Chapter 4.2.2

RECRUITING MEDICAL STUDENTS FROM RURAL AREAS

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Introduction

Doctors are more likely to practice in rural areas if they have five or more years of rural childhood upbringing (1) - although for specialty doctors, only those with at least 11 years rural background are significantly more likely to be practising in a rural location (2). Many universities therefore seek to increase their uptake of rural origin students, although most struggle to identify the most effective approach.

Rural students differ to urban students. For reasons that are loosely societal, family, and individual (3), they are less likely to complete high school and/or the tertiary education required for entry into medical courses that are increasingly postgraduate degrees (4). While academic grades are influenced by motivation and innate capacity as well as the home and school environment, access to university is further influenced by the financial ability of rural families to both lose a potential rural farm worker and to support the student living away from home. The impact of itinerant agricultural family lifestyle on academic achievement is also considerable.

Motivation to attend university at all is influenced by a range of factors. These include family expectations, measured against the perceived benefits of education, including employment options. Rural parents are less likely to have completed education themselves and are likely to be lower in socio-economic status, reducing their ability to support their children through higher education (5). Rural students are more likely to believe their parents do not want them to attend university, and homesickness has also been identified as a significant factor influencing non-completion of studies.

Promoting access for rural and Indigenous youth

Despite major government investment, students of rural origin in Australia remain significantly under-represented nationally (6).

Extrapolating from the 'pipeline' approach (which proposes that recruiting rural origin students needs to start early in order to channel them towards medical education) (7), the critical areas for change appear to be the following:

1. measures to address retention of rural students during their primary school, high school and undergraduate years;
2. contact between rural schools and the academic medical profession;
3. university selection processes; and
4. engagement between medical students and rural school students.

1. Measures to address retention of rural students during their primary school, high school, and undergraduate years.

The desire to work in health often commences as early as school years 5-8, shaping a variety of education choices including attendance rates, subject selections, and even whether they choose local or urban secondary schooling. Rural students, particularly those from Indigenous communities, drop out of school for a variety of reasons (8). Successful education retention strategies target the transition at each school stage from pre-school through primary school to high school and have systems to link schools and students to community mentors and to university residential programmes.

Rural students may be the first in their family to attend University. They will be unfamiliar with available support structures and fear increased pressure due to living away from family and social networks. Rural families may need to budget over several years to afford the additional costs of a student living away from home. Opportunities for students to remain longer in rural areas are increased through joint pathway programmes in which urban universities offer their programmes through rural university sites; or link undergraduate courses in rural areas with dedicated places within postgraduate health career programmes.

Indigenous students will particularly struggle with changed cultural contexts and need personalised support programmes.

The impact of failure may affect not just the rural student, but the educational culture of their family, school, and community.

2. *Contact between rural schools and the academic medical profession.*

Exposure to rural clinical settings helps students socialise their profession and influences career choices (9), enhancing the impact of rural origin selection. In addition students acting under supervision can expand the scope and range of existing clinical services through parallel and structured consulting. In combination, these activities heighten awareness within rural communities of health careers and encourage more formal mentorship arrangements.

Further, increased academic presence in rural areas provides opportunities for professional development of clinicians, greater evaluation of rural health service outcomes, and higher uptake by rural communities of health promotion activities.

3. *University selection processes*

The influences of standard selection processes - that include academic merit, interviews, and aptitude testing such as UMAT[1] - on rural and Indigenous students' access to universities is not clear. Many universities have introduced schemes to positively discriminate towards students of rural and Indigenous origin to redress equity of access (10) – with those universities whose entire programmes specifically target rural students being the most likely to deliver results (11). For example through a process of affirmative action the University of Adelaide was able to double their intake from 5% in 1993 to 11% in1994 (12).

As rural employment opportunities often rely on local networks rather than more formal processes, students may be less experienced in preparation of curriculum vitae and interviews. Bridging courses that address communication skills in addition to academic content have been shown to improve success in rural and Indigenous health career applications.

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[1] Undergraduate Medicine and health Sciences Admission Test, developed by the Australian Council for Educational Research http://umat.acer.edu.au/

4. Engagement between medical students and rural school students;

Rural youth who complete high school are less likely than young people in urban areas to apply to medical schools (13). A possible reason for this is the lack of professional career role models in regional areas – given that rural doctors are more likely to be older and male (as well as overworked due to workforce shortages). This provides limited scope as a role model, particularly for younger and/or female medical students.

Illustrative anecdotes

All medical students attending long-term clinical placements in Northern New South Wales are invited to mentor and inspire local primary and high school students. Organised activities include:

1. Primary school health and science days
2. Plateau Enrichment Programme
3. High school career days

Primary school health and science days

Medical students provide Science Days within local primary schools during which they showcase the anatomy of the heart, lungs, liver, eyes and kidneys and link them to simple healthy lifestyle messages.

Jeff Masters and Claire Waller from University of Woollongong teaching anatomy to Alstonville Primary students.

"Cow's hearts, eyes and kidneys provided the basis for the anatomy sessions in which the medical students taught the children some basic knowledge on the way these organs work within the body. The medical students were greatly impressed with the knowledge and enthusiasm of the primary kids who were rapt to be poking and prodding the organs. Screams of disgust were heard across the schoolyard as lenses were cut out of eyes and children held hearts in their hands. The day was worthwhile for all involved and the UOW students hope that they coaxed some kids into considering medicine as a career so that they can have someone to cover for their holidays in the future!"

(Excerpt from school newsletter 2009)

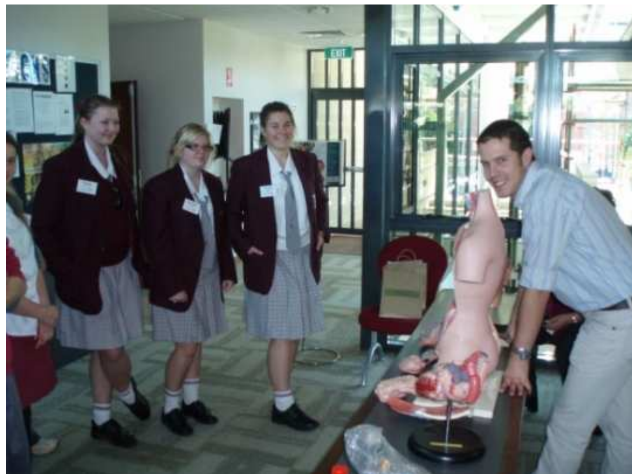
Plateau Enrichment Programme

The annual Plateau Enrichment Programme enables selected students aged 10 and 11 years old from ten primary schools in rural areas to travel by bus for a day to the University Centre for Rural Health (UCRH) Campus in Lismore. Supported by the North Coast Area Health Service (NCAHS) and UCRH staff and students, the school students are able to sample a variety of health careers including exploring an ambulance, spending time in the radiology department, working with a physiotherapist, and even touring the hospital kitchens.

As part of a public health section they are encouraged to find programmes to tackle in their school, such as improving healthy food choices for lunch.

High school career days

Collaborating with a range of role players (the UCRH, with multi-disciplinary clinicians from the NCAHS, the New South Wales Department of Education and Connect[2]), university students on rural clinical placement showcase their CPR[3] and anatomy skills to aspiring health students from 39 local high schools through a various clinical workshops.



Tom Goodsall, Sydney University student, teaching anatomy in Lismore, New South Wales.

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[2] Connect is a government programme connecting business sector to vocational training http://skillsconnect.gov.au/

[3] CPR = Cardiopulmonary resuscitation

A favourite section is an interactive panel where school students can ask questions of their university colleagues. The advantage of age peers is evident when one health student answering the question "Do you have to work really hard, or can you still have a life?" gave a rapid fire and utterly hilarious rundown of his previous week's social activity! Students rate this session 'highly satisfactory' and the following weeks provide opportunity for further questions and advice via email and phone contact with school advisers.

Practice pearls

What to do

- Raise awareness of rural health career options within rural primary and high schools.
- Work with rural high schools to identify potential students who can be supported - such as through mentorships.
- Link medical students and clinicians to high school career days.
- Create opportunities for rural high school students to access urban university campuses prior to enrolment.
- Offer bridging courses.
- Offer overt links between pre-med courses in rural universities and urban medical programmes.
- Review university selection processes to promote rural uptake including quarantined places and bonus marks.
- Provide financial assistance for rural students including scholarships.
- Provide university mentorships both social (such as rural health clubs and cultural supports) and academic (such as additional tutoring).
- Provide pastoral care (including access to counselling services).
- Celebrate successes widely and particularly within rural communities.

What not to do

- Don't assume that if positions are quarantined (or protected) they will automatically be filled. Recruitment campaigns will be needed.
- Once selected, rural students cannot be treated the same and expected to achieve the same outcomes as students from university towns with more wealthy and educated parents. Additional support will be needed.
- Avoid the assumption that all rural students will return to rural areas. Rural origin increases, but does not guarantee, rural workforce availability which is also influenced by hospital and early career experiences.

- Don’t ignore the impact of any negative internal university attitudinal barriers as these expose rural students to covert criticism of their ability and of rural careers.
- The failure of a single rural student may create a lasting effect on that community, limiting the aspirations of future students. Maintain close links with key rural stakeholders to reduce the development of negative perceptions.

Conclusion

For nearly 30 years, research has shown that students who originate from rural areas are more likely to work in rural areas after graduation. Despite this, rural origin students remain under-represented in university intakes in most countries. The reasons for this are varied, and strategies for change must address barriers and enablers within community, government, and university jurisdictions.

A distinction needs to be made between desiring to increase rural origin students as a matter of social justice and desiring to increase rural origin students as a rural workforce strategy, as the key stakeholders and the prioritisation of strategies will differ.

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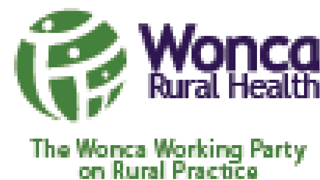

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