

Dermatology nursing in a rural area - the Overberg experience

Community dermatology in a rural area in the Western Cape.

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Background

The Overberg District Municipality of the Western Cape stretches over 11 391 km² along the coastline from Kleinmond in the west to Witsand in the east and from Villiersdorp and Barrydale in the north to Struisbaai in the south (Fig. 1).

The district covers the 4 municipalities of Cape Agulhas, Overstrand, Swellendam and Theewaterskloof and has a population of 247 684, according to the last census. There are 28 clinics, 14 mobile clinics, 4 satellite clinics and 4 district hospitals, which receive provincial government help. Notably, there is one maternity obstetric unit, and there are no TB hospitals, psychiatric hospitals, or regional hospital services in the area.

In all areas clinical nurse practitioner-led mobile services are routinely provided to the largely farming communities.

I am stationed at Elim Clinic in the Cape Agulhas Municipality. In 2007, I responded to an advertisement in the *Nursing News*, a magazine of the Democratic Nursing Organisation of South Africa (DENOSA), and registered for the 2-month dermatology nurse short course at Groote Schuur Hospital. On completion of the course I returned to the Overberg with the mission of implementing a dermatology nurse-led service and clinics in the area.

The Overberg dermatology nurse-led service

The following is an overview of the highs and lows of establishing this dermatology nursing service at primary healthcare level in the rural areas of the Cape Agulhas and Swellendam sub-districts of the Overberg District from 2008 to 2013.

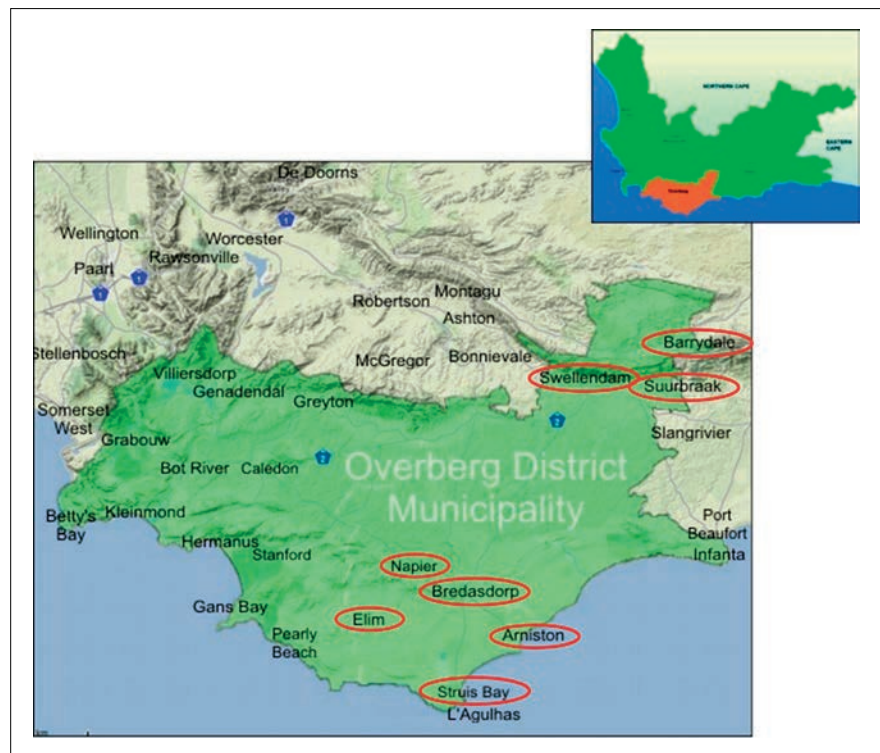


Fig. 1. The Overberg region in the Western Cape, highlighting the clinics.



Fig. 2. Sister Delena and students outside the Barrydale Clinic.

The aims of the service were:

- to provide adequate dermatology care at level 1 healthcare clinics
- to limit the burden of disease on the healthcare system by improving diagnosis of skin disease and providing appropriate skin care
- to improve referral patterns to/from secondary and tertiary institutions
- to provide a holistic approach to patient care

Table 1. Population served by the clinics

| Clinic | Population |
|-------------------------|------------|
| Agulhas Municipality | |
| Bredasdorp | 12 467 |
| Napier | 4 678 |
| Struisbaai | 3 580 |
| Waenhuiskrans | 1 418 |
| Elim | 2 258 |
| Farm areas | 5 338 |
| Swellendam Municipality | |
| Swellendam | 6 000 |
| Suurbraak | 3 098 |
| Barrydale | 4 375 |

- to promote skin health at all levels
- to offer prevention and management of skin conditions to the individual, family and community
- to ensure the sustainability of the dermatology service.

In 2008, I managed to negotiate a dermatology service for clinics in the Cape Agulhas municipal area – Bredasdorp, Elim, Struisbaai, Waenhuiskrans/Arniston and Napier. These were small beginnings because, as a general clinical nurse practitioner at Elim Clinic, time was

Table 2. Most common skin conditions seen

- Atopic eczema
- Tinea versicolor
- Acne
- Papular urticaria
- Psoriasis
- Pityriasis alba
- Tinea capitis
- Contact dermatitis
- Tinea corporis
- Vitiligo

limited for developing specialist services. Eventually, with the help of a government car, I was able to start monthly services, on a Friday, at these clinics, where 25 patients were seen per session.

In 2009, because of the success of the Agulhas municipal area clinics, I could expand the service to clinics in the Swellendam municipal area, namely Swellendam and Barrydale (Fig. 2). More recently, dermatology services were extended to Suurbraak Clinic in the same municipality. These clinics service a population of approximately 45 000 (Table 1).

In all areas clinical nurse practitioner-led mobile services are routinely provided to the largely farming communities. These monthly mobile clinics are all held on farms. Dermatology services are now included as part of these clinic services by generalist clinical nurse practitioners.

Despite running dermatology services at 8 clinics in the Overberg area, clinics are still held only once a month but have been extended to 2 days – a Thursday and a Friday.

Most patients are referred to the dermatology clinic by their local clinical nurse practitioner or by medical officers. Referrals are also received from local general practitioners from as far afield as Heidelberg.

Referral and follow-up

The referral pathways from the Overberg dermatology clinics are to the district hospitals for biopsies and specialist tertiary services for further management.

Cellphone teledermatology consultations take place with specialists from tertiary dermatology services; this provides an excellent triage tool for quicker, more

precise diagnosis and management. Patients can be started on appropriate treatment immediately without having to return to the clinic and, if necessary, they can be referred for treatments not available at the clinics or in the case of emergencies.

Because of the intermittent nature of the service, follow-up of dermatology patients seen at the various clinics is provided by the referring healthcare worker. This has resulted in up-skilling of the generalists in the clinics in keeping with government policy of improving basic training before providing specialist services.

Data are captured on a daily basis via routine monthly reports and then forwarded on a monthly basis for verification – first at sub-district and then at district level – before capture on the Sinjani system. Dermatology data currently do not form part of the information system but separate data are forwarded.

Common primary care skin problems are already effectively managed at the general clinics.

Spectrum of skin disease

From January to June 2012, a total of 502 patients were seen at the dermatology clinics, with an average of 20 cases per clinic. Fifteen per cent of the patients were less than 5 years of age and the predominant skin disease was atopic eczema.

Common skin diseases seen at the clinics are listed in Table 2. Contrary to expectations, infections and infestations were in the minority; chronic diseases, such as eczema, psoriasis and vitiligo, predominated. This implies that common conditions expected at primary care level are being managed by generalists, or patients self-medicate and do not seek help. The predominance of chronic skin diseases highlights the gap in community healthcare that is now being appropriately filled by the consulting specialist nurse service.



Fig. 3. Complex disorders of dyspigmentation seen at the Overberg clinics. A. Whorled hypopigmentation on the trunk of a patient with hypomelanosis of Ito. B. Macules of depigmentation in a phyllatoid pattern in a patient with vitiligo. C. Periorbital erythema, hypopigmentation and scale in a patient with presumed atypical psoriasis. D. Verrucous black nodule with rim of blue-black pigmentation confirmed as a verrucous nodular melanoma.

The spectrum of skin disease varies from site to site and is potentially important for healthcare provision and planning. For example, vitiligo, tinea versicolor, acne and tinea capitis predominated at the Barrydale Clinic over this period.

The referral of unusual and chronic diseases to the dermatology nursing sister meant that cases were diagnosed and treated

early. Examples of tertiary referrals from the Bredasdorp Clinic were 3 cases of acne keloidalis referred for curative surgical excision and 2 cases of chronic discoid lupus erythematosus referred for exclusion of systemic disease and initiation of chloroquine.

Examples of the more complex cases seen over this period are shown in Fig. 3, which is

a collage of cases of abnormal pigmentation seen at clinics and managed by referral or teledermatology consultation.

The essential drug list for primary care dermatology is very limited (Table 3). When the dermatology service started, limited stock of topical agents needed to treat chronic skin disease was available, largely because no one 'owned' the service. Since

Table 3. Medication for treating skin diseases in the clinics

| Treatment | Available medication |
|------------------|--|
| Acne therapy | Benzoyl peroxide Oral antibiotics <ul style="list-style-type: none"> • Doxycycline • Erythromycin • Cotrimoxazole Topical retinoids (specialist prescription) |
| Antihistamines | Chlorphenyramine Promethazine |
| Topical steroids | Weak <ul style="list-style-type: none"> • Hydrocortisone acetate 1% Potent <ul style="list-style-type: none"> • Methylprednisolone aceponate (scalp) • Betamethasone valerate Super potent <ul style="list-style-type: none"> • Clobetasol (specialist prescription) |
| Moisturisers | Aqueous cream Cetomacrogol cream Emulsifying ointment PMF |
| Antibacterials | Povidine-iodine scrub/shampoo |
| Tar | LPC 5% in HEB LPC shampoo |
| Sun protection | Sunscreen SPF8 (specialist prescription) |



Fig. 4. Outside Napier Clinic - staff and 5th-year MB ChB students.

then, an effective and collegial relationship has developed with local pharmacies, resulting in an increased range and supply of medication to cope with down-referrals.

Dissemination of dermatology knowledge and skills acquired among the rest of the Overberg healthcare providers is central to the dermatology service. Common primary care skin problems are already effectively managed at the general clinics. Because the clinics can only be held intermittently, knowledge acquired by generalists

who provide follow-up care in between clinics has improved dramatically.

The clinics have become important teaching nodes for the University of Cape Town (UCT)'s 5th-year MB ChB students who spend 2 days in the area as part of their dermatology training (mixed specialty block) (Fig. 4). Clinics are visited in rotation and provide ongoing medical education for local healthcare providers.

The clinics are central to the Postgraduate Diploma in Dermatology nurse training. Students spend 2 weeks in the area as part of their community and environmental dermatology module. A report of their experiences and how it will aid them in the establishment of a similar service in their communities forms part of the formative assessment. The first two graduates were stationed at Elim in 2012.

Referrals are also received from local general practitioners from as far afield as Heidelberg.

The monthly outreach services provided by UCT to the Overberg region, with clinics visited in rotation approximately twice a year, provide my only in-service continuing medical education dermatology training.

Outcomes

The outcomes of the Overberg dermatology nurse-led service have been numerous and include the following:

For the Department of Health:

- It has limited the burden on the tertiary healthcare system.
- It has reduced the financial expenditure on transport.
- Biopsies are done at the local hospital via the *knoppie-lys*.
- Attendance numbers at dermatology outreach visits have decreased.
- Adequate pharmacological supplies are now ensured.
- Bed utilisation is reduced by providing community facility-based care.

For the individual patient:

- Monthly specialist services are available.
- Monthly follow-up appointments are available.
- Changes in skin condition are recognised and managed early.
- Patients are encouraged to seek medical assistance sooner, as it is available on their doorstep.
- They no longer have to be ashamed of white spots (*wit kolle*), ringworms and warts, as these are now effectively managed and not ignored as being 'cosmetic problems'.
- Interpersonal relationships of healthcare workers with individual patients are possible.
- Healthcare workers can motivate better adherence to treatment options.
- Holidaymakers to the coastal resorts make use of the service.
- General practitioners refer patients.

Staff of the Overberg health service:

- They are provided with education and training opportunities.
- They are provided with immediate referral responses.
- They have accessibility to telemedicine consultations.
- The workload of the clinical nurse practitioners is reduced.
- They act as partners in a multidisciplinary health team.

For dermatology nurse practitioners:

- They are empowered with dermatology knowledge and skills.
- They are empowered to assess and make an appropriate diagnosis of a magnitude of skin conditions.
- They are empowered to appropriately manage a magnitude of skin conditions.
- They are equipped with skills in the application and use of various pharmacological preparations.
- They are equipped to provide the necessary health education and promotion to decrease the defaulter rate.
- They are equipped to provide dermatology education to colleagues.
- They observe best practices of other PHC facilities.

- They meet people from a variety of backgrounds.
- There is job satisfaction through patient satisfaction and gratitude.

Challenges and recommendations

We have established a functioning dermatology service in the Overberg region which is based on rotational dermatology nurse consultations. Attendance at clinics has increased and is expected to increase further once patients are aware of the extent and quality of the services offered. The main challenge it faces is sustainability. Succession planning is an important component of the service. We need to encourage and awaken an interest in dermatology among nurses who have had little or no previous exposure and whose training has essentially ignored the plight of those with skin disease.

Dermatology treatment requires special skills in the 'how' of topical treatment. To encourage patient adherence we need to provide day care infrastructure for nursing interventions at facility level. This will enable clinic staff to manage patients acutely and provide education on topical use.

Improved dermatology data capturing will provide the necessary statistics to motivate for improvements in services, staff and facilities. This needs to be addressed as a priority.

More regular dermatology clinics and local healthcare centre teaching need to be offered by the clinical nurse practitioner. In view of the vast distances travelled currently, it would seem advisable to provide an increase in suitably trained dermatology clinical nurse practitioners at strategic clinics. These could be specialist nurses or clinical nurse practitioners with a special interest in dermatology.

Mentorship of dermatology nursing students should continue as an essential component of the service.

Support for dermatology nurses should be provided via the Dermatology Nursing Support Group. This has already been initiated and will form a sub-committee of the Dermatological Association of South Africa. It is already affiliated to the International Skin Nurse Group, a full member of the International League of Dermatology Societies.