PLHIV: R 2,773

### iv. Mpumalanga



MP DOH Average Spent Per PLHIV: R 1,612

### v. North West

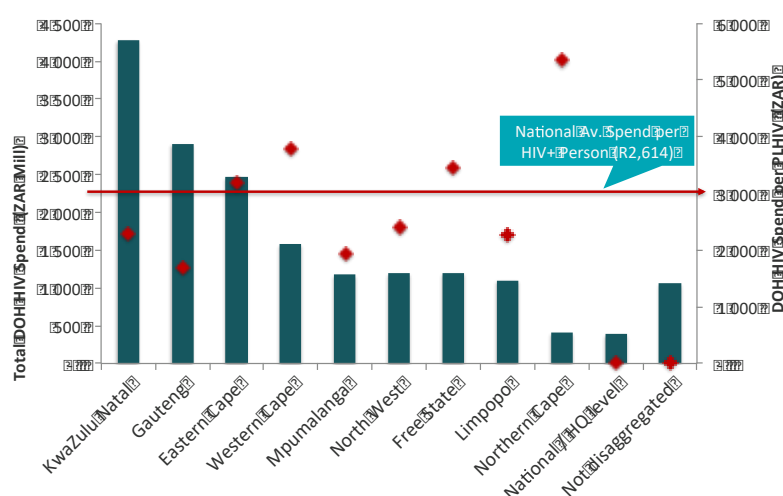


NW DOH Average Spent Per PLHIV: R 2,313

Sources of data: PDOH BAS records: CG and voted funds, 2013/14. Bhatt (2017): District HIV prevalence.

Figure 17 shows some variation in the average provincial DOH HIV spending per PLHIV (which includes the non-disaggregated and provincial level spending), and compares this with the country average DOH HIV spending that was around R2,600 per PLHIV in 2013/14 (including the national level DOH spending). MP, GP and KZN spent slightly under the average per PLHIV, while NW and EC spent slightly above. NC spent the smallest amount in total nominal amounts, but due to their small HIV-positive population and their sparse locations, they incurred the greatest expenditure per PLHIV (R3,472). The remaining provinces (LP, FS and WC) spent around R3,000 per PLHIV. Refer to the appendices for the detailed data.

Figure 17. DOH total HIV spending (CG & voted, ZAR millions) and per PLHIV (ZAR) in FY 2013/14



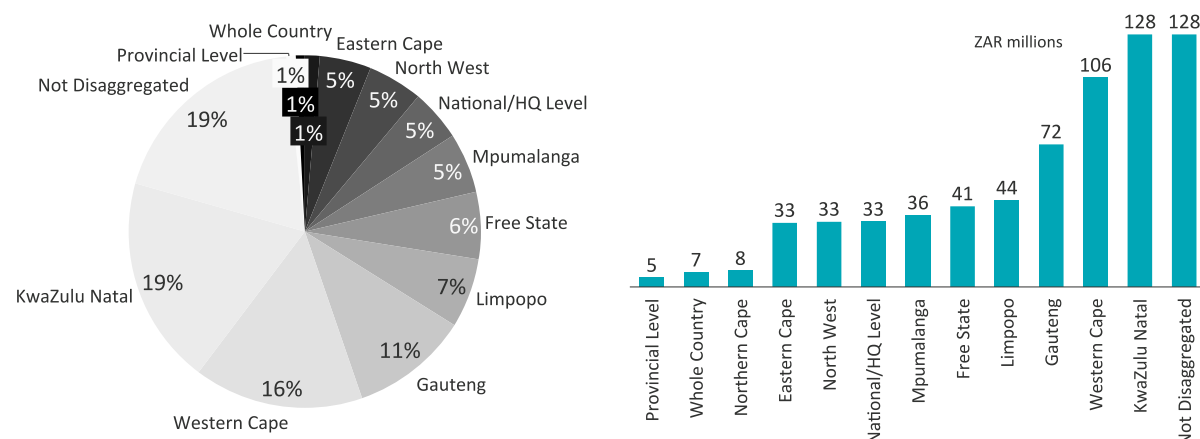
Sources of data: NDOH & PDOH BAS records: CG and voted funds, 2013/14. Bhatt (2017): District HIV prevalence.

### Global Fund Principal Recipient spending per district

In total, the GF PRs spent a total of ZAR 675 million (approximately US\$ 67.5 million) on HIV in South Africa in 2013/14. Moving to their district spending—recalling the earlier explanation of the lack of disaggregation of the PR spending by geographic location—they all, except for WC DOH, applied some assumptions to estimate the split between districts. This undermines the district comparisons, and hence conclusions cannot be drawn with much certainty. Figure 18 examines the provincial split of GF funding, showing both proportional and nominal amounts, and demonstrates that KZN received the largest share (19%) of HIV funds, followed by the WC (16%), while NC received the smallest share (1%). A large portion (19%) could not be disaggregated, and a small proportion (1%) went towards spending at the provincial level.



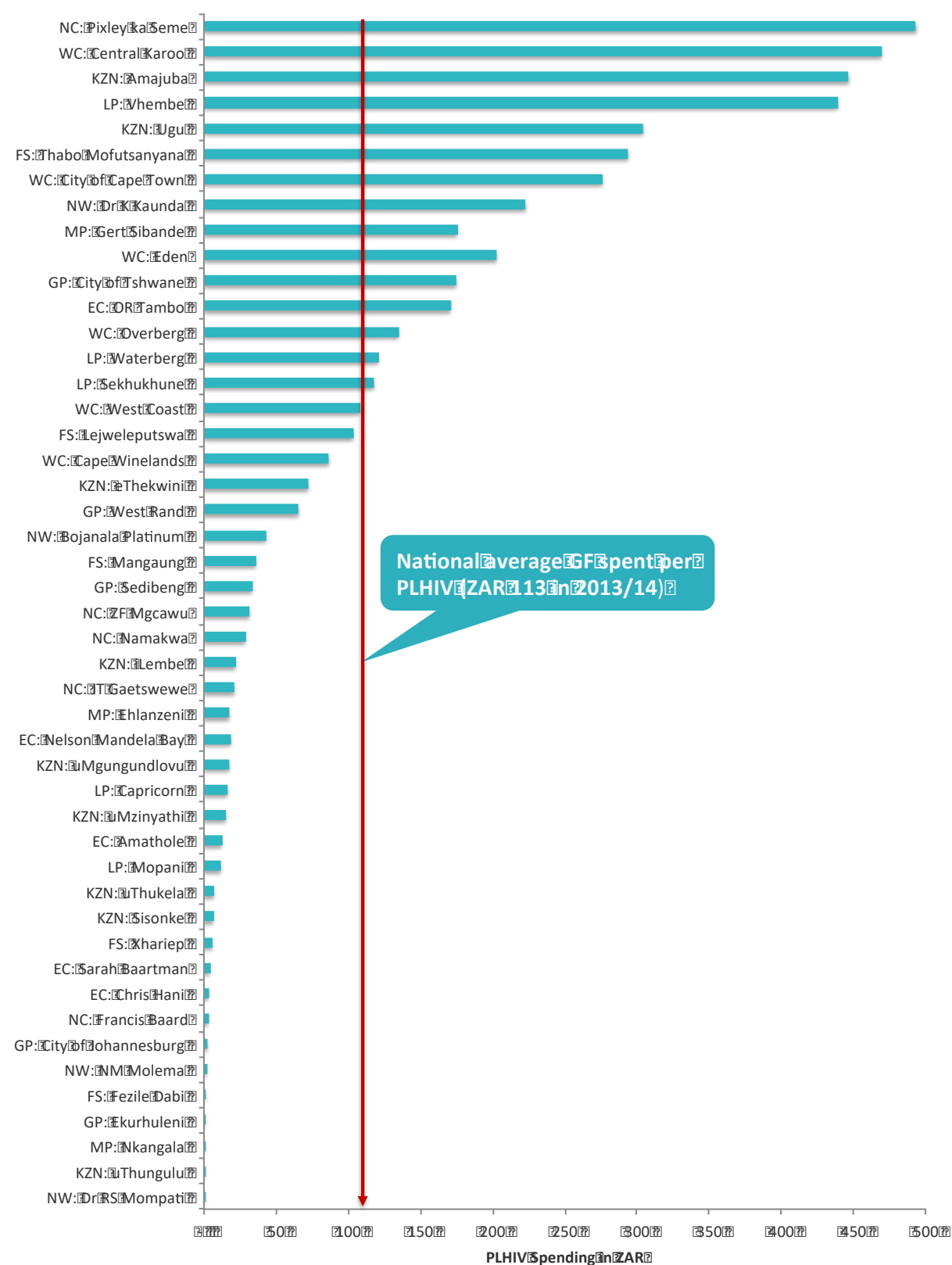
Figure 18. Disaggregated GF HIV spend per province (% , ZAR millions, FY 2013/14)



Source: GF PR EFRs, 2013/14.

Figure 19 calculates the GF spending per PLHIV per district, showing the wide range around the average spending of R113 per PLHIV, from R0.17 in Dr RS Mompoti (NW) to R493 in Pixley ka Seme (NC). Although the split provided by the PRs was an estimate, this seems to imply that the GF monies may have been spread thinly, and could possibly have greater impact if directed to fewer districts in the country – those with the greatest HIV burden – while also bearing in mind the location of the PEPFAR funding so as to avoid duplication and ensure complementarity. Going forward, the PEPFAR implementing partners will be reporting their expenditure according to district, and the PDOHs are also working to improve their regional coding in their BAS records. Therefore, GF PRs should also enhance the capacity of their reporting mechanisms and gather district specific expenditure information. Improved expenditure tracking will contribute towards better joint planning in South Africa and ensure that resources are being targeting effectively to generate greatest impact.

Figure 19. GF District HIV & HIV/TB spending per PLHIV (ZAR, FY 2013/14)

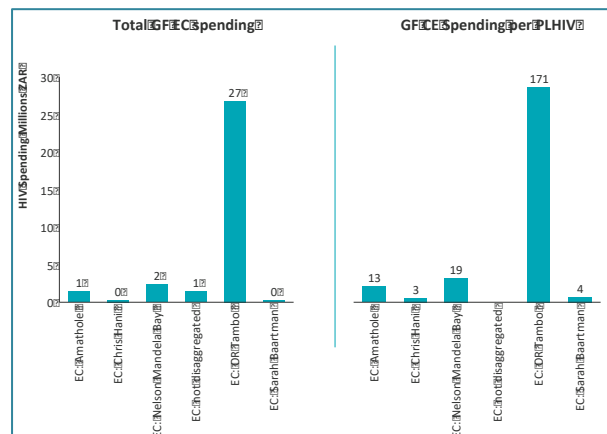


Sources: GF PR EFRs and estimated district split. Bhatt (2017): District HIV prevalence.

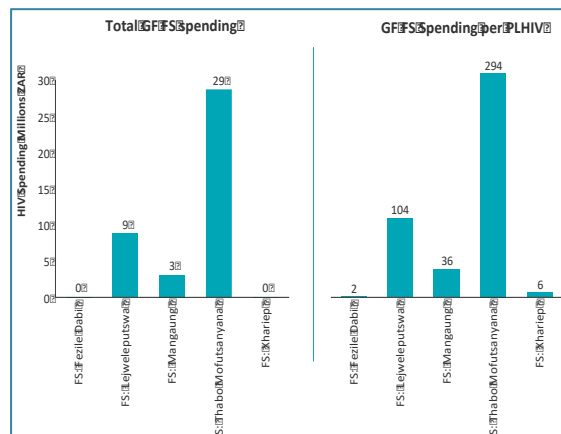
Figure 20 presents the estimated district GF spending by province. Since WC DOH had coded all its GF expenditure by district, it was possible to also show their district spending by intervention.

Figure 20. GF estimated district spending by province, total (ZAR millions) and per PLHIV (ZAR)

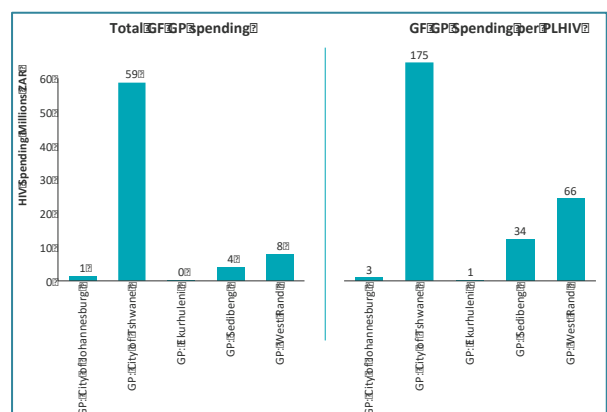
### i. Eastern Cape



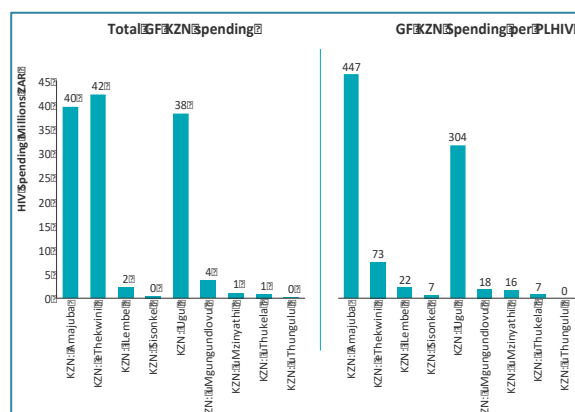
### ii. Free State



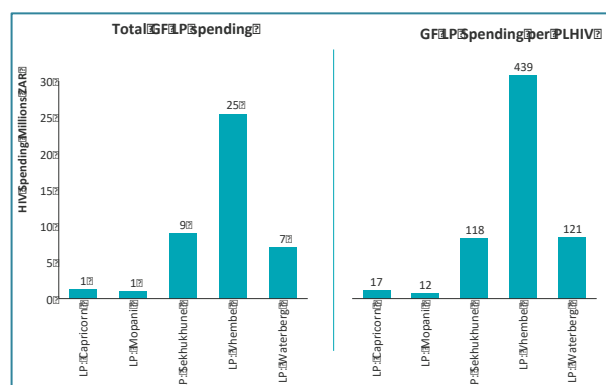
### iii. Gauteng



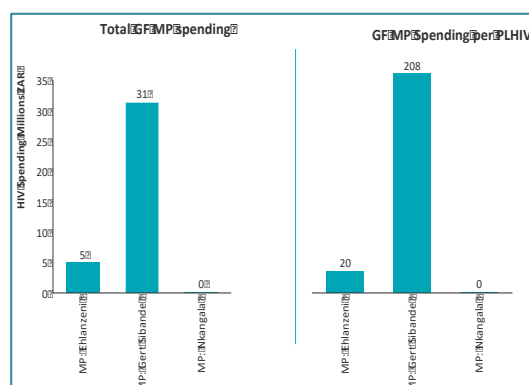
### iv. KwaZulu-Natal



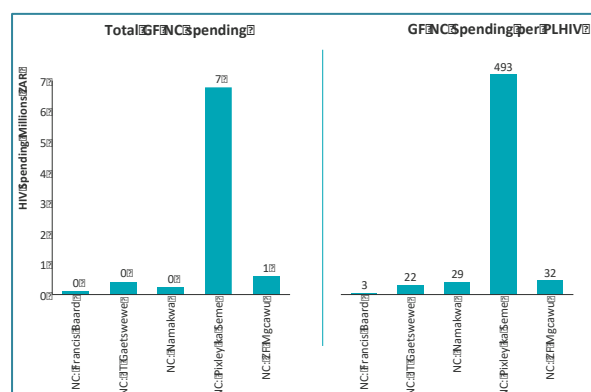
### v. Limpopo



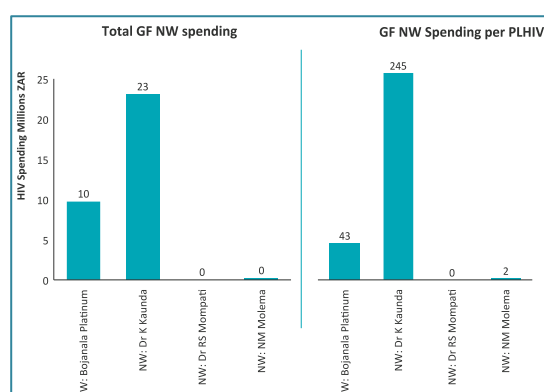
### vi. Mpumalanga



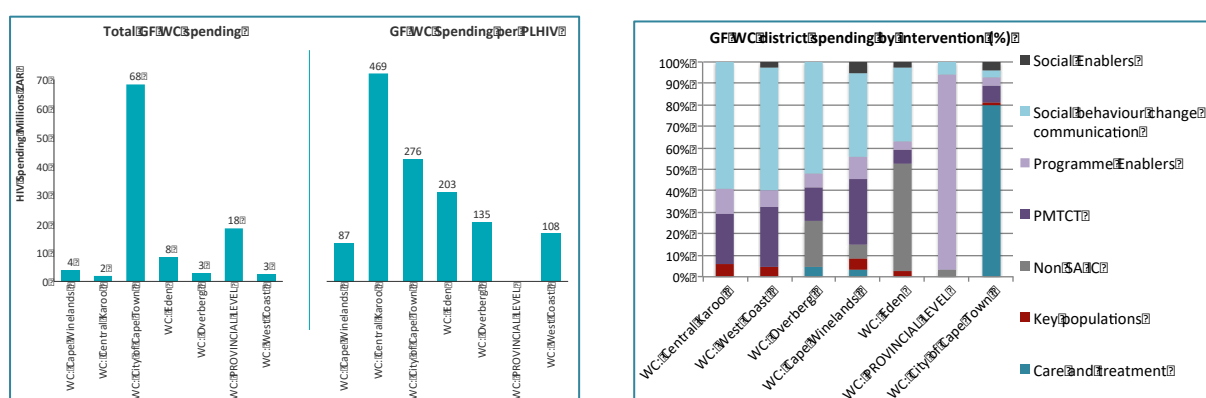
## vii. Northern Cape



## viii. North West



## ix. Western Cape



The WC DOH coded their expenditure according to the district of service delivery and the division by intervention shows that all the treatment and care spending was labelled as the City of Cape Town (CoCT). This probably means that the spending on the ARVs was not split between the districts, although the drugs themselves would have been distributed to all districts. Alternatively, the WC DOH could have used their public funds to reach other districts (as shown in the public funding section above), while the GF supported-ARVs were focused in the CoCT. Also surprisingly, the Central Karoo which had the lowest nominal spending, but the highest spend per PLHIV, spent the bulk of their funds on SBCC followed by PMTCT (this may have been a Mothers-to-Mothers project through which HIV-positive mothers provide peer-support to other mothers). The key population spending was spread across all the districts, excluding the Overberg, with a tenfold amount spent in the CoCT but which showed as a small proportion of their larger total. The provincial level spending (19%) was mostly for programme enablers, as would be expected.

## Consolidated public DOH and GF HIV spending by district

The combined HIV spending from both sources in 2013/14 is shown in Figure 21: DOH public funds (CG and voted) and GF spending (on the left axis) and the district HIV population (right axis), and applying the estimated district HIV population (Bhatt, 2017), indicates that Ekurhuleni (GP) and the City of Tshwane (GP) appear to have been spending lower than what their HIV populations might

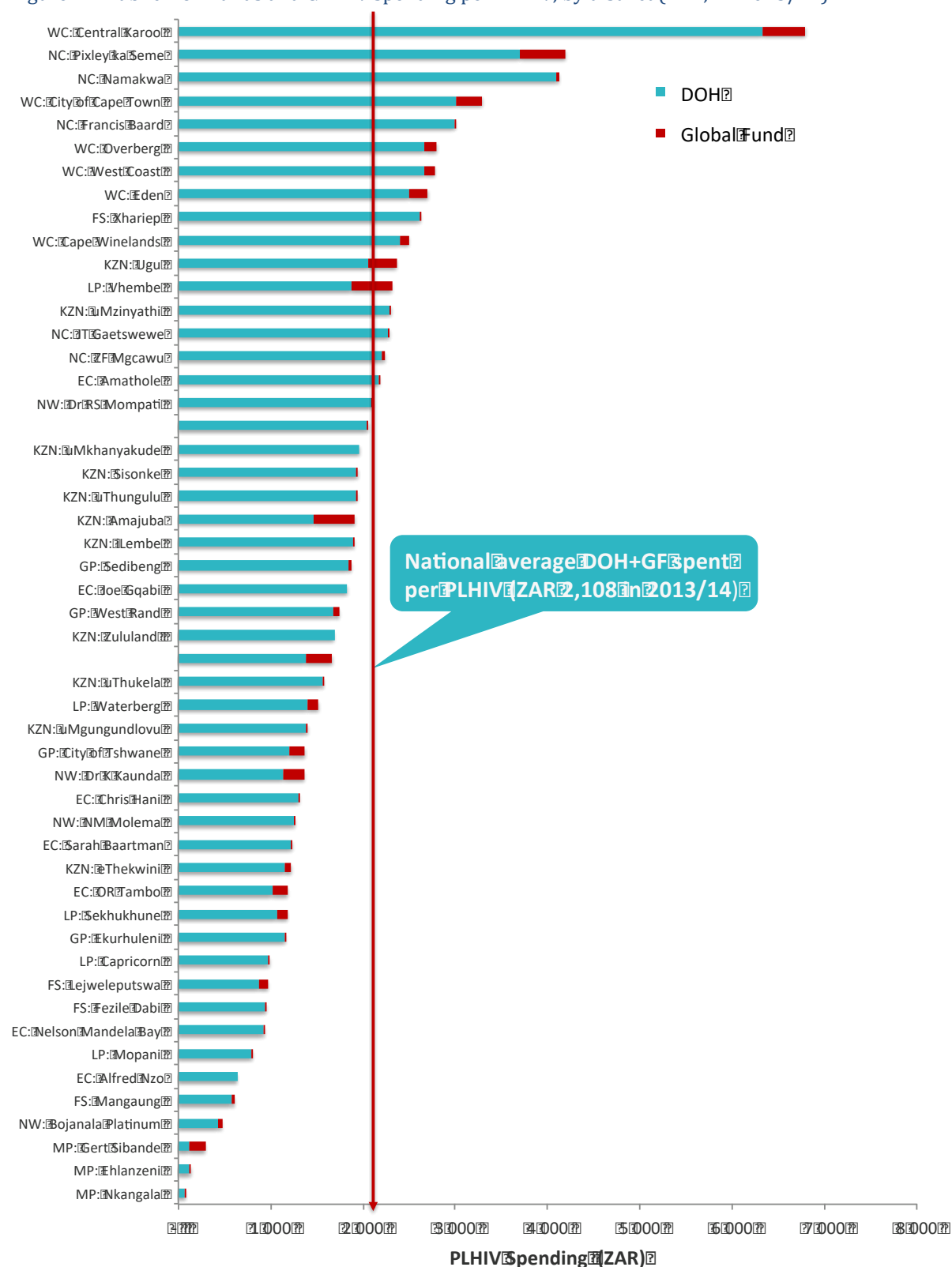
require (R1,185 and R1,396 per PLHIV respectively), which was below the provincial average per PLHIV of R2,108 (including the non-disaggregated and provincial-level spending but *excluding the national-level spending*). In stark contrast, the Central Karoo (WC), although having the lowest total HIV spending in the country, had the highest spending per persons living with HIV (PLHIV) at R6,792 (due to the smallest population of PLHIV in the district) in 2013/14.

The small proportional contribution of GF, as shown in the figure below, strengthens the argument that the GF money could be better targeted to fewer geographical areas (specific high-burden districts, or sub-districts), particularly where the public funds might not be targeted as effectively. This was indeed the intention of the new South African GF grant (2016/17-2018/19).

Spending per PLHIV in the majority of districts fell below the average in 2013/14, while only 31% (17 districts) received close to, or above, the average. All six districts in WC fell in the 'above average' spending per PLHIV, partly due to their larger commitment from their voted funds (as shown in Figure 6) but also due to them being the only DOH to receive GF funds directly as a PR (in addition to the other PR spending in the province).

After Central Karoo, the next highest spenders per PLHIV in 2013/14 were: Pixley ka Seme (NC) at R4,194, Namakwa (NC) at R4,125, Namakwa (NC) at R4,123 and the City of Cape Town at R3,293. The City of Johannesburg fell close to the average at R2,048, while eThekweni fell lower at R1,255 per PLHIV. The low levels of spending per PLHIV in the districts of MP, NW, FS and LP are due more to those provinces not disaggregating their spending according to the district level, and therefore it cannot be concluded that those districts are not benefitting from expenditure that has been labelled as provincial level.

Figure 21. Public DOH funds and GF HIV spending per PLHIV, by district (ZAR, FY 2013/14)



Sources: DOH BAS: CG & voted, GF PR EFRs and estimated district split. Bhatt (2017): District HIV prevalence.

## 4. Key messages

This analysis of the HIV spending in South Africa attempted to present the spending at the provincial and district levels, considering each district's HIV population (applying the preliminary HIV prevalence estimates by Bhatt, 2017). However, only four of the nine PDOHs adequately captured their HIV spending according to the district in which the services were provided. In the remaining five provinces, the utility, and accuracy, of the analysis of the DOH district spending per PLHIV was undermined because a large share of spending was not reported disaggregated by district. Additionally, the GF PRs did not code their expenditure according to the geographic location of the services, and hence the analysis presented here is based on the PRs' best estimation, with significant portions labelled as non-disaggregated. This makes the drawing of any definitive conclusions difficult.

However, the analysis shows how important the coding of expenditure by sub-national location could be, and its potentially valuable contribution to joint planning and maximized resource utilization and impact.

Therefore, the most important takeaway here is that all the PDOHs should be assisted to improve their coding of their expenditure in the BAS records according to the regional identifier (district name), and that GF PRs should be required to capture every expenditure with a geographical identifier, especially since the new GF grant (2016-2018) has intentionally focused on fewer districts. In particular, the large spending on ARVs via the CCMDD (both GF and GSA funds) will require improved tracking of the patients' location, so as to ensure equitable distribution of essential medicines.

The next key message is that narrower, more strategic, and/or geographic targeting of the GF monies could have greater impact than spreading the funds too thinly across interventions or all districts. Given the GF amount in South Africa is relatively small compared to the total spending on HIV (only 4%), the potential impact of these funds is minimized by trying to cover too many areas superficially and which could have greater impact if more targeted to high impact programmes and/or fewer geographic areas. It is the government's responsibility to ensure equitable access to primary health care services across the country, and they do this even in areas where the returns on investment are minimal because of the high cost of reaching those area and the low outputs due to small population sizes. It is important therefore that additional donor funds should be used strategically to focus on programmatic areas that the government does not focus on, such as interventions for key populations, or innovative ground-breaking initiatives, or specific demand-creation activities that may be needed for only an initial period to scale-up coverage by public services quickly. This strategic targeting of funding from the development partners requires close collaboration and planning between PEPFAR, GF and the government, to ensure equity of spending according to need, whilst also considering the costs of delivery in remote areas as well as potential economies of scale in the cities.

The large variation of HIV spending per PLHIV across the districts requires greater examination. This will help us to determine whether these regional disparities are brought about by data limitations such as spending data not being disaggregated correctly or non-existent district-level HIV prevalence data, or whether terrain factors resulting in higher delivery costs contribute towards higher costs and seemingly inequitable distribution of resources, or whether the higher spending actually resulted in better quality of services. The quality of services delivered by the conditional grant was not examined in this study, but it would add an important component to understanding the causes and impact of spending variations (refer to the World Bank PETS and quality assessment of HIV services in GP and KZN as an example<sup>xiii</sup>).

This analysis also allows provinces to consider potential gains in efficiency, by highlighting the variances between district spending. However, it is important to note that the government does not have the option of focusing only on areas of greater need and high-impact districts. It also must ensure equitable access to services in all areas, even where the HIV population is very small. Hence the higher spending in the Central Karoo, which might be considered inefficient, cannot be avoided by the government, but perhaps could be minimized by considering different models of delivery, such as multi-month scripting and differentiated models of ART delivery.

It was impossible to assess whether the district split of HIV spending by intervention was the most impactful, according to the SA Investment Case priority programmes, since the IC analysis has not yet been done at the district level. However, according to the analysis of the total spending in the country, it appears that some alignment with the allocative efficiency goals of the IC was being achieved in 2013/14. However, it will be useful for provinces to consider their district-level spending by intervention, to ascertain if any reprogramming or changes in allocation are required.

The preliminary district HIV prevalence estimates (Bhatt, 2017) provided some indication of the HIV burden by district – but these are still to be validated. Hence the above analysis will need to be rerun when the validated district prevalence data becomes available.

Going forward, it is important to continually examine the expenditure data from the key funding sources (which should be routinely reporting their spending by district), and to consolidate these data so as to inform joint planning and ensure the greatest impact and equitable use of constrained resources, while avoiding duplication and fragmentation efforts.

To this end, the next phase of this analysis will also incorporate PEPFAR's spending by district, and will cover the years 2014/15 to 2016/17, as soon as the public audited figures are available. It will also involve the concurrent capacity-building of the PDOHs to improve their coding and analysis of their expenditure, as well as the consolidated analysis of all three sources of funding.



## 5. Appendices

### A. The estimated district HIV prevalence (Bhatt, 2017) – still to be validated

District	HIV prev		District	HIV prev		District	HIV prev
EC: Alfred Nzo	16%		KZN: Amajuba	18%		MP: Nkangala	14%
EC: Amathole	13%		KZN: eThekweni	17%		NC: Francis Baard	10%
EC: Buffalo City Metropolitan	15%		KZN: iLembe	17%		NC: JT Gaetswewe	9%
EC: Chris Hani	12%		KZN: Ugu	17%		NC: Namakwa	7%
EC: Sarah Baartman	12%		KZN: uMgungundlovu	20%		NC: Pixley ka Seme	7%
EC: Joe Gqabi	13%		KZN: uMkhanyakude	18%		NC: ZF Mgcawu	8%
EC: Nelson Mandela Bay	11%		KZN: uMzinyathi	14%		NW: Bojanala Platinum	15%
EC: OR Tambo	11%		KZN: uThukela	18%		NW: Dr K Kaunda	15%
FS: Fezile Dabi	13%		KZN: uThungulu	17%		NW: NM Molema	11%
FS: Lejweleputswa	14%		KZN: Zululand	16%		NW: Dr RS Mompoti	10%
FS: Mangaung	12%		KZN: Sisonke	16%		WC: City of Cape Town	7%
FS: Xhariep	10%		LP: Capricorn	6%		WC: Cape Winelands	6%
FS: Thabo Mofutsanyana	13%		LP: Mopani	8%		WC: Central Karoo	6%
GP: Ekurhuleni	12%		LP: Vhembe	4%		WC: Eden	7%
GP: City of Johannesburg	11%		LP: Waterberg	9%		WC: Overberg	8%
GP: Sedibeng	13%		LP: Sekhukhune	7%		WC: West Coast	6%
GP: City of Tshwane	11%		MP: Ehlanzeni	16%			
GP: West Rand	15%		MP: Gert Sibande	17%			

## B. HIV spending by PDOH and GF PRs by district (ZAR, 2013/14)

Geographic location	GLOBAL FUND (ZAR)	SAG - DOH (ZAR)	District Population (2014)	District HIV+ pop estimated	HIV spend per PLHIV (DOH+GF) (ZAR)
LP: WHOLE PROVINCE	-	1 196 287			
NW: WHOLE PROVINCE	-	3 196 880			
Provincial Level	4 704 548	-			
Whole Country	7 350 231	-			
WC: PROVINCIAL LEVEL	18 343 101	-			
GP: PROVINCIAL LEVEL	-	20 637 003			
NC: not disaggregated	-	18 075 574			
WC: Central Karoo	1 925 328	25 944 037	71 011	4 103	6 792
NC: Namakwa	228 756	32 473 823	115 842	7 931	4 123
FS: Xhariep	92 504	39 424 545	146 259	15 111	2 615
NC: ZF Mgcawu	603 925	41 715 794	236 783	18 887	2 241
NC: WHOLE PROVINCE	-	39 255 612			
NC: JT Gaetswee	421 389	44 432 703	224 799	19 590	2 290
MP: Nkangala	92 504	11 902 261	1 308 129	188 707	64
MP: PROVINCIAL LEVEL	-	47 070 289			
MP: Gert Sibande	31 314 380	20 793 665	1 043 194	150 488	346
FS: Mangaung	3 149 963	49 766 918	747 431	86 594	611
NC: Pixley ka Seme	6 780 825	50 865 230	186 351	13 744	4 194
FS: Fezile Dabi	92 504	57 363 140	488 036	61 046	941
WC: Overberg	2 874 197	56 794 616	258 176	21 306	2 801
LP: Mopani	1 025 412	67 720 590	1 092 507	85 642	803
WC: West Coast	2 594 610	64 197 450	391 766	24 033	2 779
FS: Lejweleputswa	8 792 219	73 598 449	627 626	84 778	972
LP: Capricorn	1 334 050	77 724 655	1 261 463	79 748	991
LP: Sekhukhune	9 011 097	81 236 514	1 076 840	76 316	1 183
LP: Waterberg	7 110 006	82 378 156	679 336	58 834	1 521
EC: Joe Gqabi	-	83 499 482	349 768	45 556	1 833
MP: Ehlanzeni	4 982 524	34 283 185	1 688 615	243 594	161
NW: Dr RS Mompoti	10 606	98 072 766	463 815	62 833	1 561
NW: Bojanala Platinum	9 736 046	96 362 291	1 507 505	224 316	473
LP: Vhembe	25 475 551	108 650 897	1 294 722	58 031	2 311
EC: Alfred Nzo	-	81 436 767	801 344	127 108	641
NW: NM Molema	188 189	117 355 196	842 699	114 161	1 030
NC: Francis Baard	114 178	111 227 796	382 086	37 222	2 991
EC: Chris Hani	298 388	121 182 232	795 461	93 562	1 298
LP: PROVINCIAL LEVEL	-	121 526 600			
NW: Dr K Kaunda	23 085 495	118 351 878	695 933	94 278	1 500
EC: Sarah Baartman	244 627	67 830 366	450 584	55 534	1 226
KZN: Amajuba	39 558 878	129 970 391	499 839	88 568	1 914
FS: Thabo Mofutsanyana	28 719 884	134 450 712	736 238	97 699	1 670

WC: Eden	8 469 362	104 510 557	574 265	41 771	2 705
FS: PROVINCIAL LEVEL	-	129 779 269			
GP: not disaggregated	-	144 005 476			
EC: OR Tambo	26 789 406	159 032 660	1 364 943	156 760	1 185
KZN: Sisonke	486 528	141 431 935	461 419	73 189	1 939
FS: WHOLE PROVINCE	-	171 832 879			
KZN: uMzinyathi	1 146 755	168 436 053	510 838	73 488	2 308
KZN: uThukela	844 274	183 674 330	668 848	117 597	1 569
WC: Cape Winelands	3 953 481	109 658 368	787 490	45 531	2 495
KZN: iLembe	2 242 108	190 976 916	606 809	101 250	1 908
GP: West Rand	7 979 339	203 309 304	820 995	121 104	1 745
EC: WHOLE PROVINCE	-	220 974 454			
GP: Sedibeng	4 047 828	221 868 447	916 484	120 423	1 876
KZN: uMkhanyakude	-	216 717 266	625 846	110 229	1 966
EC: Nelson Mandela Bay	2 377 775	115 122 515	1 152 115	125 328	938
KZN: Zululand	-	219 169 878	803 575	129 805	1 688
KZN: Ugu	38 162 629	258 143 440	722 484	125 375	2 363
KZN: uThungulu	68 171	297 782 279	907 519	154 710	1 925
KZN: PROVINCIAL LEVEL	-	310 598 326			
EC: Amathole	1 423 045	242 642 277	892 637	112 159	2 176
EC: PROVINCIAL LEVEL	-	359 116 450			
KZN: uMgungundlovu	3 700 958	286 152 249	1 017 763	206 346	1 405
EC: not disaggregated	1 454 955	372 228 056			
GP: City of Tshwane	58 639 748	401 541 434	2 921 488	334 931	1 374
FS: not disaggregated	-	406 149 850			
LP: not disaggregated	-	453 628 094			
GP: Ekurhuleni	302 457	452 870 358	3 178 470	395 162	1 147
NW: PROVINCIAL LEVEL	-	650 743 826			
MP: not disaggregated	-	825 520 355			
WC: City of Cape Town	68 277 252	745 796 295	3 740 026	247 194	3 293
KZN: eThekweni	42 097 893	668 038 643	3 442 361	579 630	1 225
GP: City of Johannesburg	1 347 891	1 029 607 425	4 434 827	503 514	2 048
<b>Total HIV spending at provincial level</b>	<b>514 067 772</b>	<b>12 893 024 418</b>		<b>6 359 575</b>	<b>2 108</b>

Note: These data exclude the national level HIV spending.

## 7. References

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