

ORIGINAL RESEARCH

Towards more rural nursing and allied health services: current and potential rural activity in the Division of Health Sciences of the University of South Australia

D Wilkinson¹, C Laurence²

¹South Australian Centre for Rural and Remote Health, Adelaide University and University of South Australia, Australia

²Department of General Practice, Adelaide University, Australia

Submitted: 25 September 2001; Revised: 2 August 2002; Published: 1 October 2002

Laurence C, Wilkinson D.

Towards more rural nursing and allied health services: current and potential rural activity in the Division of Health Sciences of the University of South Australia
Rural and Remote Health 2 (online), 2003: no. 105

Available from: <http://rrh.deakin.edu.au>

ABSTRACT

Background: As part of Australia's regional health strategy, one of the recently introduced initiatives aims to increase the range of allied health and nursing services available in rural and remote communities, reflecting the growing recognition of allied health rural and remote workforce problems. While some programs focus on increasing services in rural and remote communities, long-term solutions depend in part on the actions and activities of training institutions. Medical schools are being encouraged and financed to provide more rural exposure for undergraduates, but less is known about such programs for allied health and nursing students.

Methods: A survey of the seven Schools comprising the Division of Health Sciences of the University of South Australia was undertaken to determine the extent of rural exposure in undergraduate education, research, and service support.

Results: Five Schools (71%) offer rural placements for undergraduates, four (57%) are doing rural research and three (43%) provide some services to rural communities. Contingent on appropriate resources, all Schools expressed a strong desire to substantially increase the amount of rural activity.

Conclusions: This research highlighted the paucity of data in this area and suggests the need for a national survey.



Introduction

The problems of recruiting and retaining general practitioners to rural and remote areas of Australia is well recognised¹ and Commonwealth and state governments are implementing various strategies to address the problem². One of the most frequent strategies implemented by governments around the world focuses on undergraduate medical education. This includes changes to the selection process into medical school favouring students with rural backgrounds, as well as increasing the rural component of the curriculum mainly through rural attachments^{3,4}. There is good evidence that these factors are associated with subsequent practice in a rural location^{5,6}.

More recently, similar recruitment and retention problems for rural allied health and nursing professionals have been recognised⁷. Surveys in Australia have shown that allied health and nursing professionals in rural areas are more likely to have larger caseloads, be in solo positions, have lower rates of pay and work for longer hours compared to their urban counterparts⁷⁻¹². Also, many isolated positions are filled by inexperienced new graduates⁷. In response, the Australian government in the 2000/2001 Federal Budget allocated \$49.5 million over four years to increase the number of allied health services, including nursing, in rural and remote areas¹³.

However, longer-term solutions will need to involve training institutions as evident from the US medical school experiences^{14,15}. Some universities have implemented schemes that aim to directly increase the allied health and nursing rural workforce. The Monash University pharmacy course has a sub-quota for rural students, and funding for student travel and scholarships for rural and remote placements is provided by the Rural and Isolated Pharmacists Association of Australia and the Pharmacy Guild of Australia through the Commonwealth Government^{13,16}. Rural attachments, as part of training for nursing, physiotherapy, occupational therapy and speech pathologists, are now offered by most training institutions in

Australia¹⁶⁻¹⁸. This paper presents the results of a survey undertaken in the Division of Health Sciences, University of South Australia (UniSA) to determine the degree of rural exposure offered in the curriculum, the amount of rural research done, and the amount of rural service support provided.

Methods

University Of South Australia

UniSA is mainly located in Adelaide, South Australia's capital city, and is the largest university in the state with 25,000 undergraduate and postgraduate students across six campuses. Whilst the University has been in existence just 10 years, the institutions from which it was formed have been in existence for more than a century. A wide range of professional education courses are available in the University's four divisions - Business and Enterprise; Education, Arts and Social Sciences; Health Sciences; and Information Technology, Engineering and the Environment. Through its Flexible Learning Centre, the University is a major Australian provider of online and distance education¹⁹. The University has the largest regional university campus in South Australia, located in Whyalla, an industrial town 460 km north-west of Adelaide. The Whyalla campus provides a support base for a network of rural study centres in Ceduna, Port Lincoln, Port Pirie, Port Augusta and Coober Pedy. The Whyalla Campus also houses South Australia's first University Department of Rural Health, the South Australian Centre for Rural and Remote Health (SACRRH), a co-operative venture between the University of Adelaide and UniSA, funded by the Commonwealth Department of Health and Ageing²⁰.

Division of Health Sciences

In 2000, the Division of Health Sciences at UniSA comprised seven Schools: medical radiation; nursing and midwifery; occupational therapy; physiotherapy (including podiatry); physical education, exercise and sport studies;



chemical technology, and pharmacy and medical sciences. A total of 4155 students were enrolled in courses in this Division in 2000, with the largest number in the School of Nursing and Midwifery (1707). In 1999, the Division offered external delivery of undergraduate degrees in nursing, and post graduate awards in occupational therapy, medical radiation and physiotherapy¹⁹.

Some allied health and nursing courses are offered in all three South Australian universities, but UniSA offers the widest range of undergraduate courses in these disciplines and is the only university that provides training in pharmacy, physiotherapy, podiatry, medical radiation and occupational therapy.

Survey methods

In July 2000, as part of developing a proposal to develop a multidisciplinary Rural Health School in the Spencer Gulf region, a questionnaire was sent to the Head of each School in the Division of Health Sciences, asking a range of questions relating to rural activity. Schools were asked to provide information on seven questions, with the first three questions relating to current level of rural involvement in the areas of undergraduate placement and other education activities; research; and service provision (such as locum cover, visiting and residential services). The last four questions looked at the potential each School had to ruralise their curriculum. The Heads of Schools were asked to estimate the amount of rural training that could occur in each discipline; the proportion of students that could do some of their training in a rural area; and the resources required in terms of staff, budget and equipment to achieve this. They were also asked for their views on various options available such as a rural stream, extended placements and year long clinical rotations.

Results

Undergraduate Curriculum

Five of the seven Schools offer some component of their curriculum in a rural location (Table 1), although the number

of students undertaking this option varies across the Schools. The proportion of students doing rural placements ranges from 5% in the School of Medical Radiation to 20% in the School of Pharmacy. Rural placements tend to occur in the final two years of the degrees and usually take the form of fieldwork. Nursing and Occupational Therapy are the only Schools that offer students the opportunity to undertake a rural placement in each year of the course. The Schools of Chemical Technology, and Physical Education, Exercise and Sport Studies do not currently offer rural placements.

Some Schools have received specific funding to enhance rural placements. For example a Commonwealth grant enables podiatry students to make nine visits each year to various regions including the iron triangle (Whyalla and Port Augusta), the south east (Mt Gambier, Naracoorte and Millicent), the Riverland (Berri) and Roxby Downs. SACRRH has also funded opportunities for podiatry and physiotherapy students to undertake a 6 week clinical placement in a rural or remote area of South Australia.

The School of Pharmacy and Medical Sciences has received two grants since 1999 to support undergraduate teaching in rural and remote areas. The Eyre Peninsula Pharmacy Support Project funds two lectureships in 'Rural Practice Pharmacy' to support students during rural placements and provides interdisciplinary teaching as well as clinical services. In 1999, 10 third-year pharmacy students undertook a week-long placement on the Eyre Peninsula²¹. A grant from the Pharmacy Guild supports travel and accommodation for these students.

Research

Within the Division of Health Sciences there are five University funded Research Centres: Centre for Allied Health Research, Centre for Biomolecular Studies, Centre for Pharmaceutical Research, Centre for Research into Nursing and Health Care, Quality Use of Medicines and Pharmacy Research Centre. Research projects with a rural focus represent a small component of the Division's research



output. The Quality Use of Medicines and Pharmacy Research Centre have undertaken a number of projects

involving rural communities or comparisons of rural and urban communities²⁰.

Table 1: Rural component of University Of South Australia School curricula

School	Rural Placement Description	No. of students in school, 2000	Proportion of students undertaking rural placements (%)
Chemical Technology	Total in school across all courses	110	0
Medical Radiation (3 year undergraduate course)	Total in school across all courses	402	5
	Year 2-4 weeks per year	88	3.5
	Year 3-4 weeks per year	54	28
Nursing and Midwifery (3 year undergraduate course)	Total in school across all courses	1755	10
	Rural placements offered throughout all years Undergraduate degree offers flexible delivery which allows students to remain in rural areas with regional points of contact	1755	
Occupational Therapy (4 year undergraduate course)	Total in school across all courses 1000 hours of fieldwork or clinical placement over 4 years	267	10
	Year 1 – one week full time fieldwork placement plus 2-3 half day visits to fieldwork setting	79	1.5
	Year 2-3 weeks FTE	63	20
	Year 3-6 week FTE fieldwork placement 5 week FTE fieldwork placement – project	60	19
	Year 4-10 week FTE fieldwork placement 8 week FTE implementation of project	65	12
Pharmacy and Medical Sciences (4 year undergraduate course)	Total in school across all courses	665	20
	Year 3 – one week	31	20% of classes
	Year 4 – three weeks	30	20% of course
Physiotherapy (4 year undergraduate course)	Total in school across all courses	541	
	Physiotherapy (year 1-4) Year 4 – Option of rural placement (6 weeks)	357 85	
Podiatry (3 year undergraduate course)	Concentrated visit (RHSET funded)	74	27% per year (3 years)
Physical Education, Exercise and Sport Studies	Total in school across all courses None	353	0



Service provision in rural areas

The Schools of Occupational Therapy, Pharmacy and Medical Sciences and Physiotherapy (specifically podiatry) each provide services in rural communities. The School of Pharmacy and Medical Sciences offers the most extensive range including locum support, medicine management services, and community based programs in remote areas. Between August 1999 and March 2000, the Eyre Peninsula Pharmacy Support Project provided 20.5 weeks of locum support to eight pharmacies in five Eyre Peninsula towns. This allowed rural pharmacists to take recreation leave, attend continuing education sessions and undertake medical management reviews in client homes.

Other Support Programs

Scholarships and special entry schemes for rural students

The University and the Division offer a number of scholarships aimed at supporting students from rural or isolated communities. These scholarships are either aimed at students with a rural background or students willing to work in a rural area on completion of training. Examples of these scholarships include the PodSquared Podiatry Scholarship, the Rural Health Education Scholarship Program, the Wyatt Rural Health Education Scholarships and the Wyatt Benevolent Scholarship for South Australian country students. UniSA's USANET Special Access Scheme has also been established to provide greater access for students who have been educationally disadvantaged by either their economic circumstances or distance²².

Rural Club

ROUSTAH (Rural Outlook Students Towards Allied Health) was formed as a rural club in 1996. It aims to foster undergraduate interest in rural and remote area practice both academically and socially and provide an opportunity for multidisciplinary networking within the club and with rural

clubs at other Universities. At the end of 2000, ROUSTAH had 60 members and their activities include promoting health careers to country high schools, organising trips to rural areas to visit rural allied health workers and social events with other rural clubs.

Future Directions

The Commonwealth Department of Health and Ageing, through its new rural clinical schools aims to have 25% of Australian medical students receiving a minimum of 50% of their clinical training in a rural area²³. To date, no such goal has been established for allied health and nursing students. However, our survey gave some indication on how realistic such a target might be for allied health and nursing, what format this could take and the resources required to achieve it.

Almost all Schools identified the potential to increase the amount of rural undergraduate training (Table 2). The proportion of the students thought to be able to do their training in a rural location ranged from 5% to 100%, given optimal circumstances, suggesting that the Schools could take steps towards what is currently being required of Australian medical schools. Several of the respondents did highlight the difficulties some students may have in undertaking rural placements due to work commitments and so any program may need to provide release options to a rural placement

Resources identified by the Schools as necessary to achieve an increase in the amount of rural training include additional staff (lecturers and/or co-ordinators), assistance with travel and accommodation, equipment to establish clinics in rural areas, and training and remuneration of supervisors. Not surprisingly, these items are consistent with those identified in the 1994 Report to reform undergraduate medical education²⁴ and implemented in Australian medical schools over the last decade through Commonwealth government funding³.



Table 2: The potential to increase the amount of rural undergraduate training in University of South Australia Schools

School	Possible amount of undergraduate training in rural area	Maximum proportion of students undertaking training in rural area (%)	Possible length of placement
Chemical Technology		5	3-5 weeks
Medical Radiation		50 (22) year 3	Least 6 months
Nursing & Midwifery	Extended clinics eg RDNS clinic	20	5 weeks
Occupational Therapy	1-2 semesters completed at a distance with local support – suit 4 th years	25-30	Full semester (15 weeks)
Pharmacy & Medical Sciences	To be negotiated	20	1 year
Physiotherapy Podiatry	Visiting service	25	12 weeks
Physical Education, Exercise and Sport Studies	Field study	100	3-5 weeks

To increase the proportion of allied health and nursing students trained in rural areas, a series of four options (not exclusive) were presented to the Schools:

1. establishing a rural stream with students in this stream receiving most training in a rural area;
2. extended rural placements;
3. whole clinical year undertaken in a rural area;
4. multidisciplinary placements with medical, nursing and allied health students and professionals.

These options have been successfully used by medical schools to increase rural curricular experiences. Options 1 and 2 were supported and considered feasible by all Schools, with some already implementing aspects of them (Table 3). Undertaking an entire clinical year in a rural area (Option 3) was least preferred, while all Schools supported the concept of multidisciplinary placements (Option 4). The results reflected the suitability of particular Schools to provide training in a rural setting and suggests that different strategies will be needed for different disciplines.

Discussion

It is becoming clear that many of the workforce issues faced by rural and remote allied health professionals and nurses are similar to those faced by rural doctors. Similarly, many of the initiatives implemented by State and Commonwealth governments to support rural doctors could be applied to the allied health and nursing workforce, particularly those aimed at undergraduate training. These strategies include increasing rural curriculum content; rural placements; increasing the number of rural academics and support provided to rural teachers, and establishing support for students such as rural clubs.

As many Australian universities have rural campuses providing training in nursing and allied health, implementing similar strategies would be feasible. The survey undertaken at UniSA provides some indication of which strategies would be most suitable for particular allied health and nursing disciplines. While limited to only one university, the data may be of interest to others in similar situations and may encourage further, more extensive data gathering.



Table 3: Options to increase the proportion of University of South Australia students trained in a rural area

School	1. Rural stream with bulk of training in a rural area	2. Extended rural placements eg several weeks	3. Whole clinical year on rotation in a rural area	4. Multidisciplinary placements with medical, nursing and other allied health workers
Chemical Technology – Food Technology	Possible	Highly desirable	Not feasible	Yes
Medical Radiation	Suit some streams	4 week maximum to adhere to current program	Not suitable	Probably unnecessary as students interact with a range of all disciplines
Nursing & Midwifery	Already have external Bachelor of Nursing	2-5 week blocks	Could be done through flexible delivery if available	The School would consider reviewing its curriculum to ensure a more multi D focus
Occupational Therapy	Attractive option for rural origin students	Already occurs for periods up to 10 weeks	Might be difficult without support	Attractive
Pharmacy & Medical Sciences	Prepared to examine options	Yes	Possible	Very strongly supported
Physiotherapy & Podiatry	Possible but limited with theory element taught in city	Great	More likely 6 months. 12 months may be possible in 4 th year	Would encourage this
Physical Education, Exercise & Sport Studies	Very good idea for our program		Possible in health promotion areas	Great idea

In terms of the rural activity in the undergraduate curriculum, the main strategy used by these Schools to increase rural exposure is through structured rural placements. These placements currently range from 1 to 10 weeks, and with appropriate funding and support most Schools could and would increase the length of these placements. However, few Schools would consider offering a full clinical year in a rural location. This reflects in part their curriculum structure where clinical years or rotations do not exist as they do in medicine. With appropriate resources, most Schools reported they would be able to increase the proportion of training in a rural location.

While there has been an increased interest in ruralising the training of nursing and allied health students, there still

seems to be a long way to go. A survey conducted in 1998 of Australian rural nurses found only 21% of respondents had undertaken any form of educational preparation for their rural practice and concluded that the undergraduate curricula had failed to incorporate rural health aspects¹². Our experience supports this and indicates that most Schools in our University would be able to improve the support for rural teachers and improve the number of academic staff with a rural focus if funding is available. Perhaps to be most effective we need to move beyond rural placements, and have substantive parts of undergraduate training occurring in the country, through the newly established multidisciplinary University Departments of Rural Health²⁰.



The survey highlighted two areas where the Division had less rural involvement - research and service provision. While service provision was limited to a few Schools, the Eyre Peninsula Pharmacy Support Project has influenced the design of a national program that will link University Departments of Rural Health with Schools of Pharmacy across Australia to deliver similar services, demonstrating what is possible.

In Australia there is a lack of data on the amount and type of rural exposure that nursing and allied health students receive during their training. Most research has focused on one particular strategy for one discipline^{9,25}. Our survey is the first attempt to document across all nursing and allied health disciplines within a university, the amount and type of rural exposure and research being undertaken. The data provides a baseline from which to monitor changes and to target strategies. It also suggests the need for a review of current undergraduate rural component for nursing and allied health disciplines in Australian Universities, similar to the review undertaken for medical schools in 1994²⁴.

To date there have been no systematic national strategies to recruit nursing and allied health students to rural practice, although states have introduced programs to address recruitment and retention issues with varied success. In the 1980s and 1990s rural health training units were established to provide support and education for all rural health workers, but did not provide comprehensive workforce strategies for nursing and allied health. Perhaps the University Departments of Rural Health²⁰ can do better, particularly if combined with the suggested review that can assist them in targeting initiatives to ensure they have the greatest impact. Our survey suggests that there is an interest in increasing rural activity of the allied health and nursing curricula, and with appropriate funding this interest could be realised.

Acknowledgement

We thank all Heads of Schools for completing our survey instrument, and Professor Ruth Grant, Pro Vice Chancellor of the Division of Health Sciences for permission to publish.

References

- 1 Commonwealth Department of Health and Aged Care. *General practice in Australia: 2000*. Canberra: Department of Health and Aged Care; 2000.
- 2 Commonwealth Department of Health and Family Services. *General practice: changing the future through partnerships*. Report of the General Practice Strategy Review Group. Canberra: Department of Health and Aged Care; 1998.
- 3 Norington M. An update on rural general practice education initiatives to meet rural workforce needs: progress and recent developments. *Aust J Rural Health* 1997; **5**: 204-208.
- 4 Rolfe I, Pearson S, O'Connell D, Dickinson J. Finding solutions to the rural doctor shortage: the roles of selection versus undergraduate medical education at Newcastle. *Aust NZ J Med* 1995; **25**: 512-517.
- 5 Easterbrook M, Godwin M, Wilson R, Hodgetts G, Brown G, Pong R, et al. Rural background and clinical rural rotations during medical training: effect on practice location. *CMAJ* 1999; **160**: 1159-1163.
- 6 Hays R, Nichols A, Wise A, Adkins P, Craig M, Mahoney M. Choosing a career in rural practice in Queensland. *Aust J Rural Health* 1995; **3**: 171-174.
- 7 Golding S. Report on the South Australian Rural Allied Health Workforce: Main report: Department of Human Services; Adelaide, 2000.
- 8 Nihill M. The Whyalla Model. In: Craig M, (eds) *A fair go for rural health: National Rural Health Conference*. Toowoomba: Department of Health, Housing and Community Services 1991; 260-265.
- 9 Elliott-Schmidt R, Strong J. Rural occupational therapy practice: a survey of rural practice and clinical supervision in rural Queensland and northern New South Wales. *Aust J Rural Health* 1995; **3**: 122-131.



- 10 Hodgson L. The allied health perspective. In: Craig M. (eds) *A fair go for rural health: National rural health conference*. Toowoomba: Department of Health, Housing and Community Services, 1991; 174-180.
- 11 Bent A. Allied health in Central Australia: challenges and rewards in remote area practice. *Australian Journal of Physiotherapy* 1999; **45**: 203-212.
- 12 Stephenson J, Blue I, Petkov J. *A national survey of Australian rural nurses: Association for Australian Rural Nurses Inc*; 1999.
- 13 Commonwealth Department of Health and Aged Care. More doctors, better services Regional Health Strategy. Canberra, 2000.
- 14 Rabinowitz H. Recruitment, retention, and the follow-up of graduates of a program to increase the number of family physicians in rural and underserved areas. *N Engl J Med* 1993; **328**: 934-939.
- 15 Rabinowitz H, Diamond J, Markham F, Paynter N. Critical factors for designing programs to increase the supply and retention of rural primary care physicians. *JAMA* 2001; **286**: 1041-1048.
- 16 Best J. *Rural Health Stocktake: Commonwealth Department of Health and Aged Care* Canberra, 2000.
- 17 Blue I. Recruitment and retention of rural/remote area nursing staff. In: *Planning for balance in rural health care*. Warrnambool, 1991.
- 18 McAllister L, McEwen E, Williams V, Frost N. Rural attachments for students in the health professions: are they worthwhile? *Aust J Rural Health* 1998; **6**: 194-201.
- 19 University of South Australia, 1999. University of South Australian 1999 Annual Report. Adelaide: University of South Australia; Adelaide, 1999.
- 20 Humphreys J, Lyle D, Wakerman J, Chalmers E, Wilkinson D, Walker J, et al. Roles and activities of the commonwealth government University Departments of Rural Health. *Aust J Rural Health* 2000; **8**: 120-133.
- 21 School of Pharmacy and Medical Sciences, South Australian Centre for Rural and Remote Health. The Eyre Peninsula Pharmacy Support Project. Report to the Department of Health and Aged Care. University of South Australia, 1999.
- 22 University of South Australia. Learning Connection: Students: USANET: What is USANET? April 2000 [cited 9 November 2000]. Available from: URL: <http://www.unisanet.unisa.edu.au/learningconnection/usanet/what.htm>
- 23 Wooldridge M. National rural health education and training network unveiled. In: Commonwealth Department of Health and Aged Care; Canberra, 2001 [cited 20 March 2001]. Available from: URL <http://www.health.gov.au/mediarel/yr2001/mw/mw01006.htm>
- 24 Commonwealth Department of Human Services and Health. Rural doctors: Reforming undergraduate medical education for rural practice. Final report of the Rural Undergraduate Steering Committee. Canberra: Australian Government Publishing Service, 1994.
- 25 Leversha A, Strasser R, Teed A. Training and support program for pharmacists in rural Victoria. *Aust J Rural Health* 2001; **9**: 7-11.