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Data availability: the data that support the findings of this study are available from the corresponding author upon reasonable request.

## Counting dermatologists in South Africa: number, distribution and requirement

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Dear Editor, Dermatological diseases continue to contribute significantly to the burden of disease worldwide, affecting all populations and age groups. Skin disease has been considered the fourth leading cause of nonfatal disease globally.[1] Low-socioeconomic settings reflect a high prevalence of dermatological disease, ranging from 50% to 80% of the population.[2] Despite this high burden of disease in low- and middle-income countries, a shortage of dermatologists is reported for most African countries (Namibia 0·8, Ghana 1·1, South Africa 3, Botswana 3·3 dermatologists per million population) in comparison with the rest of the world (UK 10, USA 36, Germany 65 dermatologists per million population). In Africa, < 1 dermatologist is available per million population, with the majority practising in urban areas.[3] The paucity of dermatologists is concerning, as dermatological disease has substantial impact on long-term morbidity.[2]

This analysis utilized the Health Professions Council of South Africa (HPCSA) database (from 2000 to 2019) with the variables: (i) category of health personnel (specialty – dermatology); (ii) geographical location; (iii) population category; and (iv) sex. In this article, we have used the term 'population group' in line with the definitions in the Population Registration Act (Act No. 30 of 1950),[4] which previously classified South African citizens into four major population categories: 'white', 'coloured', 'Indian' and 'black'. Although the legislation was repealed in 1991, population categories are still used in reporting in sectors such as the Department of Higher Education. Racialized data continue to be used in monitoring the redress in the education and training of dermatologists who were previously denied access to such training due to legislation. National databases such as Statistics South Africa and the HPCSA also segregate their data based on these same population groups.

Assessment of privatization of dermatology practices was undertaken by geographically mapping each dermatology private practice based on their area codes. This was compared with province-wide HPCSA registrations and with data procured from the General Household Survey regarding the medically insured population per province in 2019.[5] Ethical approval was obtained from the Stellenbosch University Health Research Ethics Committee (reference no. X21/05/010).

The data were analysed using the SPSS version 22·0 (IBM, Armonk, NY, USA). For the analysis of training capacity and the supply pipeline, data were collected from the Colleges of Medicine of South Africa and the academic heads of dermatology divisions across South African universities. The deficit of dermatologists was forecasted using the disability-adjusted life-year (DALY).[6] A DALY represents a lost year of 'healthy' life, thus measuring burden of disease. The DALY load per dermatologist was 1254 for SA (2019) (Figure 1), which is lower than in other African countries such as 1313 for Botswana (2021) and 6085 for Namibia (2021), but higher than in developed countries, such as 814 for the UK (2012) and 211 for the USA (2015).

In total 264 dermatologists were registered (in nine provinces), of whom 208 were aged ≤65 years as registered with the HPCSA in December 2019, amounting to 4·4 practising dermatologists (3·5 for dermatologists aged ≤65 years) per million population. In the public sector the ratio is 1·2 dermatologists and in the private sector 20·1 dermatologists per million population. There is equal distribution of male and female dermatologists (50% each). Most dermatologists are

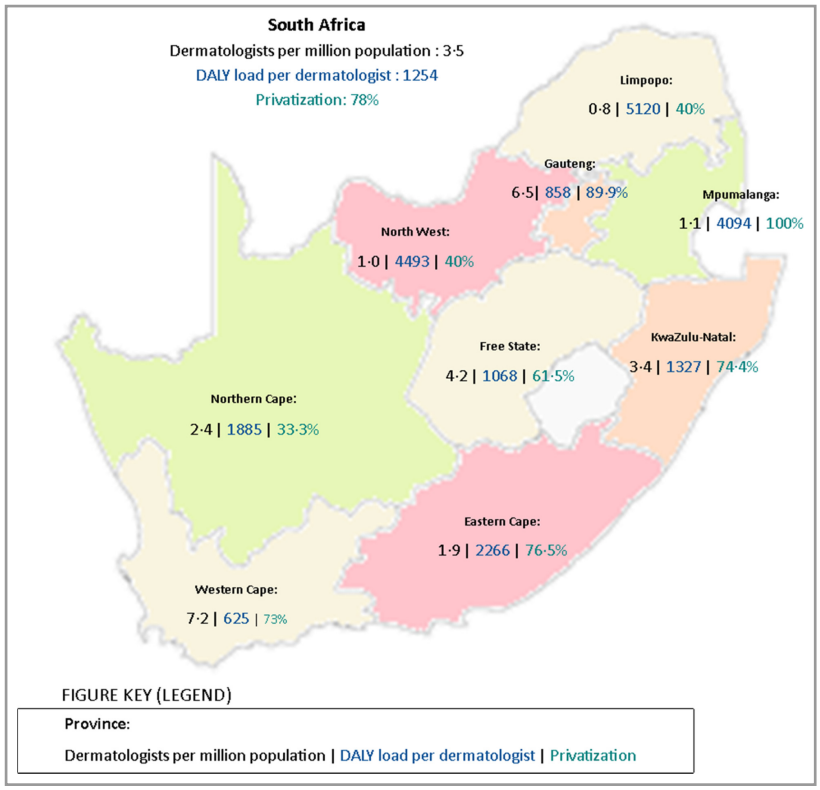


**Figure 1** Status of dermatologists in South Africa, 2019 (dermatologists registered aged ≤65 years). Privatization was assessed by geographically mapping each dermatology private practice based on the area codes of their phone numbers. The numbers of dermatologists operating within the private sector were divided by the total registrations as per the Health Professions Council of South Africa (2019). DALY, disability-adjusted life-year.

practising in the more densely populated and urbanized areas, with 78% operating in the private sector. The majority (50%) of dermatologists identified themselves as white, followed by black (25%), Asian (18%) and coloured (3%), and 4% were unknown. Of the current trainee dermatologists, 49 are paid registrars who are state funded and 15 are unpaid supernumerary registrars (non-South African registrars).

The aim in South Africa has been not to increase the number of dermatologists but to provide equitable access to dermatology services in the least performing provinces (high DALY load per dermatologist) and increase the required number of dermatologists to the levels in the better performing provinces (low DALY load per dermatologist) to achieve horizontal equity. The national shortfall for 2030 was projected to be (at least) within the range of 54–95 dermatologists.

The lack of dermatologists affects the public sector and less urbanized provinces to a greater degree. Among medical specialists, a wage differential of up to two times exists, which contributes to the South African dermatology workforce being inequitably distributed across provinces and public and private sectors. Thus, additional rural pay may incentivize retention of dermatologists in rural areas. Additional training of general practitioners and nurses in dermatological care and implementation of teledermatology programmes is also recommended. With enhanced and equitable implementation of human resources for health planning,[7] improved access to dermatological care may be achieved.

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## Hidradenitis suppurativa may impact clothing patterns even in patients with mild disease and symptoms: an observational study

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Dear Editor, Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease characterized by a fragile follicular unit.[1] Pressure and friction, secondary to clothing, can potentially cause the follicular unit to rupture and exacerbate a patient's HS.[2] However, current literature investigating the effect of clothing on HS is limited to anecdotal reports and limited quantitative data.[2,3] Moreover, clinical guidelines currently lack evidence to support clothing recommendations.[4] Disease and symptom severity in a patient with HS may provide a useful clinical tool to identify patients at risk for clothing-based disease exacerbations. Recognition of at-risk patients may help implement practical patient clothing changes to decrease HS burden.

Patients with a clinical diagnosis of HS (International Classification of Diseases 10th Revision code 73·2) (n = 153) were recruited by mail (n = 123) and clinic (n = 30) between June and September 2018 after institutional review board approval was obtained, and 67 surveys were completed (mail n = 40, clinic n = 27). Differences in mean disease severity and number of painful nodules were compared with responses related to clothing patterns. Data were analysed using SAS software version 9·4 (IBM, Armonk, NY, USA). Differences in group comparisons by mean score were analysed using ANOVA and Student t-test. Differences in the percentage of respondents were analysed using $\chi^2$-tests. Patients used a validated self-assessment tool to report disease severity using the Hurley staging system.[5] Patients self-reported their number of painful nodules, severity of scarring, frequency of itch, burning and leakage.

Respondents (mean age 39 years, 90% female, 57% African American) had comparable demographics to nonresponders (mean age 36 years, 80% female, 38% African American). Respondents had an average body mass index of 35·7 kg $m^{-2}$, 56% had a family history of HS, 28% currently smoked, 22% had Hurley stage 1, 35% had Hurley stage 2 and 43% had Hurley stage 3 disease severity. Overall, respondents reported that tight clothing (76%) and mechanical stress (i.e. pressure on skin from clothing or belts) (73%) worsened their

**Table 1** Hidradenitis suppurativa (HS) sample characteristics

| | Mean score | Tight clothing worsened HS | Mechanical stretch worsened HS |
|---|---|---|---|
| Disease severity per Hurley score | 1 | 71% | 82% |
| | 2 | 71% | 71% |
| | 3 | 81% | 85% |
| Number of body regions with HS | < 3 | 38%[a] | 38%[d] |
| | ≥ 3 | 85%[a] | 81%[d] |
| Number of painful nodules | ≤ 5 | 57%[b] | 62%[e] |
| | > 5 | 89%[b] | 89%[e] |
| Severity of scarring associated with HS | None to mild | 73% | 64% |
| | Moderate | 72% | 66% |
| | Severe | 81% | 85% |
| Frequency of itch associated with HS | Daily | 83% | 80% |
| | < Daily | 66% | 64% |
| Frequency of leakage associated with HS | Daily | 90%[c] | 93%[f] |
| | < Daily | 59%[c] | 55%[f] |
| Frequency of burning associated with HS | ≤ 1–2 per month | 73% | 74% |
| | ≥ 1–2 per week | 81% | 73% |

The data are presented as the percentage of respondents. P-values represent $\chi^2$-tests of independence between an indicator for each HS symptom category and a clothing factor. P-values are statistically significant at a threshold of 5%. Significant differences were identified between values indicated with the same superscript letter.

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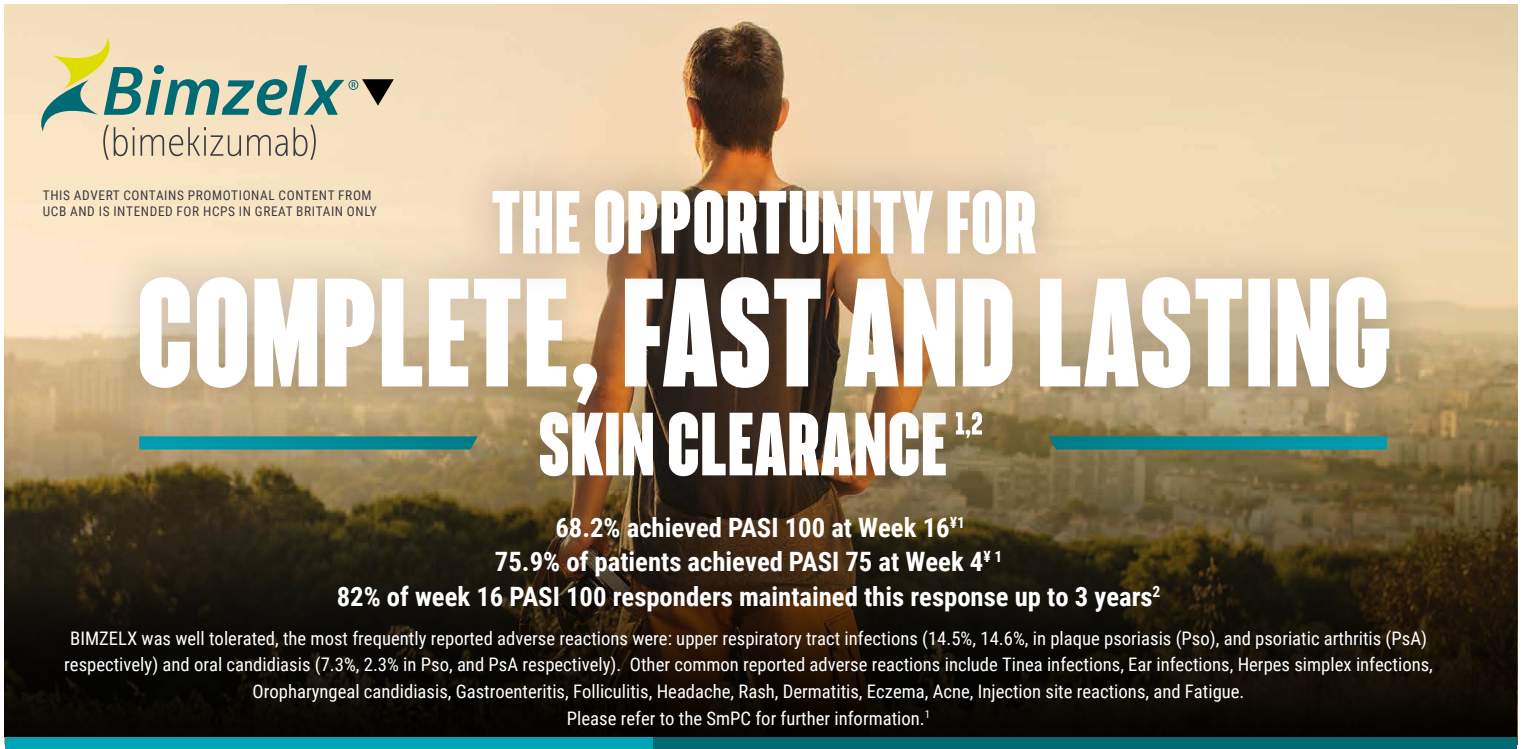

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