

Breaking new ground: lessons learnt from the development of Stellenbosch University's Rural Clinical School

Authors:

Susan Van Schalkwykⁱ

Julia Blitzⁱⁱ

Ian Couperⁱⁱⁱ

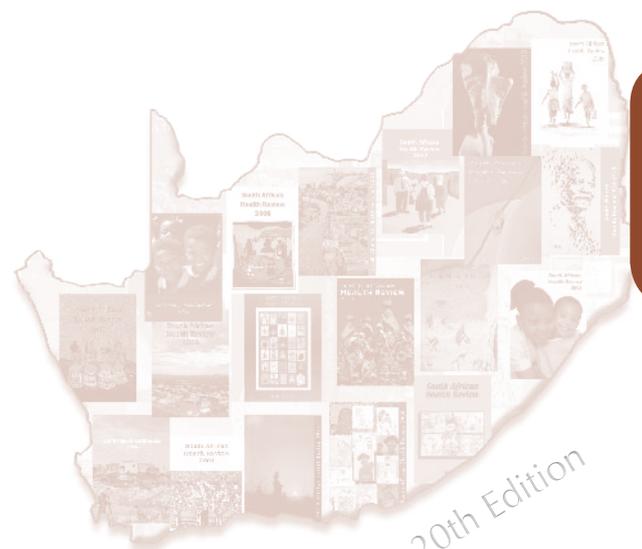
Marietjie De Villiersⁱⁱ

Jana Mullerⁱⁱⁱ

Training health professionals in rural areas increases their preparedness for rural practice and their subsequent likelihood of working in a rural area. In 2011, Stellenbosch University (SU) instituted a year-long training of final-year medical students at a rural training site. This longitudinal training model was subsequently adopted by other health professions in 2013. The nature of the training and the context within which it occurs facilitate a unique learning experience for the students, and has positive spin-offs for other role-players.

This case study presents the training model followed at SU's Rural Clinical School (RCS). Drawing on five years of research, we describe some of the ways in which the RCS training model has influenced the role-players. Key lessons learnt are outlined from both educational and health system perspectives. It is recommended that all health professions students be exposed to training in rural areas, including continuous longitudinal rotations.

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- i Centre for Health Professions Education, Stellenbosch University
- ii Division of Family Medicine and Primary Care, Stellenbosch University
- iii Ukwanda Centre for Rural Health, Stellenbosch University

Introduction

Training health professionals in rural areas increases their preparedness for rural practice and their subsequent likelihood of working in a rural area¹ and now constitutes the core curriculum for undergraduate students in many countries. A range of different models of rural training exist in South Africa, the most traditional approach being in the form of short-term rotations.² Building on international models and on the example of Walter Sisulu University, well known for its contribution as a community-based and rurally focused medical school,^{3,4} Stellenbosch University (SU) introduced longitudinal integrated clerkships (LICs). This approach to clinical training allows students to benefit from continuity of the healthcare setting and supervision, and can help to address workforce challenges.⁵ In 2011, the Faculty of Medicine and Health Sciences (FMHS) at SU became the first academic institution in South Africa to send a group of medical students to its Rural Clinical School (RCS) for their entire final year, where they could select the option to follow a LIC model. Subsequently, in 2013 and 2014, the Occupational Therapy and Human Nutrition programmes also introduced longitudinal undergraduate placements for final-year students at the RCS. Currently, the RCS is the only example of a rural, decentralised, multi-professional clinical training platform in South Africa offering year-long placements.

Adoption of this approach challenges the traditional approach – shorter-rotation, discipline-specific clinical training at a tertiary training complex – in that it provides students with the opportunity to learn in a context that is closer to the healthcare needs of our country. A longitudinal and multi-disciplinary component adds a further dimension. However, the approach is not without risk and requires the commitment of financial and human resources. This chapter describes the factors that led to the conceptualisation of the RCS and the chain of events that enabled its establishment. Drawing on five years of research, we describe some of the ways in which the RCS and the activities surrounding it have influenced the students, their supervisors, hospital staff, patients and the communities at large.

The provision of health professional training in a rural context falls under the umbrella of what is often described as community-based education (CBE). Apart from seeking to encourage the retention of healthcare workers in rural areas, CBE speaks more broadly to providing students with the opportunity to train in authentic contexts that can prepare them for the provision of quality health care across the full spectrum of service. Often a space where interprofessional practice is encouraged, CBE is also typically underpinned by principles of social justice and equity.⁶ This has particular relevance in the South African context where distribution of health services to communities in need is inequitable.⁷ As will be seen from the discussion that follows, the nature of the training and the context within which it occurs at the RCS facilitates a unique learning experience for the students, and has significant positive spin-offs for the other role players concerned. As South Africa seeks to find sufficient and appropriate clinical training placements for the growing number of health professionals in training, while simultaneously encouraging greater numbers of graduates to work outside the large metropolitan areas, the lessons learnt at the RCS have particular relevance for both the educational and the health system.

Description of the intervention

The Ukwanda Centre for Rural Health was established in 2001. At the time of inception, all fourth-year medical students at the FMHS undertook a two-week rural rotation in Family Medicine and Primary Care. This was later increased to four weeks, as part of the CBE programme. The positive experiences recorded during these rotations were an early catalyst for the subsequent introduction in 2011 of the year-long rural rotation for final-year medical students at the RCS, centred in the Worcester regional hospital and surrounding towns. This pioneering event was the result of many years of negotiations between a wide range of stakeholders. At the time, placing students on a decentralised platform away from the academic teaching hospital for an extended period represented a significant leap of faith on the part of the FMHS, the students, and the provincial and local health department. The campus built in Worcester was equally innovative, characterised by environmentally friendly academic and accommodation structures. This infrastructure was funded by the FMHS through strategic prioritisation of its portion of the Clinical Training Grant received from the Department of Higher Education and Training. In addition, funding was provided through SU's 'Hope Project', which had been set up to support interventions with the potential to benefit society. Through a series of consultative planning workshops attended by staff from the faculty (managers, educationalists and clinicians), the curriculum was adapted to ensure flexibility and relevance. This work also led to the formulation of a list of common clinical presentations to guide student learning, and the introduction of patient portfolios as both a learning and an assessment tool. Thus, although the students were required to meet the same prescribed outcomes for their final year as their colleagues at the Tygerberg Campus, the focus of their learning and the nature of their exposure was directed towards primary care and meeting the healthcare needs of the communities in which they were placed.

Medical students select to follow one of two options. In the regional hospital option, they follow clinical rotations through specialist departments, and spend one afternoon a week in the university's service learning centre – a primary care clinic in a local underserved community where they also do home visits. In the second option, the longitudinal integrated model (a form of LIC), students spend the year in a district hospital (Ceres, Hermanus, Robertson and Swellendam) 50–100 km from the regional hospital, in groups of two or three, under the mentorship of a family physician, supported by regular visits from a programme co-ordinator and from specialists based at the regional hospital. Here students learn through their involvement primarily in the care of patients with undifferentiated problems, and the curriculum is therefore informed by the patients 'walking through the door'.⁸ Although only eight students chose the RCS option in 2011 (six students at Worcester and two at Ceres on the LIC model), it has grown in popularity in the intervening years. In 2016, close to 60 fifth-year MBChB students from a group of 252 applied to attend the RCS. Only 26 (18 at Worcester, three at both Ceres and Hermanus and two at Robertson) were selected in 2017, as limitations on the numbers of student placements at the sites remains a barrier to extending this decentralised training platform further.

A unique feature of the SU RCS is adoption of the longitudinal rural training model by other health professions. Since 2013, eight Occupational Therapy students annually have been spending their

entire final year at the RCS. In 2014, Human Nutrition students joined this group, with four final-year students spending the entire year in Worcester. The remaining Human Nutrition students rotate through one or more clinical blocks for a six-week period to facilitate their rural exposure. Although not involved in the longitudinal format, final-year Physiotherapy students spend a minimum of six weeks rotating through one to three clinical blocks on the RCS platform. In addition, all final-year Speech, Language and Hearing Therapy students spend eight weeks at a time completing their Community block placement at the RCS.

The focus at the RCS is on facilitating the following overarching outcomes for all final-year undergraduate students:

- the development of graduate attributes as defined by the FMHS and reflected in the seven roles of the health professional, namely: healthcare practitioner, scholar, communicator, health advocate, collaborator, professional, and leader and manager;
- fostering of interprofessional education and collaborative practice (IPECP);
- a transformative learning experience as defined by Frenk et al.⁹

Students are encouraged to engage in the biopsychosocial and interprofessional assessment and management of patients using the International Classification of Function, Disability and Health⁷ to guide holistic thinking. This framework encourages transformative learning and critical evaluation of the student's rights and duties as a member of the community and a citizen of South Africa. Some outcomes have been community re-integration for patients, formulation of sustainable support groups, home visits, and health promotion.

The RCS has collaborated with 34 state, private and non-governmental organisations in Worcester, Ceres, Hermanus and Robertson to provide platforms for contextualised undergraduate clinical training. The development and maintenance of these partnerships has taken time and effort, and the team strives to ensure that these collaborations are reciprocally beneficial. Role-players in the academic programmes have worked together to enable innovative IPECP as part of the clinical training opportunities at each of these four sites. Inventive student projects and collaborative ventures between the RCS and healthcare organisations have evolved into sustainable initiatives bringing change within communities, the university and the healthcare setting as a whole.

Lessons learnt

In the six years since the longitudinal training model was established, much has been learnt about 'taking' clinical training to decentralised and specifically rural platforms. Engagement with stakeholders has been crucial in this regard. Our research on the medical programme at the RCS has been informed by the many different role-players involved, including students, supervisors, hospital staff, university staff, facility managers, community care workers, and patients. This has enabled us to describe and understand the complex and interconnected nature of the endeavour. Rather than try to evaluate the initiative in a sterile fashion, the study adopted a modified action research approach so that the findings that emerged each

year could be considered critically in terms of how they might be used to enhance the next year's training. Across the five years of the research project, over 200 interviews and 17 focus group discussions were held with successive cohorts of students, clinician educators, hospital staff, healthcare workers and other stakeholders. Four surveys were conducted with graduates, and students' final results were analysed and compared with the results of those who remained at the academic tertiary complex.

More recent work focused on the experiences of students from other disciplines, and explored the relevance of interprofessional education in this context through a series of focus group discussions and individual interviews with the relevant student groups. The following is a synthesis of the key lessons learnt from both an educational and a health system perspective:¹⁰⁻¹⁵

The educational perspective:

- The decentralised platform offers the opportunity for authentic, potentially transformative learning experiences, particularly for those students who spend a significant period at the rural training complex. Continuity in terms of care and supervision plays an important role here. Students across all disciplines described their learning as a 'humanising' experience as they came to identify with the communities within which they were placed, and the patients they came to know.^{10,13}
- Linked to the above is evidence of a shift in student attitudes and behaviour, such as the adoption of professional practices that can positively influence holistic, patient-centred outcomes. In the interviews, students described how their experiences had changed their approach and attitude towards the provision of health care.¹⁴
- Students who were first exposed to the rural training platform in their final year and who experienced shorter rotations expressed a desire for earlier exposure in the course of their curriculum in order to prepare them better for work in a rural context.¹⁰
- Students also claimed enhanced confidence in their clinical skills. In particular, medical students spoke about how, as a result of their year-long experience on the rural platform, they felt well prepared to embark on their internship. This was corroborated by their intern supervisors who noticed their ability to perform patient care independently and noted this as an advantage.^{11,14}
- Importantly, the analyses of student results, including comparisons between students at the RCS and the groups that remained within the tertiary academic hospital context, indicate that students who attend the RCS are not disadvantaged academically.¹⁵
- Many of the student interviewees at the RCS described how they needed to take responsibility for their own learning. Self-directed learning was therefore seen as both a necessary characteristic for students to cope in the RCS as well as an outcome of the experience.¹³ Innovation in teaching and assessment at the RCS has had a ripple effect on thinking around student learning and the potential for incorporating more innovative assessment formats (e.g. the use of patient portfolios).

The health system perspective:

- Bringing the educational project into the health system was seen to evoke a new 'identity' for clinicians, and other role-players, as educators and collaborators.¹²
- There was a perceived enhanced 'status' for the hospital, clinic and other facilities that came with being an accredited site for clinical training. This sense of recognition is emerging strongly in more recent work being conducted. In the case of the allied health professions, this benefit extends to non-governmental organisations and private practices.
- The clinicians' own professional learning was enhanced as a result of supervising the students and through the faculty development initiatives on offer.¹² In particular, care was taken to provide clinicians at the different training sites with opportunities to enhance their clinical teaching skills. Session topics included conducting tutorials, teaching at the bedside, using approaches such as the One-minute Preceptor,¹⁶ as well as clinical and portfolio assessment. Formative assessment events for medical students were supported by introducing use of the Mini-CEX (Mini-Clinical Evaluation Exercise) at the sites.¹⁷
- Students' 'extra pair of hands' helped to reduce waiting times and facilitated more in-depth and contextual patient assessment, as students had more time and the opportunity to do home visits. Patients reported a more positive experience and were generally appreciative of the care received from students.¹⁴
- Establishing decentralised clinical training sites, such as those within the RCS, centres on the development of mutually beneficial relationships between representatives of the health system, the community and the university. Once established, maintaining and strengthening these relationships over time was seen to be a key success factor in ensuring sustainability. Critical among these factors is recognition of the interdependence between the Department of Health, provincial health authorities and the different training institutions.
- Evidence is now emerging of graduates returning to practice at rural training sites or other rural healthcare facilities. Of the 36 medical graduates from 2011 and 2012, 12 returned to their rural training platforms to continue their professional careers. Subsequent graduates are still busy with compulsory internship and community service, a number of them at rural sites in South Africa.

Conclusions

The model of a rural clinical school is well described in Australia,¹⁸ Canada¹⁹ and the USA,²⁰ and has taken root in South Africa. The involvement of a range of health professional students further provides opportunities for teamwork and collaborative community-based interventions.¹⁸ Continuity, fostered by placements that are of a longer duration, enables the establishment of meaningful relationships among the students (across the different professional education programmes); between the students and their supervisors; between the students and hospital staff; between the students and their patients; and between the students and the community.

In particular, the nature of the engagement with supervisors as a result of the smaller numbers of students at decentralised sites and their exposure to primary care potentially leads to a more transformative learning experience. In addition, it facilitates the collaborative care of patients and informs a better understanding of the influence context has on patient wellness, disease and disability. Furthermore, the placement of future health professionals in rural contexts for their practical training can encourage graduates to consider rural practice and lead to them being prepared for work in the public health system.

It has been suggested that a limitation of the RCS model and its potential to be scaled up is the fact that historically, only small numbers of students are placed at regional, and particularly, district hospitals. However, our experience suggests that it is these smaller numbers that facilitate the uniqueness of the clinical learning experience. To date, over 175 students from the different disciplines have passed through the RCS. While further work is needed to determine what an ideal student/clinician ratio might look like, we would argue that were educational institutions able to access more sites, many more students would be exposed to this particular form of clinical learning. The development of a vision for decentralised training, that is shared by both the departments of health and the educational institutions, would allow such initiatives to be scaled up dramatically. This would benefit the students, the facilities where they train, and the health system at large. Initiatives around the placement of students who will be returning in significant numbers from September 2018 to complete their clinical training in South Africa as part of the Nelson Mandela Fidel Castro Medical Collaboration programme, may provide impetus towards achieving this.

Ongoing research is providing more quantifiable evidence of the contribution that educational initiatives such as the RCS can have on the health system; this includes a multi-country study from sub-Saharan Africa which is currently being completed. Nevertheless, taken collectively, the current body of scholarship in the field presents a compelling argument in support of decentralised longitudinal clinical training.

As South Africa seeks to increase the number of health professions graduates and their employment in areas of need, it is incumbent on higher education institutions to ensure that students are equipped to provide quality health care effectively in a socially responsive manner.

Recommendations

Based on the findings of our research, and reflecting on these findings in the context of current literature in the field, we recommend that:

- all healthcare professional students in South Africa be exposed to training in rural and underserved areas through the course of their curriculum;
- the option of longitudinal rotations across the different health professions be developed where this does not currently exist, and expanded where this exists already; and
- the education and health sectors jointly explore ways in which more rural clinical training sites can be established, with a view to responding to the human resources for health needs in South Africa.

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