Allied health students’ perceptions of metropolitan vs rural clinical rotations

November 2015
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This research paper was presented at the 11th National Allied Health Conference held in Melbourne, November 2015.
1. **EXECUTIVE SUMMARY**

There is a growing body of literature that providing undergraduate students with positive rural experiences can increase intentions to practise rurally. These findings have informed initiatives such as rural training pathways and rural clinical placements. To date however there has been a focus on the medical workforce with more limited opportunities available for allied health students to undertake rural clinical rotations.

This research was undertaken to quantify the factors that allied health students consider important when deciding to undertake a clinical rotation, their perceptions of metropolitan versus rural placements and how these attitudes compare with those of nursing and medicine students.

The membership of the multidisciplinary National Rural Health Student Network (NRHSN) was surveyed during March 2015 about the factors considered in deciding to undertake clinical rotations and perceptions of rural versus metropolitan placements. Responses were obtained from 1,203 NRHSN members comprising 246 allied health, 195 nursing and 713 medicine students.

In considering clinical placements and rotations allied health students are looking for opportunities for hands-on learning, developing their professional skills, quality teaching and a broader scope of practice. The financial costs associated with placements (such as accommodation) is the only non-career or professional theme mentioned by the majority of students (to a significantly higher degree compared with medicine students).

Rural placements were strongly associated with many issues considered important in considering a placement, such as more autonomy, responsibility and opportunities for hands-on learning. Metropolitan placements were perceived as more prestigious, better for those who want to specialise and having better facilities, infrastructure and exposure to the latest technology.

It is recommended that more is done to remove the perception that in many regards rural rotations are of inferior quality to metropolitan ones – particularly in terms of issues such as prestige and poor facilities. Removing some of the financial barriers associated with rural placements for allied health students also represents a priority.
2. BACKGROUND: THE MALDISTRIBUTION OF THE ALLIED HEALTH WORKFORCE IN AUSTRALIA

Australia-wide there is a shortage of nursing and allied health professionals working in regional rural and remote locations.¹ Almost 1 in 3 Australians² (and 65% of Aboriginal and Torres Strait Islander people³) live outside of major cities, however the distribution of the allied health workforce outside of urban areas is considerably less.⁴ For example, one study found Australians living in metropolitan areas receive more than double the level of service provision from allied health professionals such as physiotherapists, podiatrists, occupational therapists and social workers than those living outside of urban areas.⁵

This discrepancy becomes more marked as the degree of remoteness increases - falling from 22 allied health professionals per 100,000 people in capital cities to 12 in remote areas and 6 in very remote areas.⁶ Figure 1 below demonstrates how the number of full-time equivalent allied health professionals declines with increasing levels of remoteness – for example, there are three times more dentists per person in major cities compared with remote and very remote areas, and more than twice as many physiotherapists.

Figure 1: Selected allied health professionals (FTE) by remoteness area⁷,⁸

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The consequences of this maldistribution are likely to become more apparent in the future in light of our ageing population and associated growth in the burden of chronic diseases.\(^9\) Furthermore, people living in rural Australia have unique health issues directly related to where they live and have a poorer health status than their urban counterparts.\(^10\) Looking ahead, we need to increase access to the allied health workforce in rural and remote areas and ensure that resources are delivered to the areas where they are needed most (while recognising that a focus on health workforce issues alone will not in and of itself be sufficient to improve rural health outcomes).\(^11\)

### 2.1 Strategies to address the maldistribution

It has long been demonstrated that one of the best predictors of future rural medical practice is having a rural background. The so-called 'rural background effect' has been demonstrated to be a strong and positive predictor of attraction to rural practice.\(^12\) One policy response to this evidence has been the requirement for universities participating in the Rural Clinical Training and Support Program to have at least 25% of their yearly undergraduate medical intake comprise of students with a rural background. Despite this, at present there are no rural origin quotas on allied health student intakes.

In addition to the rural background effect, there is significant evidence that providing positive rural exposure and experiences to students from a non-rural background can have positive results.\(^13\) These findings have informed policy initiatives such as the John Flynn Placement Program,\(^14\) the development of rural training pathways and both short-term and extended rural placements. Having a positive rural experience at undergraduate level - whether it is undertaking an internship at one of the Rural Clinical Schools\(^15\) or a one week placement living and working with a host community\(^16\) - can increase the intent of an individual to embark on a rural career.

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\(^12\) Jones M, Humphreys JS, McGrail MR 2012. Why does a rural background make medical students more likely to intend to work in rural areas and how consistent is the effect? A study of the rural background effect. Australian Journal of Rural Health; 20: 29-34.


\(^16\) Toussaint S, Mak DB. Even if we get one back here, it’s worth it… 2010’. evaluation of an Australian Remote Area Health Placement Program. Rural and Remote Health; 10: 1546.
Significantly, emerging research suggests that rural placements and exposure can be a stronger predictor of early career choice than rural background. A recent study analysing data from the Medical Schools Outcome Database found that students who had undertaken an extended rural placement were more than three times as likely as those with a rural background to express a first preference for a rural internship.\textsuperscript{17}

Rural clinical placements – both short and long-term – are a key mechanism through which urban students gain exposure to rural practice and lifestyles. However it is not the case that any rural placement is a good rural placement and a poor experience can result in turning students away from rural practice. In 2014 RHWA commissioned the University of Queensland to undertake research exploring the decision-making process to relocate rural amongst Australian-trained urban medical students and junior doctors.\textsuperscript{18} The research found that for some of these students and junior doctors, a rural placement modified their longer term work aspirations about where to work, with positive experiences increasing the openness to rural practice. Conversely however, the authors noted that:

“poorly supported rural exposures shifted the aspirations of a number of medical students and junior doctors away from rural practice. These findings suggest that investing in high quality rural placement experiences is important for encouraging rural practice.”\textsuperscript{19}

### 2.2 What about allied health students?

The vast majority of research to date has however been conducted amongst medical students with an assumption that findings can be largely transferred to allied health professionals. While there is evidence that rural background and rural experiences such as clinical placements positively impact on the likelihood of future rural practice amongst allied health students,\textsuperscript{20,21} at present this evidence base is not as robust as that for medical students.

There are undoubtedly similarities between allied health and medicine students in terms of what may encourage them to consider rural practice, however research suggests that workforce strategies that have proved effective for one discipline may be less so for

\textsuperscript{18} Zadoroznyj, M, Brodribb, W, Martin B 2014. Understanding the decision to relocate rural amongst Australian trained urban medical students and junior doctors. Brisbane: Institute for Social Science Research.
\textsuperscript{19} Ibid. P51.
As a whole, the allied health workforce is younger and comprises more females than the medical workforce and in addition, there can be marked differences between different allied health disciplines.

A recent literature review of Australian research summarised the barriers and enablers to clinical placement experiences in rural and remote communities for allied health students. These barriers and enablers are summarised in Table 1 and are similar to those identified in a recent review undertaken by Rural Health West.

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial disincentive</td>
<td>Financial incentives</td>
</tr>
<tr>
<td>Social isolation</td>
<td>Voluntary placements</td>
</tr>
<tr>
<td>Isolation for learning resources</td>
<td>Regional coordination/resourcing</td>
</tr>
<tr>
<td>Undersupply of placements</td>
<td>Regional development</td>
</tr>
<tr>
<td>Inadequate knowledge of placements</td>
<td></td>
</tr>
<tr>
<td>Inadequate administrative/organisational support</td>
<td></td>
</tr>
<tr>
<td>Competing commitments</td>
<td></td>
</tr>
</tbody>
</table>

Both of these literature reviews identified a lack of student exposure to rural practice through rural placements as key barriers to increasing the rural allied health workforce. This is something that the Australian Rural Health Education Network (ARHEN) and the 11 University Departments of Rural Health (UDRH) are working hard to address through coordinating multidisciplinary rural placements at a national level.
Following the RHWA-commissioned University of Queensland research completed in 2014 with medical students, in 2015 RHWA undertook a research project in conjunction with the National Rural Health Student Network to add to the evidence base around clinical placements amongst both medicine and allied health professionals.

Specifically, the research aimed to explore why allied health students choose rural placements, their perceptions of the strengths and weaknesses of both rural and metropolitan clinical rotations and how their views compare with those of medicine students.

3. METHODS

A questionnaire was administered through Survey Monkey and sent to the 16,898 members of the National Rural Health Student Network (NRHSN) during March 2015. The survey captured a range of student background characteristics such as demographics, rural origin, and place of residence, likelihood to practise rurally (for at least 5 years), the factors considered important when deciding whether or not to undertake a placement and perceptions of rural versus metropolitan rotations.

The NRHSN is a multi-disciplinary network of students who belong to the 28 Rural Health Clubs at Australian universities. Funded by the Department of Health and managed by RHWA, the NRHSN promotes rural health careers to students and provides a voice for students who are interested in improving health outcomes for rural and remote Australians. The NRHSN membership is not a representative sample of health students at Australian universities. In addition to being heavily skewed towards medicine students (approximately 50%), NRHSN members have, by virtue of their membership, an expressed interest in rural health. Approximately 50% of the NRHSN membership is comprised of students from a rural background.

Nevertheless, the NRHSN is a large, national, multi-disciplinary database and it is planned to replicate this study amongst a more representative national sample at a later date.
4. RESULTS

Completed surveys were obtained from 1,203 NRHSN members. For the purposes of this study, analysis was confined to the 246 allied health and 713 medicine students who responded to the survey.

Compared with medicine, allied health students tend to be younger and a higher proportion are female (Table 1). Amongst this NRHSN sample of students, a significantly higher proportion are of rural origin compared with those studying medicine. This of course is not necessarily a characteristic of the broader allied health student population.

Table 1: Key characteristics of the sample obtained

<table>
<thead>
<tr>
<th>Base: all respondents</th>
<th>Allied Health Students (n=246)</th>
<th>Medicine Students (n=713)</th>
<th>NRHSN Database (n=16,898)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>12 25</td>
<td>30 70</td>
<td>29 71</td>
</tr>
<tr>
<td>Female</td>
<td>88 75</td>
<td>70 64</td>
<td>71 33</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-25 years</td>
<td>75 55</td>
<td>64 59</td>
<td>59 48</td>
</tr>
<tr>
<td>26-35 years</td>
<td>17 48</td>
<td>30 45</td>
<td>33 52</td>
</tr>
<tr>
<td>36+ years</td>
<td>7 6</td>
<td>6 8</td>
<td>8 52</td>
</tr>
<tr>
<td><strong>Where currently living</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major cities (ASGC-RA 1)</td>
<td>48 55</td>
<td>55 45</td>
<td>N/A N/A</td>
</tr>
<tr>
<td>Regional and remote (ASGC RA2-5)</td>
<td>52 45</td>
<td>45 33</td>
<td>N/A N/A</td>
</tr>
<tr>
<td><strong>Rural origin</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>75 75</td>
<td>58 42</td>
<td>N/A N/A</td>
</tr>
<tr>
<td>No</td>
<td>25 28</td>
<td>42 17</td>
<td>N/A N.A</td>
</tr>
<tr>
<td><strong>Undertaken rural placements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>72 72</td>
<td>83 83</td>
<td>N/A N/A</td>
</tr>
<tr>
<td>No</td>
<td>28 28</td>
<td>17 17</td>
<td>N.A N.A</td>
</tr>
</tbody>
</table>

4.1 Future intent to practise rurally

Respondents were presented with 5 statements regarding future intention to practise rurally for a period of at least 5 years. Given that the NRHSN is a body of students with an interest in rural health, it is to be expected that the vast majority indicate a positive disposition to practise rurally. Even amongst this sample, students with a rural background have a
significantly higher intention to practise rurally compared with their urban counterparts (Figure 2).

A higher proportion of allied health students plan to practise rurally compared with medicine students (89% versus 82%) although this difference is explained by the greater number of rural origin students in the allied health sample. Amongst students with a rural background there is no difference between disciplines with regards to future intent to practise rurally (both 92%).

**Figure 2:** Future intent to practice rurally (for at least 5 years)

4.2 **Factors of importance in considering clinical placements**

From a list of 31 factors that might be considered when deciding to undertake a clinical placement in either a rural or metropolitan setting, respondents were asked to nominate which were more important to them (the order in which these factors were presented was randomised). The 9 factors nominated by at least 50% of participants are summarised in Figure 2 (each participant nominated an average of 13 factors as important to them).

When compared with the factors that are important in deciding to undertake a placement by medicine students, there are some differences of note. For example, a higher proportion of allied health students nominate *developing professional skills, broader scope of practice* and *exposure to a wide range of patients* as important considerations.
Figure 2: Factors considered important when deciding to undertake a clinical placement (medicine: n=713; allied health: n=241)

When asked to nominate the 3 most important considerations when deciding to undertake a clinical placement, compared with allied health students, a significantly higher proportion of medicine students nominate:

- opportunities for hands-on learning (45% vs 36% of allied health students)
- quality of the teaching (36% vs 21%)
- distance from family and friends (28% vs 17%)

Conversely, a significantly higher proportion of allied health students nominate financial costs as the most important consideration compared with medicine students (26% vs 15%).
4.3 Perceptions of metropolitan versus rural clinical placements

Respondents were asked whether they associated a list of 29 attributes more strongly with rural or metropolitan clinical placements (or both equally). Of the attributes considered important in deciding whether to undertake a clinical placement (Figure 2 above), only one - *opportunities for hands-on learning* - is more strongly associated with rural placements by the majority of allied health students (Figure 3).

The majority of allied health students also associate rural placements with:

- *working in smaller teams*; and
- *more responsibility*.

This contrasts with the views of medicine students (Figure 4), the majority of whom associate rural placements with a number of other attributes such as:

- *more attention from supervisors*;
- *more autonomy*;
- *the ability to learn more skills*; and
- *greater continuity of care*.

Allied health students either nominate rural or both rural and metropolitan placements on these factors.
Both allied health and medicine students associate metropolitan placements with:

- *exposure to the latest technology*;
- *better facilities and infrastructure*;
- *being more prestigious*; and
- *better for those who want to specialise*.

Medicine students see metropolitan placements as providing *more exposure to complex and rare/ unusual cases* whereas allied health students do not differentiate between rural and metropolitan rotations here.
**Figure 4:** MEDICAL students' perceptions of rural versus metropolitan clinical placements  
(Proportion associating each attribute more strongly with placements in regional, rural and remote or metropolitan settings; n=713)

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Regional/Rural/Remote</th>
<th>Metropolitan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities for hands-on learning</td>
<td>1%</td>
<td>91%</td>
</tr>
<tr>
<td>Work in smaller teams</td>
<td>2%</td>
<td>68%</td>
</tr>
<tr>
<td>More responsibility</td>
<td>2%</td>
<td>81%</td>
</tr>
<tr>
<td>More attention from supervisors</td>
<td>7%</td>
<td>76%</td>
</tr>
<tr>
<td>More autonomy</td>
<td>4%</td>
<td>74%</td>
</tr>
<tr>
<td>Learn more skills</td>
<td>5%</td>
<td>69%</td>
</tr>
<tr>
<td>Greater continuity of care</td>
<td>4%</td>
<td>67%</td>
</tr>
<tr>
<td>Exposure to more complex cases</td>
<td>12%</td>
<td>55%</td>
</tr>
<tr>
<td>Exposure to more rare/unusual cases</td>
<td>13%</td>
<td>60%</td>
</tr>
<tr>
<td>More prestigious</td>
<td>2%</td>
<td>75%</td>
</tr>
<tr>
<td>Better for those who want to specialise</td>
<td>2%</td>
<td>74%</td>
</tr>
<tr>
<td>Better facilities and infrastructure</td>
<td>3%</td>
<td>78%</td>
</tr>
<tr>
<td>Exposure to the latest technology</td>
<td>2%</td>
<td>88%</td>
</tr>
</tbody>
</table>

- Associate attribute more strongly with placement in regional, rural or remote location
- Associate attribute more strongly with placement in metropolitan location
5. DISCUSSION

The findings confirm that in considering clinical placements and rotations, allied health students are looking for opportunities for hands-on learning and developing their professional skills. Quality of the teaching and a broader scope of practice also figure highly in their considerations. The financial costs associated with placements (such as accommodation) is the only non-career or professional theme mentioned by the majority of students.

These themes are broadly similar to those nominated by medicine students, albeit allied health students are more likely to consider a broader scope of practice and exposure to a wider range of patients. Medicine students in contrast are more likely to consider distance from family and friends.

Rural clinical placements are strongly associated with providing opportunities for hands-on learning, working in smaller teams and greater responsibility. Metropolitan placements are perceived to be more prestigious, better for those who wish to specialise, having better facilities and providing exposure to the latest technology. Whether or not this is in fact the reality, this is the perception of many of today’s students. Clearly, more work needs to be done to remove some of the stigma attached to rural clinical placements - students need to be assured that a rural placement will not negatively impact on their opportunities to specialise or be viewed less favourably by potential employers.

Metropolitan placements are also perceived as exposing students to more complex and unusual cases. It could be argued that due to the lack of specialist services in many rural locations, students may obtain a greater exposure to more complex conditions and patients during a rural placement than they might in a metropolitan one. Similarly, the strong perception that metropolitan placements offer superior facilities, infrastructure and technology is certainly not true in all cases, and those rural areas offering cutting edge technologies would do well to promote this to potential students.

Overall however, allied health students perceive fewer distinctions between rural and metropolitan placements compared with medicine students. Reasons for this are not clear from this study, although it is possibly related to the higher proportion of allied health students from a rural background in the survey sample.
6. CONCLUSIONS AND RECOMMENDATIONS

Encouraging domestic healthcare students and junior professionals to consider rural practice is crucial to growing our non-urban health workforce. A key component of this is exposing students to rural practice through clinical placements and rotations during their undergraduate studies and postgraduate training. The evidence is growing that positive, well-supervised, and supportive rural placements have a positive influence on students’ intentions to practise in rural locations.\(^{27,28}\)

This research demonstrates that today’s students are looking for career and professional advantages in their placements. While rural placements offer some perceived benefits, it is recommended that more is done to remove the perception that in many regards they are of inferior quality to metropolitan placements – particularly in terms of issues such as prestige, reputation and how they are viewed by training colleges and potential employers.

This study suggests that the financial costs associated with placements may be a more significant barrier for allied health students compared with studying medicine, where four week rural placements (as a minimum) are mandatory for most. The issue of cost, as well as the organisational support and opportunities for rural clinical rotations for allied health students will be the subject of future research by RHWA and the NRHSN.

Acknowledgment: Rural Health Workforce Australia and the National Rural Health Student Network are funded by the Australian Government Department of Health.

\(^{27}\) Rural Health West 2013. Op cit.