



After rural placement, what next? Factors associated with entry into rural workforce

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ABSTRACT ACCEPTED FOR THIS SESSION – SLIGHTLY MODIFIED NOW:

The workforce consequence of such strategies as supporting students on rural placements is yet to be established for allied health disciplines. As University Departments of Rural Health position themselves for a national study, it is timely to review the initial contribution made by Combined Universities Centre for Rural Health (CUCRH) in establishing the relative importance of factors such as placement location, duration, and role in professional formation, as well as the students' discipline and rural background on subsequent rural work. The study (published in AJRH volume 14) sets a benchmark for workforce studies relating undergraduate placements to subsequent work decisions. In this presentation we focus on the experiences of the allied health students and include an additional year of data that was not available when the article was prepared. Like much "natural" research, it is limited by the absence of a control group, but provides valuable information for guiding placement policy

What impact do undergraduate rural placements have?

- Rural practitioners' commitment to take on students
- Does it make a difference?
 - Attitude
 - Numbers entering workforce
 - **Factors associated with workforce entry**

Commitment to taking students

Receiving students on rural placements takes significant amounts of time and energy, and considerable planning. Yet rural allied health practitioners, who are already under considerable pressure, continue to take on students. At a conservative estimate, 42% of Queensland rural OT's take on students (Schmidt and Strong 1995). Although few and far between, in comparison with urban practitioners, more placements are offered by rural practitioners (McAllister, 2004)

why do rural practitioners make this commitment?

The belief expressed by rural practitioners around Australia is that there is a need for more staff. They believe that taking on students, and I quote "may help encourage OTs [physios, pharmacists, speech therapists] to move into rural practice in the future" (p127 (Schmidt and Strong 1995).

So we begin this paper by acknowledging the regional allied health professionals who spent 1000's of hours supervising the students in this study, with the intention of improving rural health care

The question is: does it make a difference?

There are many answers to that question, depending on what we mean by "difference".

There have been a large number of studies that have looked at the impact of rural placement on students' attitudes to rural life and work. From these, we know that rural placements enhance students' estimates of country practice, and the willingness of both rural and urban origin students to consider future country work. This study does not ask about attitudes.

What about impact on relative numbers of students going to live and work in the country? Studies from medicine and nursing, and a select few from allied health perspective, suggest more students enter rural practice if they've had a rural experience. But for allied health, the results are inconclusive. Australian studies include one by Butler and shepherd (1999) in which physio students reported no impact for rural placement on their workforce decision. Elliott-Schmidt and Strong found that only 16% of surveyed rural-working OTs had done an undergraduate rural placement.

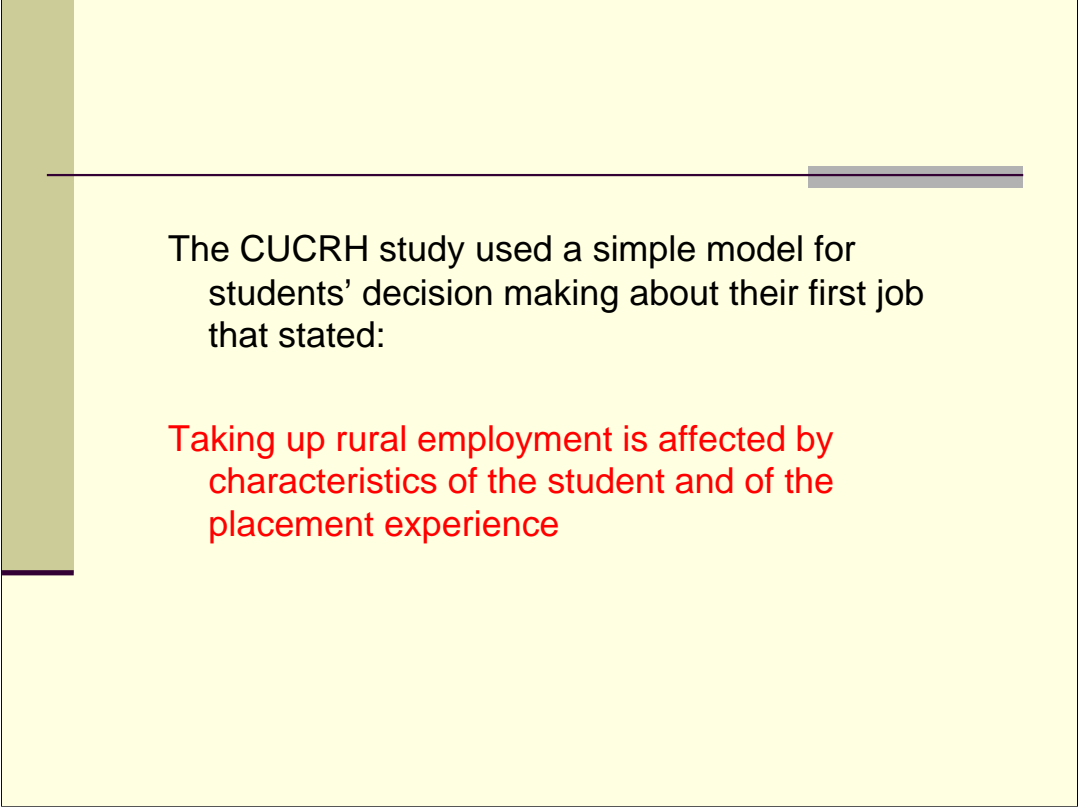
This study does **not** jump into this gap to ask whether rural placements increase the rates of entry into rural workforce over students who have not had a rural experience, although it does establish a stable baseline rate of student entry after one or more rural placements.

Almost no studies have asked what factors in a rural placement are influential on a students' return to country.

It is generally held that a "positive experience" will increase likelihood of entry. A positive experience is assumed to be one of "high quality". But a definitive measure of what "quality" refers to is yet to be established.

Related assumptions include the belief that those aspects that make rural practice different from urban practice could be significant. Time in the country is cited as another potentially significant factor – with longer assumed to have a bigger impact better. But so far, none of these potential factors have been systematically examined.

This study was designed to assess factors that predict health science students' entry into rural workforce after they have done a rural placement.



The CUCRH study used a simple model for students' decision making about their first job that stated:

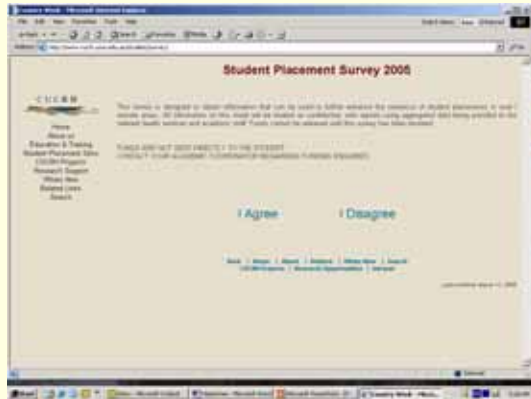
Taking up rural employment is affected by characteristics of the student and of the placement experience

CUCRH looked at a large number of students from urban universities, both before and after graduation. Those who ended up in the country and those who chose city work were statistically compared to see what factors might be different between the two groups. This comparison showed the factors which were positively related to country work.

The overall statistical model included all factors – those relating to the student and those arising from the placement itself – as having an influence.

From 2000 – 2003, approximately 700 health science undergraduates were surveyed

Students going on rural placements received a placement bursary after completing the CUCRH survey



How did we recruit our large number of students?

CUCRH works with most Western Australian health science schools and disciplines to assist student travel to rural placements. This includes the disciplines of: dietetics, health promotion, health information management,, occupational therapy, speech pathology,, social work, occ health and safety, physiotherapy, podiatry, and nursing,

There are certain requirements for students to be paid. The placement must be of two or more weeks. But this includes travel time. The placement must fall within the CUCRH cachement from Midwest to the Pilbara. But the WA department of health has come on board to fund student placements in all other regions of the state. The placement must also be a distance of more than 100km from Perth. This excludes towns of commuting distance to the city, and students must live in their placement site for the whole time.

To get their money, students fill out and return a survey. This gives us 100% return rate!

Now the survey is online, it can only be submitted after every question is answered!

Factors

The placement survey recorded information about :

The students:

- Discipline
- Rural background
- Membership in rural club

The placement:

- Duration of placement
- Compulsory or not
- Reported value to professional development

These were the factors in the model

Information from the survey was entered into an SPSS database.

We improved the survey as we went, so some information came from the later cohorts of students – rural background, and membership in rural club

In totality, the database included a rich set of information, which for the purpose of this study was grouped into two sets, information about the student, and information about the placement

These two sets of information were the factors that were statistically compared between graduates.

After graduation, they were surveyed again

The single question of interest here:

- **Workplace location?**

(This was the dependent variable being “predicted” by their undergraduate factors)

An open-ended question

- What impact did your undergraduate rural placement have on your work?

(added qualitative information)

Students were contacted using the details they provided in the first survey – they either responded to an emailed survey, or were interviewed over the phone.

Numbers of final year health student undertaking a rural placement & response rates after graduation

	Response rate	Total number responding
2000	71%	55
2001	37%	52
2002	67%	83
2003	75%	122
2004	70%	90
TOTAL	36%	402

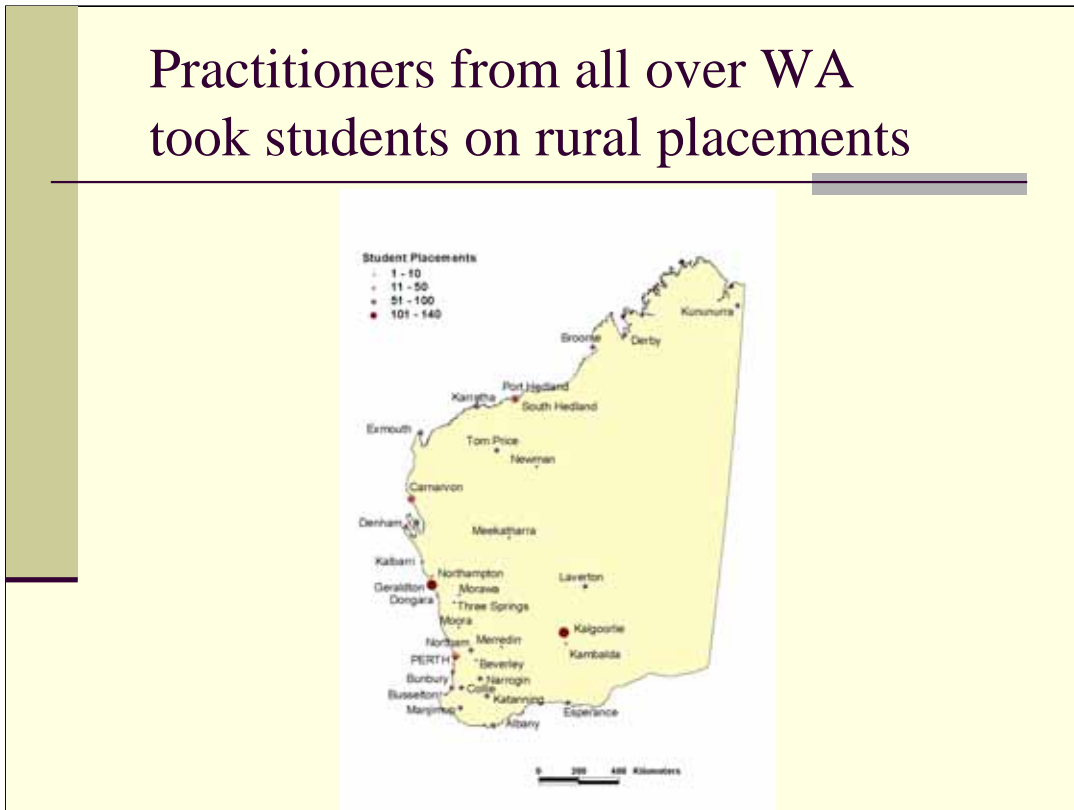
Of all students who received funding after completing the CUCRH survey, most agreed to be re-contacted:

But in each year group, a group of around 15% of students did not want to be re-contacted.

However, 632 allied health students who had done placements between 2000 and 2004 agreed to be contacted and

We were able to contact 402. For most cohorts we were able to contact and collect information from about 70% of these students approximately one year after graduation.

Practitioners from all over WA took students on rural placements



Looking first at the undergraduate information,

A GIS map of placement addresses showed that students were received even in the most remote of locations that had a health service.

Regional centres were able to take on more students than small sites.

Students came from **eleven** allied health disciplines

Physiotherapy	180	45%
Speech Therapy	80	20%
Occupational Therapy	63	16%
Dietetics	23	6%
Health Promotion	17	4%
Medical Imaging	15	4%
Environmental Health	8	2%
Podiatry	7	2%
Social Work	4	1%
Health Info Management	3	1%
Occ Health & Safety	2	1%
TOTAL	402	100%

Allied health graduates in rural practice

	% working rural	No. of graduates
2000	20%	49
2001	40%	48
2002	30%	79
2003	29%	109
2004	22%	85
TOTAL	28%	370

Out of our 402 graduates, 32 were studying, working overseas or not working in their discipline. An amazing 28% of the remaining graduates were working in the country when we contacted them about one year after their graduation.

Student factors associated with choosing country work

Discipline	% working rural	No. of graduates
Physiotherapy	19%	176
Speech Therapy	29%	73
Occupational Therapy	38%	58
Dietetics	29%	21
Health Promotion	50%	10
Medical Imaging	33%	15
Environmental Health	88%	8
Podiatry	33%	6
Social Work	50%	2
Health Info Management	100%	1
TOTAL	28%	370

It was interesting that not all disciplines took up country work equally. Students from Occupational Therapy and some of the disciplines that had few students on placements, like health promotion and environmental health had high proportions of new grads entering rural practice compared with physiotherapy and speech therapy.

Student factors associated with choosing country work

	% working rural	No. of graduates
Rural Background		
Yes	45%	93
No	19%	175
Member of rural club		
Yes	31%	48
No	25%	140

We asked three cohorts (2002-2004) if they had lived in a rural area before starting their studies. As would be expected, students with prior rural experience were significantly more likely to then be living and working in the country after graduation. We included in this group, students who may have had as little as one year prior life in the country. However, it is also important that almost 20% of graduates who had never lived in the country before also took jobs in the country after their placement.

In two year (2003 and 2004) we asked students if there were members of a rural health student club. Membership in a rural club did not associate with rural practice. The proportion of rural club members working in the country after graduation were somewhat higher, but the difference was not statistically significant ($p = 0.4$).

Placement factors associated with choosing country work

Placement characteristics	% working rural	No. of graduates	p-value
Less than four weeks	61%	38	<0.001
Four weeks or more	24%	332	
Compulsory	25%	307	0.004
Elective	43%	63	
Excellent for prof dev	31%	249	0.084
Other	22%	121	

Placement factors were significant predictors of subsequent rural work.

Students choosing their own placement rather than it being a required part of their course were more likely to return.

Students who did not stay long, but went for less than four weeks, had a much strongest association with subsequent rural work;

Finally, if they rated their placement as 'excellent' for their own professional development, they were more likely to return to country practice. However, the difference between those who reported 'excellent' and the others was not statistically significant.

between those who This was so where factors such as availability of equipment (computer, internet, phone), housing, and placement organisation did not collectively rate an effect.

Did each factor have its own independent impact?

Characteristics	Odds ratio of working rural	p-value
Compulsory	0.9	0.868
Less than four weeks	10.5	<0.001
Excellent experience	1.9	0.043
Rural background	3.1	<0.001
N=268 graduates		

Although we looked at the different individual characteristics, which ones are actually the most important?

We used a multivariate statistical technique called logistic regression to test the change in the odds of working in the country

For each variable, if all other characteristics were the same. We did not include the individual allied health disciplines because we can not

Say everyone should be OTs or health promotion officers just because they have high rates of working in the country!

Because we wanted to look into the effect of rural background we only used the three cohorts where we had this information.

What we found was that shorter placements were stronger related to going to practice. This may be because short placements can be an exciting adventure whereas students sometimes find that with longer placements some other difficulties both back home and on the placement emerges. Since most educational programs encourage longer placements this is something worth urgent further study. Interestingly, for allied health students, whether the placement was compulsory or elective was not a factor in their eventual work in rural areas.

Students who had a placement that they considered 'excellent' were more likely to work in the country as a graduate. Identifying the characteristics of a 'excellent' placement is another area that warrants further study.

Finally, students who had a rural background, even if they had only lived a year in the country, are more likely to work in the country. This is a common finding and justifies special efforts to raise the awareness and aspirations of rural residents to pursue allied health studies. However, it is equally important that there are many other effective strategies that also increase recruitment – by increasing the opportunities for personally and professional rewarding rural placements. This is the job of the university departments of rural health in partnership with universities, professional associations, health services and rural and remote allied health professionals.

“it concreted my mind”



Students responses to the open-ended question with very positive remarks about their undergrad rural experience. Grads living in the city indicated that other factors, such as exposure to tertiary hospitals and specialist practice were very significant to them. Many of the urban-located grads expressed interest in rural work – AFTER they'd gotten their confidence and skills developed. For those who had moved directly into rural work, words such as “re-inforced” and “concreted” were used.

Factors associated with rural practice: advocacy to retain placements

- Give special support to rural background students
- Give urban students a go – a significant number get their minds changed **IF** they have a positive experience

What kinds of conclusions can be drawn from this data?

As per other studies, rural students who come from a “disadvantaged” population are the best people to respond to rural workforce needs. Even a very brief stint in the country is sufficient to increase the association with grad rural practice..

A word of caution, though, against discriminating against urban-background students on that ground. Though rural students are highly likely to go bush, in fact the numerically larger group is urban students who may have their plans shaped by their rural experience, and who decide to make this big move, determined by a series of other factors.

So rural practitioners do well to receive all students – one in four return to a country location.

These students are indeed the workforce of the years ahead.

The question about how long these new grads will remain in rural positions is yet to be examined – this question about retention is worthy of further longitudinal study.

Factors associated with rural practice: advocacy for appropriate placements

- Short placements work as well – better – than long ones
- Choice may be more important than coercion

To effectively advocate for rural placements as a workforce strategy, characteristics of the placement are important to consider.

From this study, it is evident these include the length of placement – and in particular that the placement not strain the urban students' resources too far in moving them to a location with no connections, income or support for longer than is necessary. Valuable as rural placements are for clinical learning, a brief and very intense time may be as useful as a longer placement.

The argument for universal mandatory placements is an interesting one, and includes increased understanding and social consciousness. It is true that students coerced to go rural may have a wonderful and socially-broadening experience, but this study suggests that this will inch them along the very initial part of the decision continuum, and some will never move beyond this initial reach. In contrast, students who self-selected are already more certain, and more ready to have their minds “concreted” by the placement experience. As suggested by Butler and Sheppard (1999), placements act as a valuable test ground for these undergrads.

Factors associated with rural practice: the need for quality

- Professional development matters to students
- But what makes an “excellent” placement?

Finally, the quality of a placement is a highly significant factor. This did not appear to be related to elements routinely considered significant such as equipment and organisation, but rather to the great clinical experience available to develop the students’ professional skills.

This result is strongly affirming of practitioners. It centres the “concreting” rural experience on the rural practitioner and their practice.

It suggests that the supervisor who provides excellent experience and clinical mentoring, or the centre with challenging clinical cases, has significant impact on students’ workforce decisions. More research is needed on this topic..