

12 Human Resources

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12.1 PHC professional nurse clinical workload

Lack of clear definition in understanding and measuring nursing workload has been identified in the literature as a major problem in workforce allocation worldwide.^a

Factors influencing the workload of professional nurses (PNs) have been well documented in the literature.^{b,c} These include:

- ◆ Increased burden of disease, growing population, and increased scope and clinical practice for PNs.^b
- ◆ Increased demand for nurses, inadequate supply of nurses, and increased overtime work.^c

The above factors are also operative in South Africa (SA). In 2010, the South African Nursing Council (SANC) reported that SA had 32 000 vacant posts for registered nurses, and it was also estimated that the country would have a shortage of 20 815 nurses in 2015.^d In addition, the re-engineering of primary health care (PHC) strategy to address the burden of disease and improve efficiencies in delivery signal the need to review staffing needs and PHC allocation in South Africa. Staff shortages have serious implications for nursing workloads, and can impact negatively on adequate patient care and safety.^e The rising demand to train sufficient nurses with appropriate skills remains relevant in the SA policy agenda, as evident in the South African Human Resources for Health (HRH) strategy.^f

Poor data quality precluded accurate interpretation of district and provincial PN workloads in the 2014/15 DHB. PN clinical workload is defined as the average number of clients attended by all PNs in a PHC facility per day. The numerator for this indicator is expressed as the total number of clients seen at a PHC facility, while the denominator is the total number of PN clinical work days.^b This is a useful indicator to measure the efficiency of PHC services rendered to clients, and to analyse PHC utilisation patterns, staffing and training needs. In essence, high clinical workload suggests that nurses are seeing many clients per day. Conversely, low patient clinical workload could be an indication that nurses' time is not being utilised adequately for patient care.^g Either high or low workload could be due to data quality problems.

Over the past three years, the average PN clinical workload has shown a downward trend from 31.6 clients per PN in 2012/13 to 29.4 clients per PN in 2014/15. On average, each nurse saw 2.2 fewer clients per day over this period.

An illustration of provincial trends (Figure 1) shows Mpumalanga (MP) workload to be the highest at 35.4 clients per PN. Limpopo (LP) has the lowest PN clinical workload at 21.7 clients per PN.

On a year-to-year basis, PN workloads in the Eastern Cape (EC), Gauteng (GP) KwaZulu-Natal (KZN), Northern Cape (NC) and North West (NW) provinces remained relatively stable over the past three years. Although Mpumalanga's PN clinical workload remains the highest in the country, a declining trend is observed from 41.7 in 2012/13 to 35.4 in 2014/15. Limpopo and the Free State (FS) PN workloads declined from 25.0 to 21.7 and 35.6 to 31.8 clients per PN respectively in the same period. The Western Cape (WC) only has data for 2013/14 and 2014/15 and the clinical workload increased slightly from 20.2 to 21.9.

a Neill D. Nursing workload and the changing health care environment: A review of the literature. *Administrative Issues Journal: Education, Practise and Research*. 2011;1(2):132-43.

b Day C, Barron P, Monticelli F, Sello E, editors. *The District Health Barometer 2007/08*. Durban: Health Systems Trust; June 2009.

c Carayon P, Gurses AP. Nursing workload and patient safety: A human factors engineering perspective. In: Hughes RG, ed. *Patient safety and quality: An evidence-based handbook for nurses*. Rockville (MD): Agency for Healthcare Research and Quality; 2008.

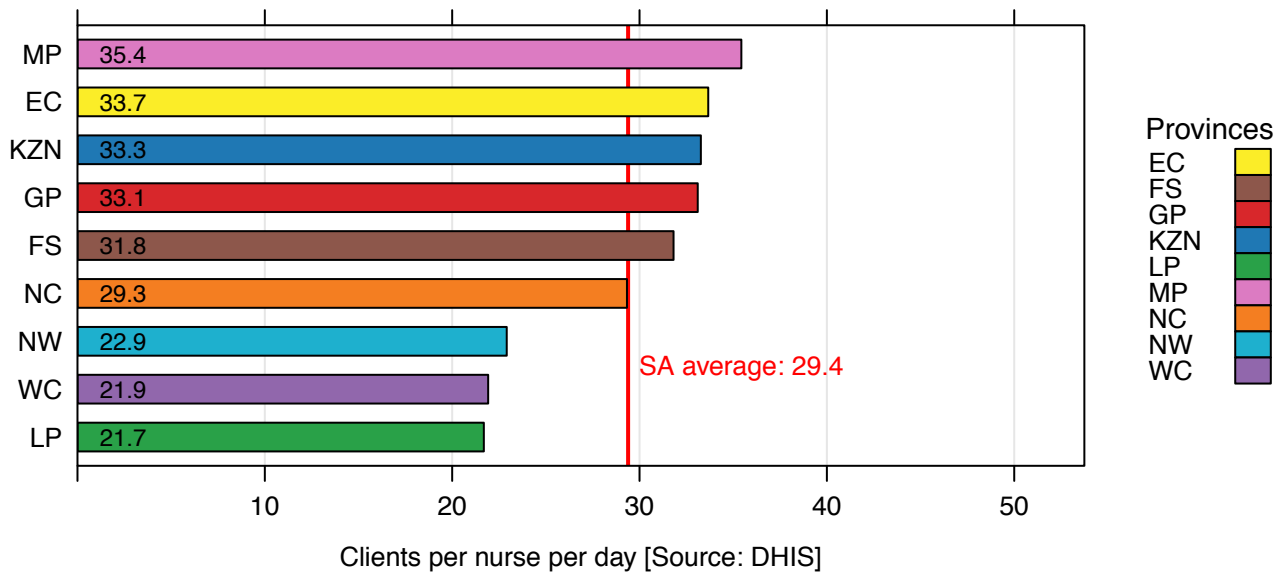
d Tshitangano TG. Factors that contribute to public sector nurses' turnover in Limpopo province of South Africa. *Afr J Prm Health Care Fam Med*. 2013;5(1), Art. #479, 7 pages. <http://dx.doi.org/10.4102/phcfm.v5i1.479>.

e Lang TA, Hodge M, Olson V, et al. Nurse-patient ratios: a systematic review on the effects of nurse staffing on patient, nurse employee, and hospital outcomes. *J Nurs Adm*. 2004;34(7-8):326-37.

f National Department of Health. *Human Resource Strategy for the Health Sector: 2012/13-2016/17*. Pretoria: NDoH; 2011.

g Daviaud E, Chopra M. How much is not enough? Human resources requirements for primary health care: a case study from South Africa. *Bull World Health Organ*. 2008;86(1):46-51. Available from: <http://www.who.int/bulletin/volumes/86/1/07-042283/en/> [accessed 17 July 2015].

Figure 1: PHC professional nurse clinical workload by province, 2014/15

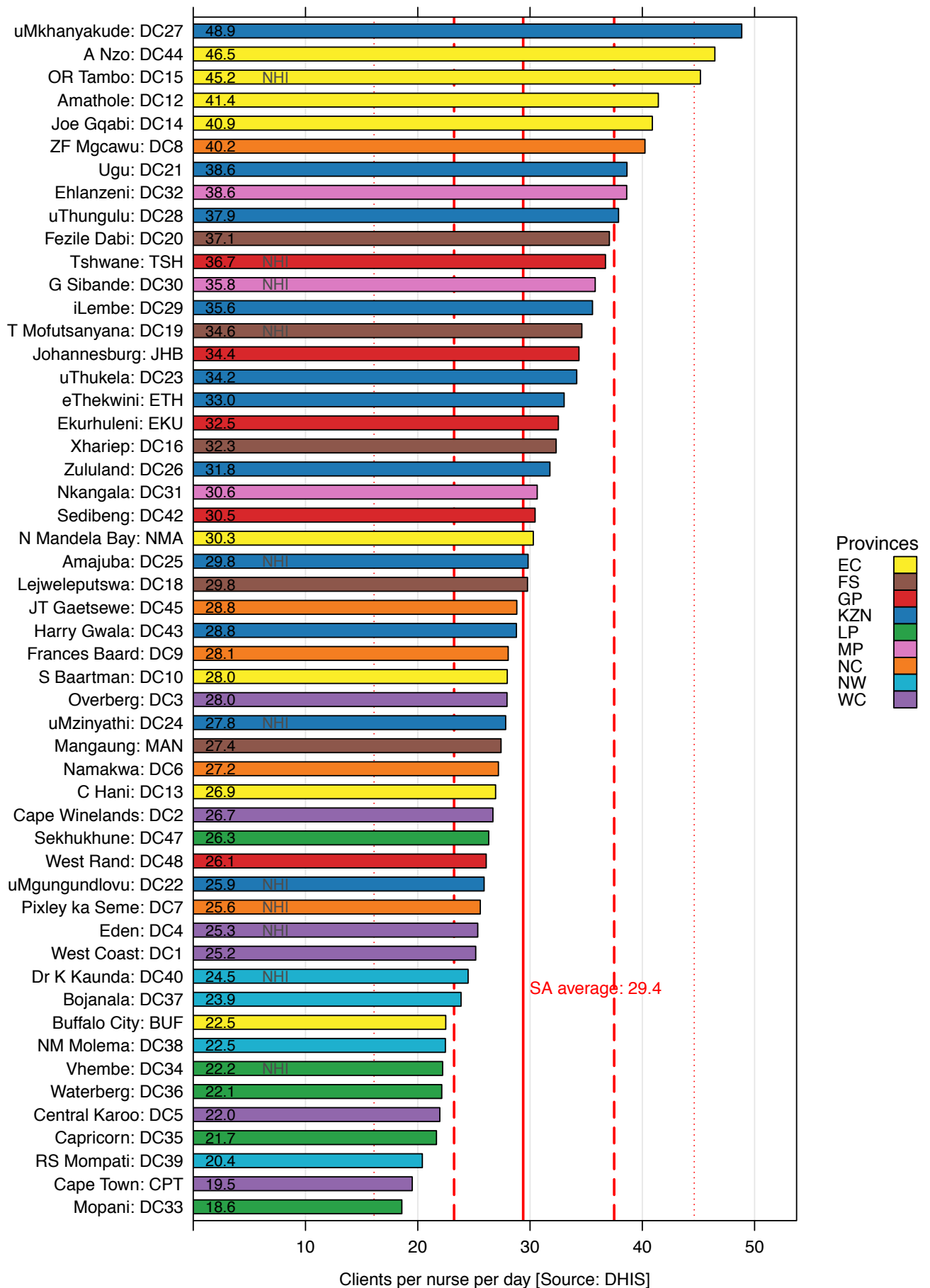


A comparative analysis of this indicator across the 52 districts (Figure 2, Map 1) shows the range of values, from a high of 48.9 clients per PN per day in uMkhanyakude (KZN), to a low of 18.6 clients in Mopani (LP). As in previous years, four Limpopo districts, namely Mopani, Capricorn, Waterberg and Vhembe, still rank among the 10 districts with the lowest PN clinical workloads. All districts in the North West and Western Cape provinces were below the SA average.

A significant increase in PN workload was evident in the following four districts from 2012/13 to 2014/15: Amathole (EC) PN workload increased from 27.5 to 41.4 clients per day, Joe Gqabi (EC) from 33.3 to 40.9, uMkhanyakude (KZN) from 40.6 to 48.9, and ZF Mqcawu (NC) from 29.0 to 40.2. The following districts showed a decline from 2012/13 to 2014/15: Gert Sibande (MP) from 44.0 to 35.8, Lejweleputswa (FS) from 33.5 to 29.8, and Nkangala (KZN) from 38.5 to 30.6 clients per PN per day.

A wide variation was observed in PN workload in the different districts in 2014/15 (Figure 3). For example, in the Eastern Cape Province four districts (Alfred Nzo, OR Tambo, Amathole and Joe Gqabi) were in the top five districts, with high workloads above 40 clients per PN per day. Buffalo City had a workload of 22.5 clients per nurse per day.

Figure 2: PHC professional nurse clinical workload by district, 2014/15



Map 1: PHC professional nurse clinical workload by sub-district, 2014/15

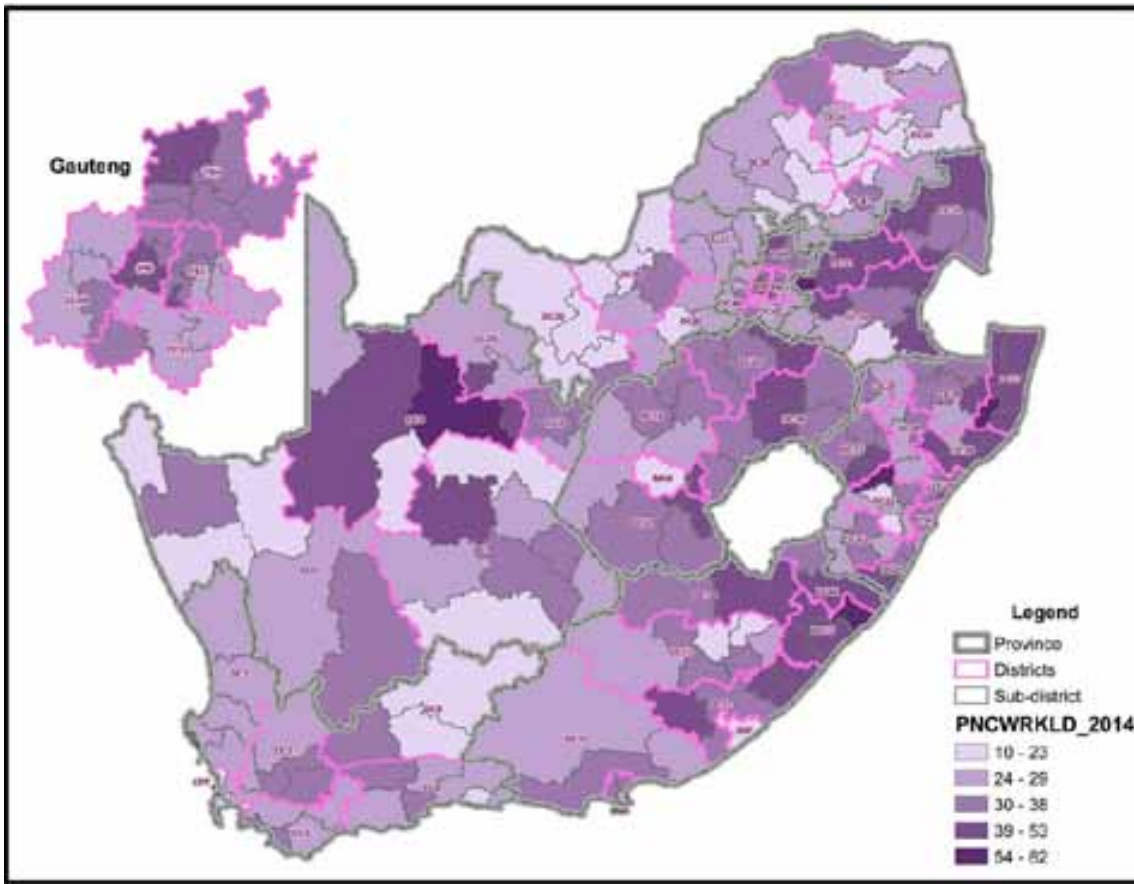
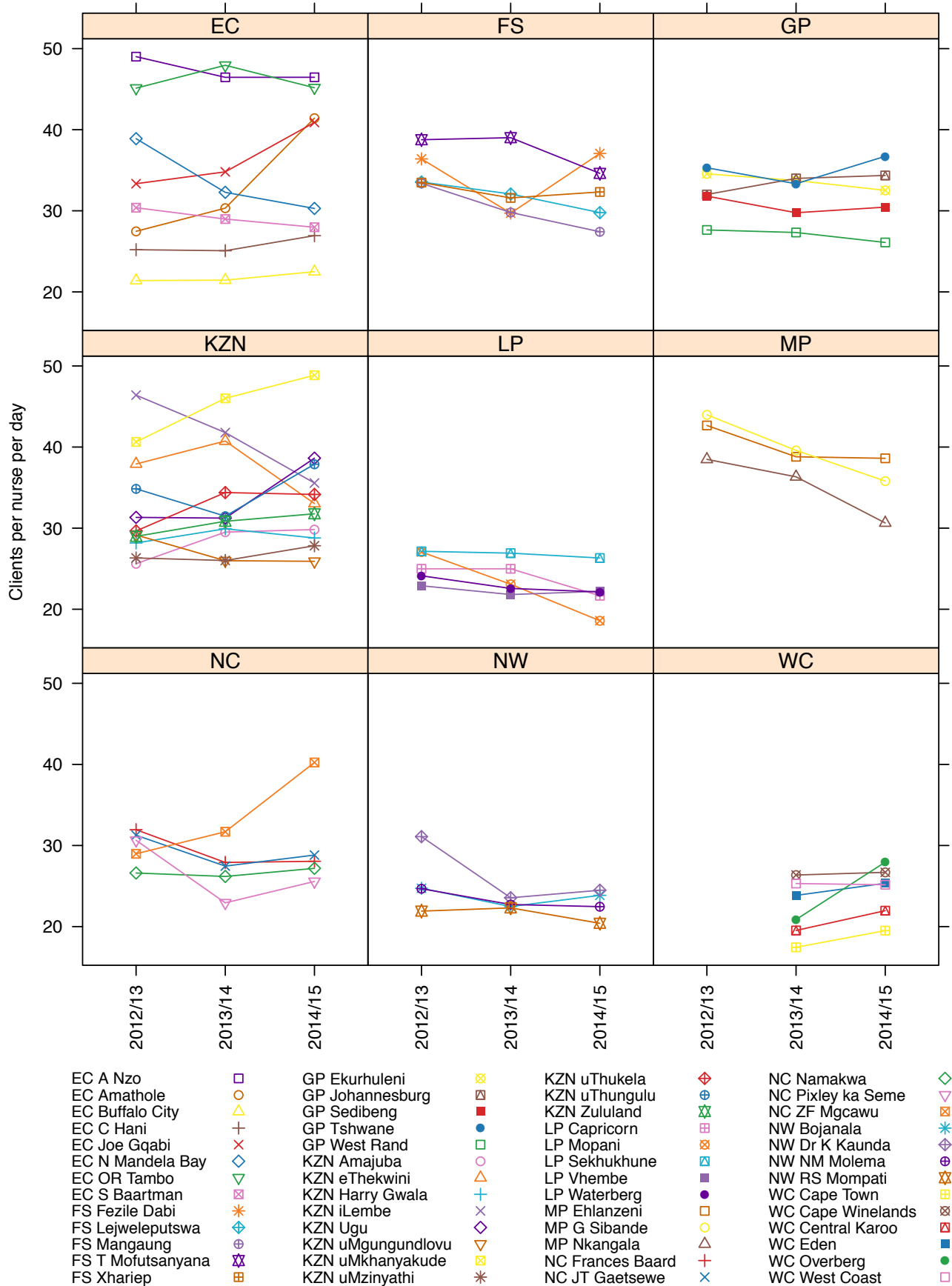


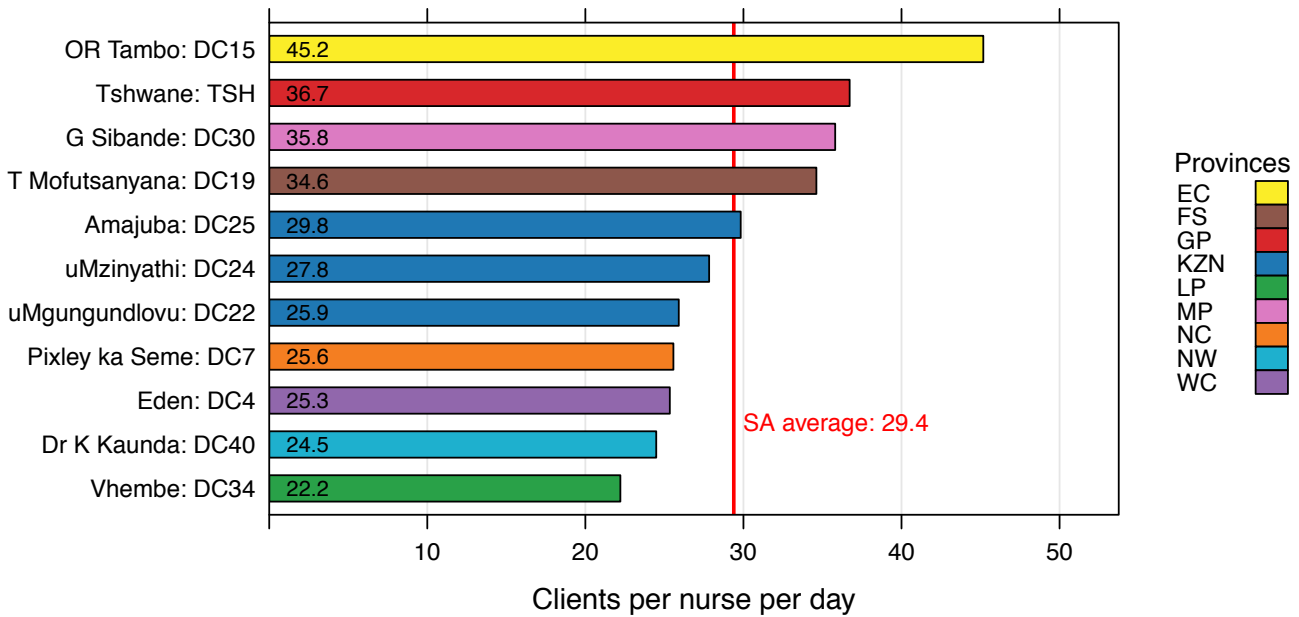
Figure 3: Annual trends: PHC professional nurse clinical workload



Section A: Human resources

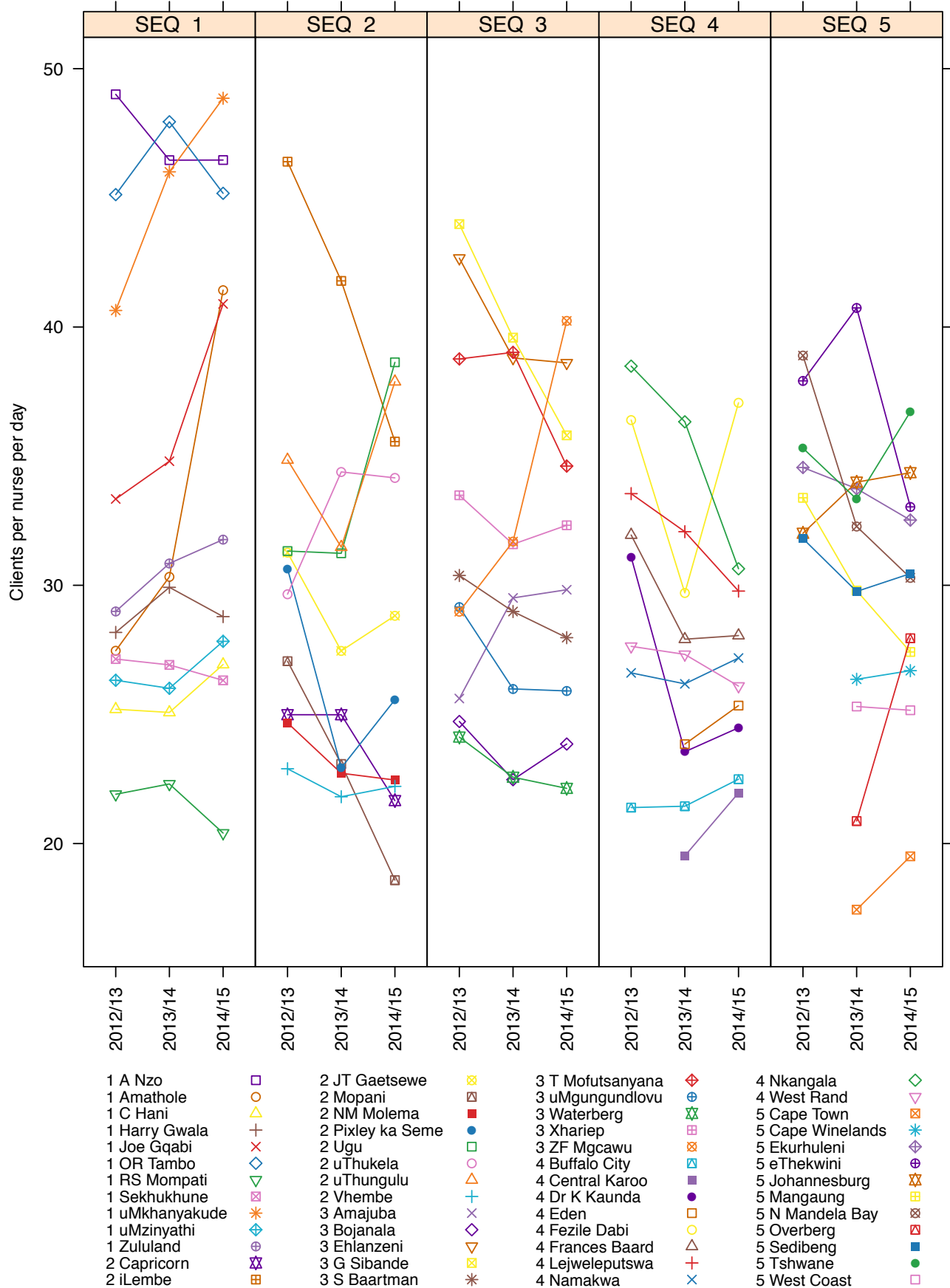
The average workload for the National Health Insurance (NHI) districts was slightly higher than the SA average at 30.3 clients per PN per day in 2014/15 (Figure 4). Workload in the 11 NHI districts ranged from 45.5 in OR Tambo to 22.3 in Vhembe district.

Figure 4: PHC professional nurse clinical workload by NHI district, 2014/15



As shown in Figure 5, there was wide variation in PN workload among districts within the same socio-economic quintiles (SEQs). For example, in SEQ1 workloads in uMkhanyakude (KZN), uMzinyathi (KZN) and OR Tambo (EC) districts were much greater than the workload in RS Mompoti (NW) in 2014/15. Similar differences can be seen in the other socio-economic quintiles.

Figure 5: PHC professional nurse clinical workload by SEQ, 2014/15



The data surrounding this indicator require more investigation to ensure that the changes reflected are realistic and reflect the situation on the ground. A wide range of professional clinical workload values occurred among districts in the same provinces and within SEQs. The declining trends in PN clinical workload in Limpopo, Free State and Mpumalanga provinces need to be investigated, as do workload trends in certain districts, namely Ekurhuleni (GP), Gert Sibande (MP), Sarah Baartman (EC), Lejweleputswa (FS) and Nkangala (MP). On the other hand, districts with increased workload also need to be probed further to identify reasons for such peaks; these districts include Amathole (EC), Joe Gqabi (EC), uMkhanyakude (KZN) and ZF Mqcawu (NC). Wide variations in PN clinical workload within provinces, particularly in the Eastern Cape, should be investigated. ZF Mqcawu district in the Northern Cape seems to be an outlier.

12.2 PHC doctor clinical workload

The role of the medical practitioner/doctor in PHC is to manage complicated referrals, as well as newly diagnosed HIV assessments and treatment, and emergency cases. Ideally, a medical practitioner should be available at all PHC facilities for consultation or at least through outreach programmes on a consistent basis. The PHC package indicates the spectrum of care to be delivered.

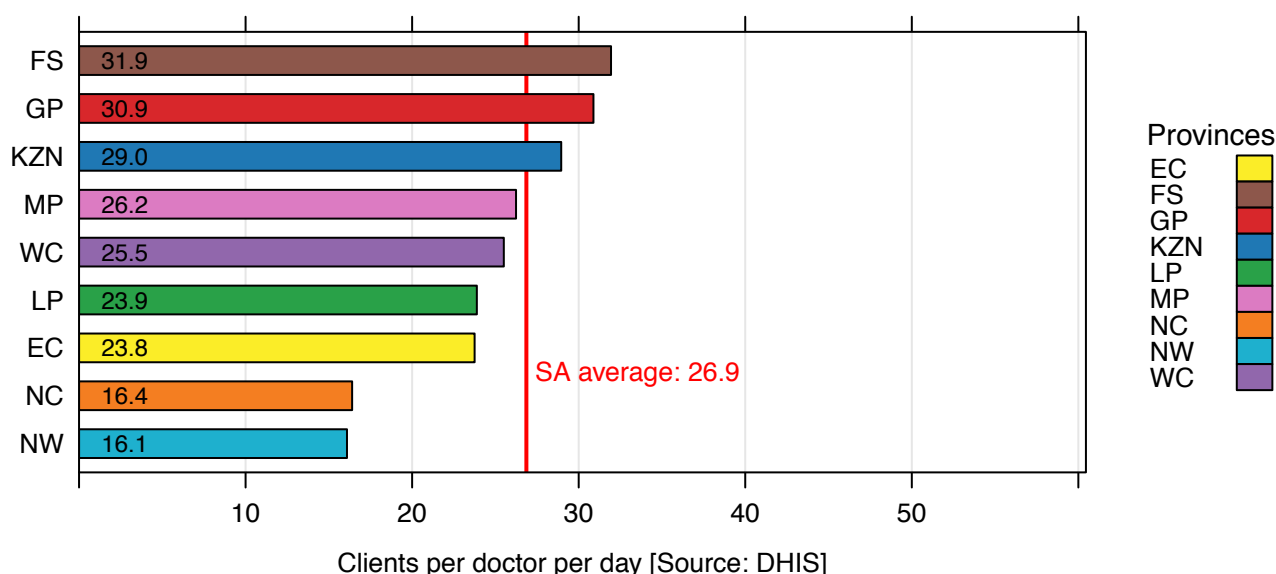
The number of clients seen per medical doctor is a useful indicator to show which areas in the PHC system are not performing well, which geographical areas are not covered by medical doctor services, and where the population does not have access to medical care. However, this indicator fails to indicate complex contextual factors such as rural/urban differences, population density issues, transport needs and medical doctor ratios, and how these impact on the number of clients seen by doctors per day and the doctor workforce in totality.

According to Daviaud and Chopra,⁹ there is a need to optimise correct staff category allocation for maximum quality, efficiency and equity within the parameters of changing population patterns, burden of disease, scope of practice and clinical practice; this has cost implications for human resources and gives rise to different approaches to improve medical coverage in PHC.

The PHC doctor clinical workload is expressed as the number of consultations (clients) per doctor per day. The indicator is relevant for analysis of utilisation patterns, efficiency of health care delivery, and staff training needs in the PHC setting. An equitable workload is important for both staff and clients. The aim of equitable allocation of doctors in the PHC setting is to meet the health needs of the local population by improving access to a medical doctor and addressing the burden of disease.

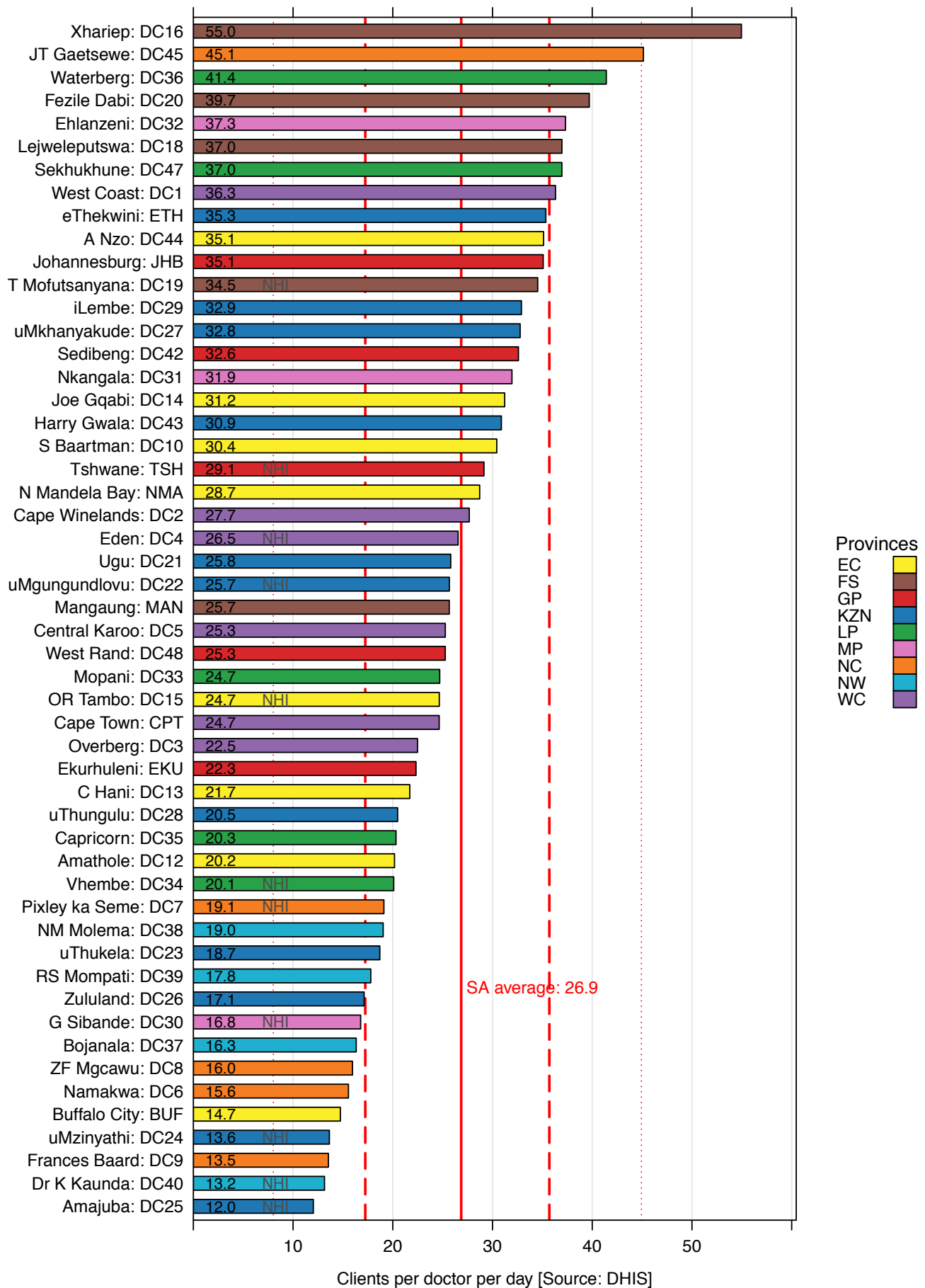
Figure 6 shows the provincial spread of doctor workload, with a two-fold difference between North West with the lowest workload and Free State with the highest. It is probable that different ways of collecting and recording data and other data quality issues account for the large differences in both provincial and district doctor workloads.

Figure 6: PHC doctor clinical workload by province, 2014/15



As shown in Figure 7 and Map 2, the average number of clients per doctor per day was 26.9 in 2014/15. The district with the lowest workload was Amajuba (KZN) at 12.0 clients per day, and the highest workload of 55.0 clients per day was seen in Xhariep (FS). This is a more than fourfold difference. There was an increase of more than 10 clients per day between 2012/13 and 2014/15 in John Taolo Gaetsewe (NC) (from 24.5 to 45.1), RS Mompoti (NW) (from 7.8 to 17.8) and Xhariep (from 22.8 to 55.0). There was a decrease of more than 10 clients per day in the same period in Joe Gqabi (EC) (from 44.8 to 31.2), Johannesburg (GP) (from 45.2 to 35.1), Lejweleputswa (FS) (from 57.6 to 37.0), ZF Mgcawu (NC) (from 30.0 to 16.0) and Thabo Mofutsanyana (FS) (from 48.1 to 34.5) (Figure 8). There are a number of possible reasons for these large changes, including data quality issues, doctors changing, and small numbers of doctors. Figure 9 shows a similar spread of doctor workload in the NHI districts.

Figure 7: PHC doctor clinical workload by district, 2014/15



Map 2: PHC doctor clinical workload by sub-district, 2014/15

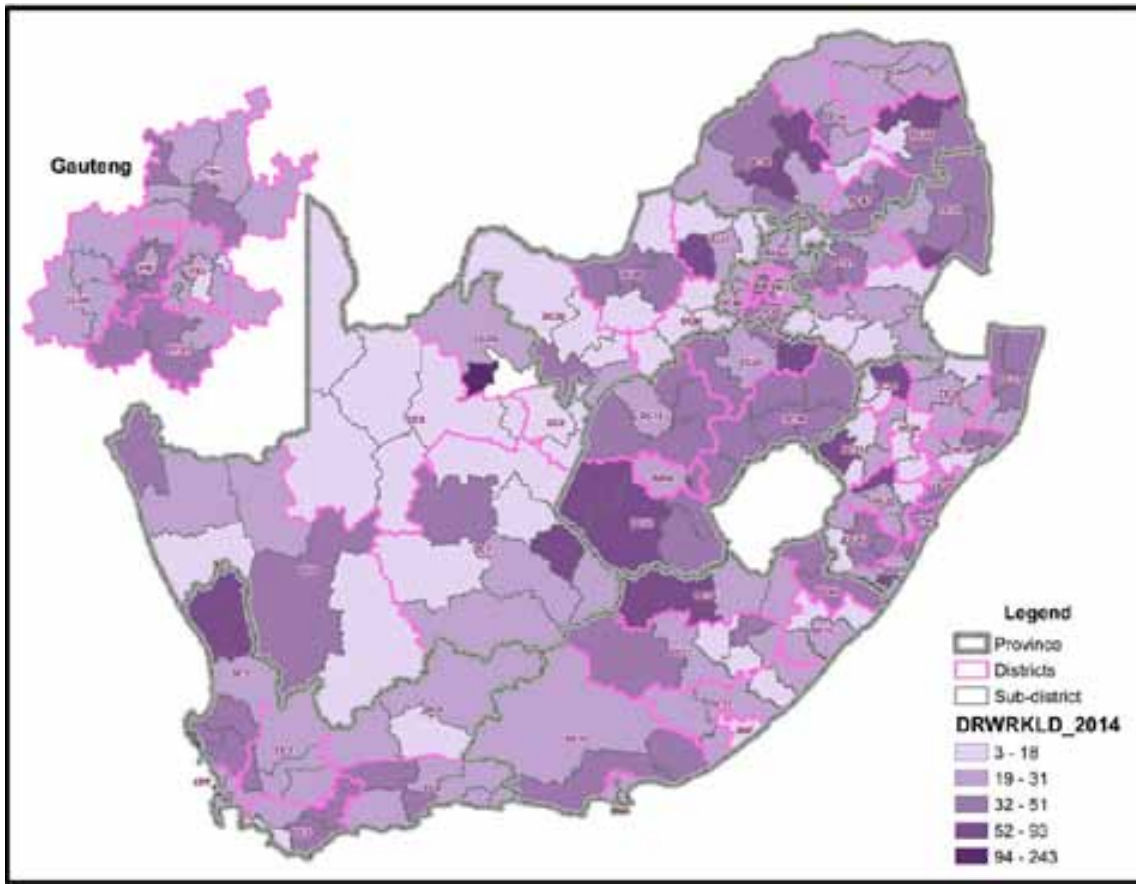


Figure 8: Annual trends: PHC doctor clinical workload

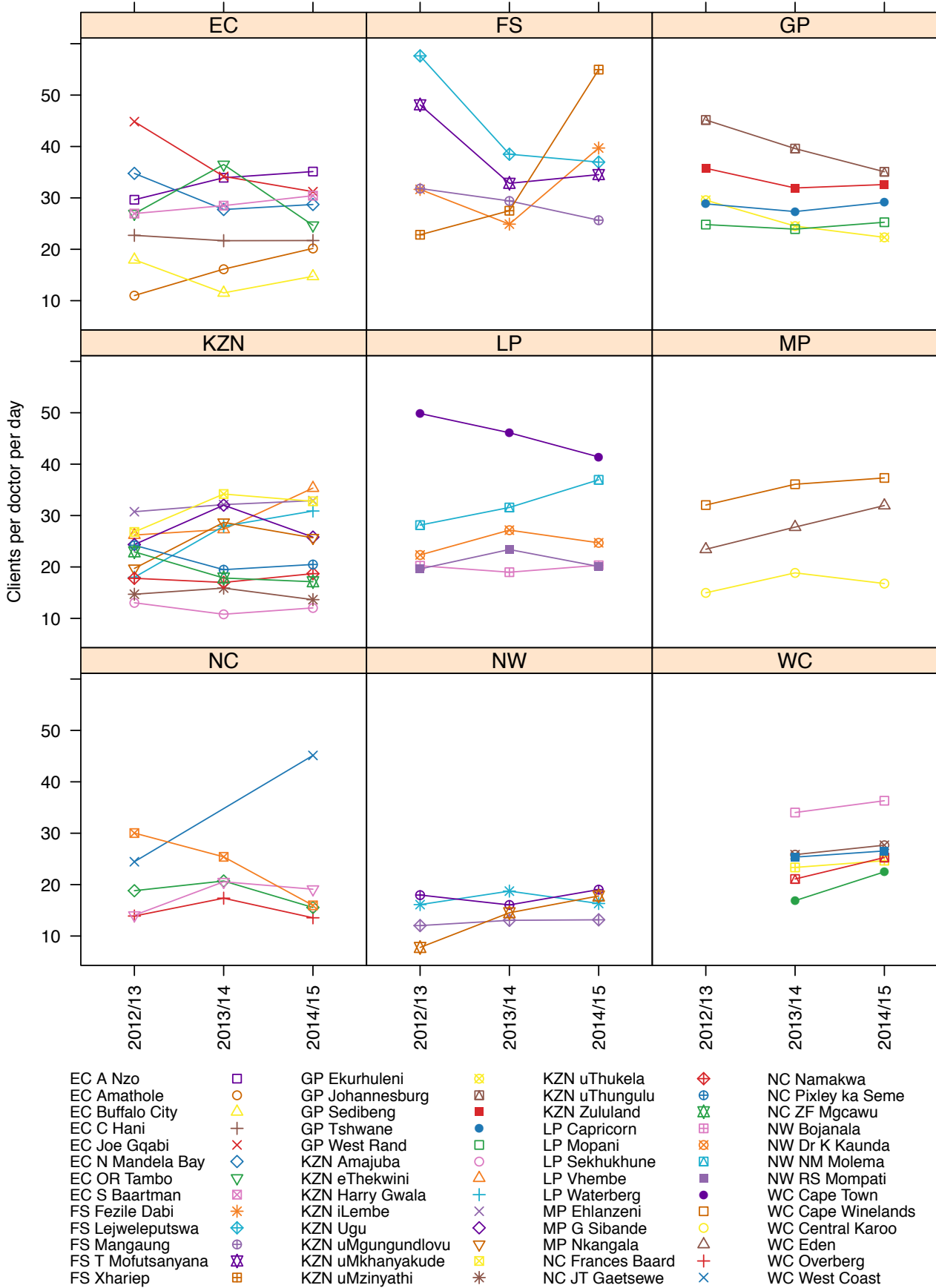


Figure 9: PHC doctor clinical workload by NHI district, 2014/15

