Recruiting doctors to work in rural areas is an important global concern for health managers and educators. Factors influencing this include specialisation, work in private or public sectors and the type of medicine doctors want to practise. Other issues include children’s education, hobbies, spouse’s occupation and parents’ health. There are few reliable predictors of future career choices, but for doctors their rural origin appears to be the most significant factor. We share the belief that exposure to rural health care during training and education which emphasises rural health issues can positively influence health professionals towards working in rural areas. We wished to determine whether or not this was seen to be a factor by health professionals.

**Methods**

The design was an exploratory qualitative study using in-depth interviews. A purposive sample of 15 South African health care professionals (HCPs) (doctors, dentists, pharmacists and therapists) working in rural areas in South Africa, for at least 3 years in their current location, was taken. The following variables were considered: gender and ethnicity, private or public practice, university of graduation, health profession and province of work.

Key informants were chosen from suggestions from the Collaboration for Health Equity through Education and Research (CHEER), and from e-mail discussion lists on which South African rural health care professionals are active. A member of the research team interviewed each person purposively selected from this list. To improve reliability the four interviewers standardised the approach. Reflection, summarising and clarification to explore in detail what participants were saying and to uncover unanticipated ideas, followed clear, open-ended questions. To maximise contextual sensitivity, the interviews were conducted where participants practised, with one exception.

Interviews continued until saturation was reached after the initial question ‘What factors have influenced you to practise in your current geographical location?’ Two further questions were posed: ‘What made you decide not to practise in an urban location?’ and ‘What factors in your education or training influenced where you practise?’ Field notes and audio-taped
interviews were transcribed verbatim. The researchers analysed interviews that they themselves conducted. The researchers identified and described themes and looked for relationships between them. Common and apparently contradictory themes were identified, and a composite analysis of all the interviews was done and cross-checked.16

The composite analysis was submitted to a number of the interviewees for comment.

Informed consent of participating health professionals was obtained prior to interview. The research protocol was approved by the Committee for Research on Human Subjects of the University of the Witwatersrand, Johannesburg.

Results

Demographics of interviewees are outlined in Table I. Themes identified are summarised in Table II.

The themes identified are presented in Fig. 1. Personal attributes of the HCPs, namely their rural origin and/or their value system, are critical in determining whether or not consideration is given to rural practice as an option or an obligation. The decision to ‘go rural’ or ‘return rural’ is facilitated by exposure to rural practice during training, an understanding of the needs in rural areas and positive role models.

The context and nature of their work and of the environment in which they practise are essential factors in HCPs’ decisions to continue working in a rural area. Their ability to stay is supported by the role of family and friends, ongoing training and development, and the style of management of the health service. Personal motivation is reinforced by a positive relationship with the community, and by being an advocate for the local community and a role model for future HCPs. (Abbreviations for categories of HCPs: doctor/medical practitioner = MP; dentist/dental practitioner = DP; pharmacist = P; occupational therapist = OT; physiotherapist = PT).

### Table I. Demographics of key informants

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>10</td>
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<tr>
<td>Female</td>
<td>5</td>
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<tr>
<td>Race</td>
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<tr>
<td>Profession</td>
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<tr>
<td>Doctor</td>
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<tr>
<td>Dentist</td>
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</tr>
<tr>
<td>Pharmacist</td>
<td>2</td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>1</td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>1</td>
</tr>
<tr>
<td>University</td>
<td></td>
</tr>
<tr>
<td>UL</td>
<td>4</td>
</tr>
<tr>
<td>UKZN</td>
<td>2</td>
</tr>
<tr>
<td>UCT</td>
<td>2</td>
</tr>
<tr>
<td>UWC</td>
<td>2</td>
</tr>
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<td>WSU</td>
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</tr>
<tr>
<td>NMMU</td>
<td>1</td>
</tr>
<tr>
<td>UP</td>
<td>1</td>
</tr>
<tr>
<td>Wits</td>
<td>1</td>
</tr>
<tr>
<td>SU</td>
<td>1</td>
</tr>
<tr>
<td>Province</td>
<td></td>
</tr>
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<td>Limpopo</td>
<td>6</td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>4</td>
</tr>
<tr>
<td>KZN</td>
<td>4</td>
</tr>
<tr>
<td>Western Cape</td>
<td>4</td>
</tr>
</tbody>
</table>

UL = University of Limpopo; UKZN = University of KwaZulu-Natal; UCT = University of Cape Town; UP = University of Pretoria; WSU = Walter Sisulu University; NMMU = Nelson Mandela Metropolitan University; UWC = University of the Western Cape; Wits = University of the Witwatersrand; SU = Stellenbosch University.

### Table II. Summary of themes influencing decision to work and stay in rural area

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal factors</td>
<td></td>
</tr>
<tr>
<td>Origin: rural origin and work with own people</td>
<td></td>
</tr>
<tr>
<td>Values: political, religious, service to people</td>
<td></td>
</tr>
<tr>
<td>Facilitating factors</td>
<td></td>
</tr>
<tr>
<td>Role models</td>
<td></td>
</tr>
<tr>
<td>Exposure to rural work</td>
<td></td>
</tr>
<tr>
<td>Rural peoples’ need</td>
<td></td>
</tr>
<tr>
<td>Dislike urban life</td>
<td></td>
</tr>
<tr>
<td>Context</td>
<td></td>
</tr>
<tr>
<td>Work and environment</td>
<td></td>
</tr>
<tr>
<td>Nature of rural practice and people</td>
<td></td>
</tr>
<tr>
<td>Tranquil rural surroundings</td>
<td></td>
</tr>
<tr>
<td>Staying factors</td>
<td></td>
</tr>
<tr>
<td>Family and friends</td>
<td></td>
</tr>
<tr>
<td>Learning in work</td>
<td></td>
</tr>
<tr>
<td>Supportive management</td>
<td></td>
</tr>
<tr>
<td>Reinforcing factors</td>
<td></td>
</tr>
<tr>
<td>Relationships</td>
<td></td>
</tr>
<tr>
<td>Role model and advocacy for local community</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 1. Composite model of themes.
Personal factors

Deciding to go or return to a rural area is underpinned by personal attributes, including: serving people (especially one’s ‘own people’), having a community connection, Christian beliefs, political motivation, wanting to serve people in rural areas and the need to make a difference and have an impact.

For those of rural origin, this aspect was the strongest motivating factor. They described a sense of returning home, and of familiarity with and ability to relate to rural people, coming back to roots, family, people, and village and being born there. Some felt a sense of obligation, needing to give something back to the community which had nurtured and supported them, because ‘my success is the community’s success’ (DP). In contrast, going to the city would involve ‘disconnection’ from the community and be considered a ‘desertion’ (DP).

Facilitating factors

While values and origin are motivating factors, a decision to go rural is not automatic, but is seemingly facilitated by other factors, namely:

Exposure to rural practice during training, such as rural electives and holiday work. One was encouraged by the emphasis in her occupational therapy course on service delivery and holistic practice, and time spent in a rural area. Some said the content of their training, with an emphasis on rural health care and exposure to family studies (at Walter Sisulu University and University of Limpopo), was important. There was discordance on this factor however, because on being asked specifically, most respondents did not consider educational factors to be a major influence.

Awareness of the needs in rural areas included the absence of doctors in the area (MP), most professionals being white expatriates (P) and personal experience of ineffective treatment as a child (P).

The importance of role models – others working in rural areas were an inspiration.

Dislike of urban life, most respondents mentioning cities as places where they would not like to live as they were ‘not nice’, lonely, unsafe, crowded, busy, ugly and dehumanising, where one is not ‘recognised as someone even if rich’ (FT), lacking space, requiring a specialised approach to working and causing a ‘pressurised lifestyle’.

One respondent (OT) had unsuccessfully applied for a city job and another (MP) would have moved were it not for the shortage of staff in her hospital – but both no longer wished to move to the city.

Context

Once the HCP has begun rural work, motivation is maintained by the context of the work and the environment, including physical environment, lifestyle, job satisfaction, nature of rural patients and financial issues.

The natural physical environment including the geography, climate, fauna and flora was much appreciated in different settings and was connected with the rural lifestyle. Respondents reported a better quality of life, tranquillity, safety, peacefulness, lack of traffic, time to relax and opportunities for involvement in community activities.

Job satisfaction was rewarding because of the diversity of tasks and patients, involvement in the community and practising with a broader perspective. ‘You are a real primary health care doctor’ (MP). One respondent (OT) described how rural practice is diverse while city practitioners are boxed into a specialised environment. Continuity of care, comprehensive care and gatekeeping are rewarding. For some this was linked to being able to combine private and public sector work.

The nature of rural patients was spoken about positively; they were described as easy to talk to, friendly, considerate, appreciative and less demanding. They were often contrasted with their urban counterparts. While city patients demand referral to specialists and specific drugs, ‘patients from rural communities come to a doctor because they are ill’ (MP).

The financial situation was an important benefit, HCPs earning more (because of rural allowances), being provided with housing (public service) and spending less, so they were able to save. However some private practitioners feel that rural income is less and that state appointments are important to supplement income. One respondent’s financial situation was a trap that prevented him leaving rural practice for some time (MP).

‘Staying’ factors

Family, the choice and happiness of the spouse, extended family, and friends were critical in the decision to go and to stay in rural practice. ‘I receive a lot of support from my family and other people’ (P).

Rural life enables one to spend more quality time with family and provides a safe environment for children. Children may be close to school in some cases. For others schooling becomes an issue as children get older; one respondent (MP) was moving to the city because of this.

A network of friends is important and the friends of one (MP) persuaded him to set up his practice in the village.

A supportive team, especially the management team in the public health service, with a well-functioning system, is vital in ensuring that HCPs stay in rural practice. Respondents talked about having enough staff, supportive nurses, well-organised hospitals and clinics, medicines in stock and good emergency services, support from management and senior colleagues, and a fair, communicative and supportive management style.
Relationships within the team are important, including a good relationship with the local doctor (P).

Training and development included opportunities to learn with senior colleagues to support and teach. Postgraduate training, especially in family medicine, which doctors were able to do while working in rural areas, was an important contributor.

Reinforcing factors

Being a role model for others and an advocate for the broader community, being able to teach younger colleagues, students and community service professionals, thereby instilling service values and a vision of the potential of rural practice, was important. This responsibility may go beyond the individual mentoring relationship, to a broader role; representing the profession in the area and a broader advocacy role, in terms of community upliftment and improved rural health care.

A close relationship with the community and appreciation from them is important; feeling appreciated and recognised being more important than riches (PT), feeling honoured for ‘what I am and what I do’, (PT) and a sense of acceptance, being ‘within a community’ (DP).

Educational influences

In contrast to those who raised their university training as a facilitating factor, when questioned about educational influences on their decision to practise in a rural area, respondents generally felt medical school did not help them choose to work in a rural area. There was a sense of disenchantment and of minimal influence. One interviewee was working in a rural area ‘in spite of medical training’ (MP). Several felt their university training actively worked against rural practice, only preparing them to work in an urban, white, western society and were actively discouraged from them is important; feeling appreciated and recognised being more important than riches (PT), feeling honoured for ‘what I am and what I do’, (PT) and a sense of acceptance, being ‘within a community’ (DP).

Discussion

Demographics

The demographics of the participants are considered to be a fair reflection of the situation in rural practice in South Africa. Apart from nurses who were not included in this study, because few are university-trained, doctors were the dominant profession. The gender mix reflects the international situation where males predominate in rural practice, especially among primary care physicians,17

White professionals, often expatriates, dominated rural practice in the past, related to apartheid policies and lack of training opportunities for black professionals. Rapid change has occurred since democracy in 1994; the sample was therefore deliberately skewed towards the new South African demographics of rural practice.

Seven of the eight medical schools and two health science faculties not involved in doctor training (Western Cape and Nelson Mandela Metropolitan Universities) were included.

Findings

These results provide qualitative support for international studies, highlighting the complex interactions among factors that influence how HCPs decide to go to and stay in rural areas. Career decisions of health care professionals include ‘demographic’ factors, such as gender, age, cultural and ethnic background, and family commitments, together with a more complex set of constructs such as personality, self-perception, self-efficacy and motivation, the role of which is less clear, though no less important, as seen in this study. The model generated from this study helps to conceptualise some of the interactions.

Personal values and place of origin are very important and accord with studies that demonstrate that rural-origin students are more likely to practise in rural areas,6,16,21,22 and that personal qualities are very important. Religious beliefs were previously found to be one of the strongest motivators for working in rural practice; our interviewees reflected such beliefs, together with traditional values and sociopolitical convictions.

Role models have been a greater influence on primary care doctors than their non-primary care counterparts. There is thus a need to identify and encourage existing role models.

While financial incentives are necessary, the work environment, sound management, and team relationships are equally important elements of a rural retention strategy. These can be found in successful rural hospitals.22

Many educators believe that providing undergraduate students with the necessary skills and positive experiences in rural medicine encourages future practice in rural communities,12,21,22 While there is international evidence in this regard,21,24,25 our results suggest that other factors may be more important, which may have to do with the timing and duration of the rural experience.22 The perceived quality of a rural educational experience is apparently associated with an increased interest in a rural career.26 It is therefore possible that South African health science faculties have not provided experiences of sufficient significance or quality to make an impact. Further research is required to assess this.
Concerns that educational experiences may mitigate against a decision to practise rural and that exposure to rural practice may discourage students need to be taken seriously. A second phase of this study, where urban practitioners are being interviewed, may elucidate this further.

The independent effect of the curriculum is unknown. It is unclear whether positive career choices are the result of the training or the unique nature of those who underwent the training. In our study, the latter appears more important. Medical school training and characteristics of medical schools are not independently associated with rural practice or retention, but they are important co-factors akin to the facilitating factors we describe.

This study enhances our understanding of the relationships among factors influencing HCPs' decisions regarding rural practice. It can assist in reframing the policy question from 'What can be done during health professional training?' to 'What can health science faculties do?' to address the shortage of rural HCPs.

Positive and negative factors affect recruitment and retention of rural HCPs and their problems need to be tackled using a multidimensional approach. Medical educators may play an important role in preparing students to face these factors and to cope with living in rural communities. A partnership between medical educators, rural health service authorities and a rural community is crucial. Our results suggest that educationalists should work particularly on the following areas:

- Selection of HCP students – where they come from and what they believe. The former is easier and is being done in many places, including South Africa, for example, through rural scholarship schemes. Assessing the values of applicants is more difficult.
- Assisting students and young HCPs to connect with their own roots and values.
- The nature, level and duration of rural exposure and community engagement for students.
- Facilitating rural communities to become more involved with the support of HCPs.
- Supporting and training managers to improve the work context and to use a more participative management style.

While it is important to implement programmes actively on the basis of what is known, developing evidence regarding best practice in regard to these issues is needed.

References

5. Rabinovitz HK. A program to recruit and educate medical students to practice family medicine in underserved areas. JAMA 1983; 249: 1059-1061.

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