c) Longer placements
While curriculum constraints precluded lengthier placements, it was important to ascertain whether RPP students in 2003 would have appreciated longer or additional rural experience. This issue was discussed at length in the post-placement briefing and is considered later in this chapter.

d) Group size
As indicated in Chapter 9, BDent curriculum development had raised various possibilities for the mandatory placements to be offered in 2004. The options for consideration can be summarised as;

- Whole year orientation with all students subsequently attending placements concurrently. The timing of this en bloc placement and the venue for orientation were additional elements to be considered,

- Whole year orientation at the commencement of year 4 with subsequent small group placements throughout the year, and

- Smaller group orientation integrated with the clinical placements and staged throughout year 4.

While previous RPP experience supported the third option, it was important to consider larger group orientation. With 24 students attending the RPP commencing in week 2, an opportunity was provided to investigate larger group orientation.

e) Sydney-based orientation
The benefits and limitations of group orientation in a rural location have been described in chapters 8 and 9. With the decision to orientate the 24 students who commenced their RPP in week 2 in Sydney, came the opportunity to evaluate the relative merits of Sydney-based orientation.
Introduction of RPP 2003 to students

Early in 2003, all final students were informed of RPP opportunities. It was explained that 40 places were available (see above) but that it was likely additional placements would become available. Students were invited to submit applications for places. The RPP 2003 was once again an entirely voluntary option. A total of 48 applications were received and accepted. It was at this stage that formal processes commenced to approve the clinical placements in Queanbeyan and Albury. Memoranda of Understanding were signed and the Dental Board of NSW accredited the clinical facilities for student placement.

Pre-placement briefing

46 of the 48 students (96%) attended the pre-placement briefing session held in Sydney. The two non-attendees were contacted by email to ensure that all aspects of the briefing session were addressed.

The aims of this session were as in 2002;

- to address student concerns about practicalities of RPP
- to recruit students as co-researchers and gain their consent to participate in RPP research
- to collect pre-RPP data
- to determine motivating factors for involvement
- to introduce and commence development of the assessment strategy described in
Student concerns about practicalities

As in previous years, there were numerous queries that related to the practicalities of the RPP. Despite being provided with transport arrangements and accommodation details, students appeared to require reassurance. As there were 46 students travelling throughout NSW, responding to these queries took an inordinately long time. The need to discuss these aspects of the program was apparent. In previous years, however, this process had taken considerably less time, largely due to the smaller group size.

Recruitment of students as co-researchers

All of those present willingly agreed to support ongoing research into the RPP and recognised that their predecessors had had a substantial input to, and influence on, the RPP 2003. The students were again informed that their participation in this research was entirely voluntary and that if they chose to refrain from participation they would not be subject to any form of bias or prejudice either during or after the RPP. The two students contacted by email also agreed to participate although they chose not to submit pre-placement questionnaires.

Collection of RPP data

As in previous years all students were asked to complete a pre-placement questionnaire. One student failed to complete the questionnaire and the two non-attendees did not complete questionnaires. There were therefore 45 (94%) completed questionnaires available for analysis. Despite requests for these students to provide their career interest scores, none were forthcoming. This was the first year when there had not been a 100% response rate for the pre-placement questionnaire.

Motivating factors for involvement

While it was anticipated that the motivating factors would be in alignment with previous years, it was possible that the larger number of placements available would result in a less rurally-oriented group attending. Table 23 shows the motivating factors listed by the students.
Table 23: Motivating factors for students attending RPP 2003

<table>
<thead>
<tr>
<th>Motivation to attend RPP 2003</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>To learn about dentistry in a different environment</td>
<td>53</td>
</tr>
<tr>
<td>To learn about dental health issues in the country</td>
<td>31</td>
</tr>
<tr>
<td>To experience rural lifestyle</td>
<td>28</td>
</tr>
<tr>
<td>To get more clinical experience</td>
<td>26</td>
</tr>
<tr>
<td>To assist in career decision-making</td>
<td>16</td>
</tr>
<tr>
<td>To have a holiday</td>
<td>13</td>
</tr>
<tr>
<td>To meet new people</td>
<td>8</td>
</tr>
<tr>
<td>To have a new life experience</td>
<td>5</td>
</tr>
</tbody>
</table>

In previous years, the major motivating factor for students was to ‘experience rural lifestyle’, with a lesser emphasis on professional practice. The 2003 cohort had a greater focus on obtaining clinical experience and a greater emphasis on ‘having a holiday’. A detailed analysis of this data is presented and discussed in Phase 3.

Assessment strategy

As described in chapter 9, a final assessment strategy was developed and evaluated in 2003. The three components of the assessment strategy are appended (Appendix 4).

The pre-placement briefing provided a background to this assessment strategy with particular emphasis on the use of previous students’ self-assessment criteria in developing the criteria for both the clinical mentor and RPP coordinator assessments. The students, working in small groups, were encouraged to review and debate the criteria. There was an acceptance that the forms were valid and students then spent time developing the criteria for their self-assessments. In contrast to previous years, there was no real debate and students were reluctant to discuss their opinions and reflections.

One student (35) stated that the self-assessment forms were “fair enough”, but the majority of students were visibly disinterested in the self-assessment requirement. Several prompting questions were asked using examples of clinical situations that might arise. An example of such a question was “What if you are doing particularly
difficult treatment that is new to you and you require considerable support to achieve the desired outcomes? Is it fair for you to be awarded ‘unsatisfactory’ in this situation?” While there appeared to be small group whispered comments, only one student (09) was prepared to make the observation that “Yes it is fair because that’s what the criteria say but this might only be one such incident and your other clinical experience might compensate”. She went on to discuss the selection of clinicians to actually complete the assessment; she considered that there was a real opportunity to ensure that a satisfactory grade was achieved through prudent selection of assessor. Further comment was not elicited during this pre-placement briefing. Students completed the self-assessment forms during the briefing session and were strongly encouraged to contact the coordinator for comment and validation on completion. This session was in marked contrast to previous pre-placement briefings where discussion had been lively and there had been numerous personal contributions to the debate.

This observation was substantiated when the self-assessment criteria were reviewed after the session. Of the 46 students attending the briefing, 35 (76%) submitted their self-assessment forms for comment as requested. Of these, ten (29% of those who submitted and 21% of whole cohort) described five self-assessment criteria, nineteen (54% of those who submitted and 40% of whole cohort) described three or four self-assessment criteria and the remaining six (17% of those who submitted and 12% of whole cohort) described the various assessment domains but did not provide complete criteria for their self-assessment. Of the ten students who defined five self-assessment criteria, seven had used the criteria documented for the mentors and RPP coordinator as their own criteria.

The apparent lack of initial interest in self-assessment was disappointing, as was the lack of response to the comments that the coordinator provided. It was determined that the self-assessment strategies would be developed and refined during the orientation program. This apparent lack of interest in self-assessment may have been due to limited previous exposure to this methodology as several students described their experiences as varied and apparently of little practical value. One student (26) stated that, “when we have done this before it was obvious that it didn’t really count for anything and the tutor had the real say in our assessment. It’s just been a token gesture.
really”. The size of the group also had an impact on the acceptance of the methodology. It was difficult to ensure that all students were supported to the level that had been provided in previous years, purely due to timing issues.

At the end of the pre-placement briefing and with prior approval from the mentors, contact details were provided to each of the students present. The groups were encouraged to nominate a correspondent who would liaise with the mentors prior to the RPP. Of the twelve RPP groups (three in weeks 1-2, six in weeks 2-3 and three in weeks 3-4) ten groups established ongoing email contact. Two weeks prior to the RPP commencing, two groups had not complied with this request. This failure necessitated numerous telephone calls and memos in an attempt to determine whether the students actually intended to attend the RPP. It seemed that the lack of contact was due to a lack of perceived need for contact.

Program structure

As indicated previously, the RPP 2003 comprised orientation and subsequent clinical placements. The RPP took place over a two-week period with two days allowed for orientation, two days allowed for travel and eight days allocated to clinical placements.

Orientation Program

Three separate orientation programs were held in 2003. Each comprised the following sessions;

- Area in Context,
- Cross-cultural workshop,
- Risk Management, and
- Learning Workshop.

The orientation programs based in Broken Hill were supported as in previous years and there were no adverse events. There was 100% attendance at every session. The orientation in Sydney was held on the Sunday and Monday of week 1 and the Faculty of Dentistry organised room hire and appropriate refreshments. Once again, personnel
representing the ADA NSW and GIFS facilitated the Risk Management session. A newly recruited practitioner with a wealth of experience in Indigenous oral health care led the ‘Cross-cultural workshop’, the oral health Network Managers from Northern and South Western Networks presented the ‘Area in Context’ session and the RPP coordinator facilitated the ‘Learning Workshop’.

The attendance was extremely disappointing and can be summarised in Table 24. In addition, one student fell asleep on the floor during the ‘Area in Context’ session and two students left before the end of the ‘Learning Workshop’. Two students did not attend any element of the orientation program. These individuals and other non-attendees were contacted and it was apparent that they did not perceive the non-attended sessions to be of any value to them. They were informed that these details would be recorded on the RPP coordinators assessment but this was of little or no concern to them as the RPP was an elective curriculum component.

Table 24: Attendance at various elements of orientation program in 2003

<table>
<thead>
<tr>
<th>Day</th>
<th>Session</th>
<th>Number of students present</th>
<th>% present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday morning</td>
<td>Learning Workshop</td>
<td>42</td>
<td>88%</td>
</tr>
<tr>
<td>Sunday afternoon</td>
<td>Area in Context</td>
<td>36</td>
<td>75%</td>
</tr>
<tr>
<td>Monday morning</td>
<td>Cross-cultural workshop</td>
<td>44</td>
<td>92%</td>
</tr>
<tr>
<td>Monday afternoon</td>
<td>Risk Management</td>
<td>41</td>
<td>85%</td>
</tr>
<tr>
<td>Monday evening</td>
<td>ADANSW/GIFS Reception</td>
<td>12</td>
<td>25%</td>
</tr>
</tbody>
</table>

While the orientation in 2002 had not been as successful as in previous years, the orientation experience in 2003 was even less positive.

The learning workshop provided students with opportunity to develop their learning contracts. Full details of the rationale and requirements for the contract had been distributed during the pre-placement briefing in the form of a RPP Handbook. Working in groups of 3 and 4, students developed and documented individual learning
contracts. This element of the session worked well with all 42 attendees developing clearly defined contracts. As each student had to be individually supported, the entire session was taken up with this element. It had been determined previously that the session would allow further consideration of self-assessment criteria. There was insufficient time for this to happen.

While the observations made at the time were overwhelmingly negative, in hindsight, there were many students who did attend all elements of the orientation and who were enthusiastic in their approach. It is likely that the increased number of places available meant that the student participants were less strongly motivated to attend and the increased number of students who reported that one of their motivating factors was ‘to have a holiday’ supports this interpretation.

"NIGHTMARE!!!! Very embarrassing to have experts and less than interested students. Great shame as many of them are extremely interested but the disruptions and poor attendance seem to have affected the whole group. It feels as though there is a general indifference. It doesn’t count therefore we don’t bother. Only a dozen for free drinks too!! So what did I learn? Larger group don’t participate as much. If it’s important then the assessment has to count for something. Many students not that interested in self-assessment – need to work with them on a one-to-one basis if I believe they need to do this. Sydney orientation not an option but then again, maybe they are not and it is not relevant to them BUT consistency of feedback in previous years would support it being relevant. Can I let them come and go as they feel the need ie really student-centred?? It’s an option but when staff travel so far to support etc then this is not really an option. In reality, when they are in Broken Hill there isn’t really any choice and they all enjoy/learn/provide positive feedback. Maybe the non-attendees don’t really think about the relevance and just make assumptions. Sunday might be an issue but the BH mob are happy enough to travel and work on Sundays. Perhaps the move away from formally recognising reflection has had an impact? Think that a lot of it is because the personal touch has decreased. It’s a lot easier to work with a small captive
audience. Bottom line is that I think that orientation is important and students from previous years agree. If it is important then they have to attend. Policing?? ?? Difficult in Sydney – maybe when RPP is non-elective then my part of the assessment will matter and they would show up? If we had been away from home I suspect that they would have shown up anyway. Smaller groups mean that students are visible. Difficult with bigger groups of unknown students to actually know who is or isn’t there! This has really confirmed my gut feelings re the camaraderie, small group, high level of academic support.

NOWHERE NEAR ENOUGH TIME!

DJC July 03

Clinical work and rosters

The range of clinical opportunities provided was unique to each placement location. It was apparent that all but one of the mentors had focused on providing students with optimum clinical experience in a wide range of locations and with the support of numerous clinicians. In one placement, the mentor determined that the students should not participate in private practice visits and I was unaware of this situation until the RPP had finished.

As in previous years, students were encouraged to amend their rosters in collaboration with the mentors. The two new clinical placement mentors were particularly receptive to this and through email communication, worked with the eight students to ensure that the students’ perceived needs were being met.

In order that the clinical productivity could be measured, students were required to maintain a logbook to validate ISOH (Information System for Oral Health) data.

Social opportunities

While there were numerous social opportunities provided at the clinical locations, the students who attended the Sydney orientation had little inclination to attend evening functions. In advance of this orientation, students were offered various options; the
ADA NSW / GIFS reception attracted notional interest however only 12 students (25%) actually attended this function.

**Learning and assessment requirements**

Students were aware that on completion of the RPP they would be expected to submit;

- evidence that they had fulfilled their learning contract,
- a completed self-assessment,
- a logbook of experience, and
- a completed clinical supervisor assessment.

The RPP coordinator assessment would be finalised on review of each of these items following the post-placement briefing.

**Post-placement briefing**

This session was held in Sydney approximately one month after the final RPP. Surprisingly, this session was attended by 46 of the 48 participants. The two students who failed to attend the pre-placement briefing and the orientation, did not attend. These students did not submit any of the RPP requirements however the mentors related that the students had attended the clinical placements! Despite numerous and varied attempts to contact these two students, there has not been any opportunity to interview them.

The 46 attendees submitted various files and journals both at this meeting and subsequently by post and electronic means. Only two of the participants (4%) submitted all of the four requirements listed above; Table 25 shows the rate of return for each element.
Table 25: Student submission of required RPP elements in 2003

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Number submitted</th>
<th>% of cohort (n=48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence of fulfilled learning contract</td>
<td>12</td>
<td>25%</td>
</tr>
<tr>
<td>Self-assessment</td>
<td>35</td>
<td>73%</td>
</tr>
<tr>
<td>Log book</td>
<td>18</td>
<td>38%</td>
</tr>
<tr>
<td>Clinical mentor assessment</td>
<td>46</td>
<td>100%</td>
</tr>
</tbody>
</table>

This would suggest that of these requirements, the students placed greatest value on the assessment provided by the clinical mentor. The low return rate of logbooks may have related to the awareness that data were being collected using ISOH. A total of 31 (65%) students completed post-placement questionnaires. Those who did not complete the questionnaires were contacted by email and asked to provide career interest scores. A total of 45 (94%) of students ultimately provided these.

Staff development

Issues related to staff development did not improve in 2003 with the addition of two more clinical placement locations. It was impossible to visit all locations and provide the degree of support required. This situation was exacerbated by the change of key personnel in two of the established locations. Despite written advice and information being provided, the mentors and clinicians relied heavily upon verbal information provided over the telephone. There was undoubtedly a need for increased site visits however the combination of distant locations, a lack of funding for travel and the time constraints imposed by a fractional academic appointment meant that this did not occur. All of the mentors were strongly encouraged to contact the coordinator for additional academic support and many availed themselves of this.

"Supporting everyone everywhere is even more of a problem this year. What can I do? The verbal support is undoubtedly appreciated but I don’t believe that it is enough. I can’t get everywhere and I’m not sure that all of the travel costs are recoverable. Should have budget or clear ‘rules’ for travel. Can’t afford to do the job and be away all the time – I’m paying for the privilege!"
Other option is to get all mentors to attend central staff development but then there’s cost to them; travel, accommodation, opportunity costs. Big argument for RPP is minimal cost to AHS. If I ask all to attend then this kind of defeats this. Broken Hill, Dubbo and Orange works best – probably because its where it all started and I was there to personally drive and support. Maybe I just need to accept that over a two-week period, differences and personal interpretation are OK but that if longer placements are introduced then I will have to prioritise staff development on site. Will be interesting to see how differences impact on outcomes.”

DJC April 03

STAKEHOLDERS
As summarised at the end of Chapter 9, all stakeholders maintained their commitment to the RPP.

Faculty of Dentistry
The Faculty of Dentistry re-advertised the 0.4 FTE position for RPP coordinator, co-funded by the University Department of Rural Health.

University Department of Rural Health
The UDRH at Broken Hill appointed a new student coordinator who assisted in the site arrangements. The coordinator’s travel to and from Broken Hill was supported and one trip to Lismore was also funded. The UDRH at Lismore participated in discussions relating to the Northern Network placements. It was suggested that, in the absence of accommodation for groups of 12 students, the orientation program should be delivered to the clinical locations through videoconferencing.

Oral Health Branch of NSW Health (OHB)
The OHB provided a central fund of $8,000 to defray accommodation costs in each AHS.
ADA NSW

The ADA NSW and Guild Insurance and Financial Services (GIFS) provided $25,000 to pay for students' travel expenses. All of the staff involved with the RPP in 2002 maintained their commitment to the three Risk Management sessions planned for 2003.

Dental Board of NSW

With the introduction of another two locations, the Dental Board accredited the clinical facilities for student placement.

Research Cycle 4

Research questions

The original research questions associated with the RPP were defined as;

1. Was the RPP a student-centred program that promoted student learning?
2. Did the RPP result in positive attitudes to rural practice and lifestyle?
3. Did the RPP students contribute to oral health care for community members?

In chapters 8 and 9 I have described the development of a table of thematic concerns (*) based on input from RPP co-researchers. Over the previous three action research cycles, additional research questions had been generated. These can be listed as:

4. Did the RPP staff support and inspire the students?
5. Were honorary titles an incentive to become involved with the RPP?
6. Did any staff recruit as a consequence of the RPP?
7. Have the stakeholders supported the Faculty?
8. Did the students learn through participation in the ADA NSW Risk Management session?
9. Are the students more aware of the ADA?
10. Has there been any inclusion of oral health into other health curricula?
11. Did the students achieve what they wanted to?
12. Does the RPP provide a template for extramural education?
13. Can the RPP develop into a mandatory program?
14. Did the students meet other students?
15. Did participants work in rural areas when they graduated?

While research to this point addressed these questions and reporting demonstrated that the RPP achieved its three major goals, consultation with faculty involved with curriculum development raised additional questions with a focus on the practicalities of RPP development. These can be summarised as;

16. Can additional RPP clinical placements be developed?
17. What are the options for closer placements for mature students?
18. Are longer placements achievable and/or desirable?
19. Is a Sydney-based orientation appropriate?
20. How many students should attend the RPP at one time?

Research methods
There was a clear need to focus on the practicalities of introducing a mandatory RPP in 2004 however the opportunity to gain additional insight into the other research questions led to a revision of the research methods to be used in 2003.

Pre- and post-placement questionnaires
This method of obtaining data was maintained and the final questionnaires used in 2003 are appended (Appendix 4).

Reflective statements
In light of data presented in Chapter 9 reflective statements were not used in 2003.
Log books

The need to determine student contribution to oral health care required this element to be used in 2003. All staff were asked to use the ISOH system to validate the student log books.

Student interviews

With an RPP cohort of 48 students in distant locations, there was insufficient opportunity to conduct semi-structured interviews. While informal interviews were documented in the coordinators research portfolio, this method was not used in 2003.

Staff interviews

All staff were asked to provide written feedback with specific reference to the newly-generated research questions.

Personal reflections

These were entered into the research portfolio that had been maintained throughout the RPP research project.

Review of graduate employment

While collecting graduate employment data was desirable, the 2003 cohort would not graduate until December 2003. The need to develop a framework for the mandatory RPP in advance of this time meant that this was not a primary aim for this research project. It was anticipated that these data would inform future developments and revision of the RPP in coming years. Graduate employment data will be collected as a baseline measure for evaluation of the mandatory RPP.

The list of research questions provided above forms the structure for the overall analysis of data presented in Chapter 11, Phase 3.
STUDENT LEARNING

Before attending the RPP students were asked to list the oral health issues that they thought affected rural communities. The same request was made on completion of the program. The responses are summarised in Table 26.

Table 26: Students perceptions of oral health issues affecting rural communities pre-RPP 2003

<table>
<thead>
<tr>
<th>Grouped theme</th>
<th>Number of comments pre-RPP</th>
<th>Number of comments post-RPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate manpower</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>Geographical isolation</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>Lack of Specialist support</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Inability to pay for treatment due to low income</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Lack of public sector funding</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>Limited dental awareness</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>Limited range of treatment available</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Lower dental health priority</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Aboriginal health needs</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Lack of fluoridation</td>
<td>12</td>
<td>4</td>
</tr>
</tbody>
</table>

It is interesting to note that before the RPP, students did not consider the range of treatment options available to be an issue however on completion of the program this was considered to be a major issue with 21 of the 31 respondents (68%) listing this as an issue. Similarly, there was increased reporting of a perceived lack of public sector funding and a lack of focus on dental awareness, prevention and education. One student (14) summarised this as, “limited access to public care, no oral health education, no prevention, use of funds?”. At the de-brief meeting, one student (27) commented that she believed that she would be “de-skilling if I went to work there. It’s just dressings and Y told us that they didn’t have time to do any scaling because they were so busy”. It is also interesting to note that before the RPP, nine students thought that individuals in rural communities had a ‘lower dental health priority’. On completion, only one student believed this to be the case and an overwhelming majority recorded aspects of public system care as being issues.
Inadequate manpower was perceived to be an issue both before and after the RPP. The perceived geographical barriers to care were considered less of an issue after the RPP and it is likely that this is due to students being based in regional centres with variable exposure to rural communities.

**Learning Contracts**

As mentioned above, only 12 students (25% of cohort) submitted completed learning contracts. As also described, the four RPP requirements were submitted at the post-placement briefing, by post and by email. A review of the requirements for each student demonstrated that only 2 (4%) had submitted all four elements. Of the 35 students who submitted self-assessments, all 35 indicated that they had fulfilled the learning contract; 12 of this group provided the learning contracts for academic assessment. Of the 46 submitted clinical supervisor assessments, 38 mentors indicated that the students had completed their learning contracts. It is likely that there would be increased compliance with RPP assessment if this were made an integral curriculum component with a formal assessment requirement.

A review of the 12 submitted learning contracts demonstrated that the contracts had been fulfilled. Ten of the twelve were comprehensive, demonstrated clear evidence of learning and were well presented. The other two were scant in detail and poorly presented however they both demonstrated student learning. This is aligned with Toohey’s [1996 #322] discussion relating to the use of learning contracts in the Health Science Education program at the University of Sydney. She noted that learning contracts may be associated with a significant workload for both students and supervisors, and that, in the absence of clearly defined assessment criteria, there is likely to be a difference in both approach to, and completion of, learning contracts.

In the context of an elective, non-assessed curriculum component, and having established a non-biased co-researcher relationship, it was impossible to obtain additional information from the students. As in previous years, responses to emails were very limited although the students were happy to respond to the request for career interest scores.
Self-assessment outcomes

Self-assessments were unreliable and there was limited motivation to complete them. As described above, the pre-placement briefing resulted in 35 self-assessment strategies and students were provided with feedback. There was insufficient time to support each student in the development of these strategies and the lack of response to email feedback indicated that there was little inclination or time to develop these further. As has been described in the literature (110, 113-115, 118), student self-assessment requires considerable support in the development of appropriate and realistic criteria. I was unable to support this due to time constraints, number of students and the lack of previous student experience using self-assessment methods. Consequently, self-assessment was neither valid nor reliable.

Of the 35 submitted self-assessments, all students awarded themselves a ‘satisfactory’ grade. Of greater interest was the range of comments made by students in response to the open-ended questions on the self-assessment form (see Appendix). The students had gained considerable insight into their own abilities and appreciated the opportunity to observe and reflect on various aspects of rural oral health care. With reference to the academic advisors assessment form, students who demonstrated the ability to discuss the RPP and recognise their strengths and weaknesses were considered to be ‘satisfactory’.

It had been anticipated that the three assessment requirements would be considered separately. The need to consider each assessment in awarding an aggregate ‘satisfactory’ or ‘unsatisfactory’ was to be reviewed using the 2003 outcomes; a firm recommendation for assessment of the mandatory RPP from 2004 was to be developed. As the 2003 assessment was not a formal requirement, compliance was low. An overall RPP assessment strategy is therefore proposed in Chapter 12 with the caveat that this will require formal evaluation and may require modification.
Student learning from the ADA NSW Risk Management session

As in previous years, staff representing ADA NSW and GIFS facilitated the session with assistance from the RPP coordinator. Using the same open and closed response questionnaire as in previous years, 41 students provided feedback summarised in Figure 10.

Figure 10: Student evaluation of Risk Management session 2003

The comments made by students again referred to the approachability and support of the facilitators, the relaxed and informal learning and the relevance of the session to them. There were three suggestions for improvements, all of which requested longer sessions with more real-life cases.

Role of staff

Once again the students appreciated the support and enthusiasm of the clinicians that they met during the RPP. Of the 31 students (65%) who completed the post-placement questionnaire, 30 (97%) considered the clinicians and mentors to be ‘essential’ to their learning. The remaining student (22) was ‘unsure’ whether this was the case. He noted that, “I felt that I was left to myself far more than I thought I would be. I felt like a bit
of a nuisance as the dentist was really busy and it was obvious that she just wanted to get on with her work”. A review of the self-assessment form for this student indicated that he had rationalised this experience in the context of his future career aspirations. He wrote, “It’s important for me to make sure that I am enthusiastic about my job and that I can find opportunities to teach students in this way”.

Other students made comments about the private practice visits. Student 23 stated that, dentist ignored us and it got boring just standing in the corner. I would have got more from chatting with him after work I think”. Another student (38) commented that, “nothing was too much trouble. It was obvious that he was really busy but he made us feel like we could ask what we liked. He explained who we were to the patients and that was good because they joined in the conversation”. With the expansion of the RPP resulting in over 100 dental practitioners becoming involved, it was inevitable that there would be different attitudes and approaches to student visits. While selection of highly motivated practitioners would provide a more positive experience, there is value to students being exposed to a range of practitioners as illustrated by student 22’s comments above.

DATA COLLECTION AND ANALYSIS

Data collection

45 students completed pre-placement questionnaires and 31 students (65%) completed post-placement questionnaires. This post-placement response rate is considerably lower than in previous years (100%, 100% and 80% respectively in 2000, 2001 and 2002). This is likely to be due to the decreased level of academic support because of the increased number of student participants. In previous years with smaller groups of students, the coordinator had been able to establish personal relationships with each of the participating students; in 2003 the increased numbers and geographical locations of these students meant that the coordinator was unable to establish these relationships. Of the students who attended the smaller group placements based at Broken Hill, all 24 students completed the post-placement questionnaire. Of the group of 24 who attended the RPP in Weeks 2 and 3, 7 students (30%) completed the post-placement
questionnaire. This low response would suggest that this group felt less involved in the RPP and the associated research, with the inference that it was due to the limited academic support available.

**Student familiarity with rural lifestyle**

Of the 45 students who completed the pre-placement questionnaire, 37 (82%) reported that they were ‘not familiar at all’ with rural life and the remaining 8 (18%) stated that they were ‘quite familiar’ with rural life. All of the latter group had spent 6 months or less in rural areas. Of those who were not familiar, 19 (42% of respondents) had never been to rural areas and the remaining 18 (40% of respondents) had spent less than one month in rural areas.

One student (2%) had spent holidays in rural areas; 14 students (31%) had holidayed in regional towns, 19 (42%) in metropolitan areas and 11 (25%) overseas. No students had received either primary or secondary education in rural areas. Thirty six students (80%) had received primary and secondary education in metropolitan areas, 3 students (6%) in regional towns and 6 students (12%) overseas. Thus, in this cohort, there were no students who completed questionnaires from rural backgrounds; they would not be included in the overall analysis in Phase 3.

**Student attitudes to rural practice before and after the RPP**

Table 27 summarises the perceived advantages of a rural career before and after the RPP. The major advantages before and after the RPP were perceived to be the ‘rural lifestyle’ and ‘increased/broader range of clinical experience’. Being part of a small friendly community was also equally ranked before and after the RPP.

Before the RPP, the ability to support communities where there are no services was ranked 4th however after the RPP this was ranked last. This might be because students were placed in regional towns where services exist or because the students were able to identify more personally applicable advantages. Remuneration in rural practice was ranked higher after the placements, as was professional support. This is likely to be due
to the professional support networks that were drawn upon in order to recruit RPP staff.

### Table 27: Perceived advantages of a rural career pre- and post-RPP 2003

<table>
<thead>
<tr>
<th></th>
<th>Frequency of response</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-RPP (n=45)</td>
<td>Post-RPP (n=31)</td>
</tr>
<tr>
<td>Being part of a small, friendly community</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>Rural lifestyle</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>Increased /broader range of clinical experience</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>Ability to provide care where none exists</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Increased remuneration</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Improved employment opportunities</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Professional support</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Decreased cost of living</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Students also listed the perceived limitations of rural practice and these are summarised in Table 28.

### Table 28: Perceived limitations of a rural career pre- and post-RPP 2003

<table>
<thead>
<tr>
<th></th>
<th>Frequency of response</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-RPP (n=45)</td>
<td>Post-RPP (n=31)</td>
</tr>
<tr>
<td>Distance from family and friends</td>
<td>35</td>
<td>29</td>
</tr>
<tr>
<td>Professional isolation</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>Limited continuing education opportunities</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Lack of social activities</td>
<td>25</td>
<td>12</td>
</tr>
<tr>
<td>Independence</td>
<td>No mention</td>
<td>3</td>
</tr>
<tr>
<td>Distance / Cost of travel</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Limited education for children</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cultural isolation/racism</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Limited range of experience</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Limited opportunities for spouse employment</td>
<td>3</td>
<td>No mention</td>
</tr>
<tr>
<td>High crime rate</td>
<td>No</td>
<td>1</td>
</tr>
</tbody>
</table>

263
|                    | mention | | mention |
|-------------------|---------| |---------|
| No ocean          | No      | 1 | No      | 11      |
|                   | mention | | mention |
| Weather           | 1       | No mention | 10     | No mention |
|                   |         | |         |
| Having a community identity | 4 | 3 | 6 | 7 |

The limitations ranked most highly both before and after the RPP were ‘distance from family and friends’, ‘professional isolation’ and ‘lack of social activities’. Perceptions of cultural isolation and/or racism were largely dispelled after participation in the RPP (ranked 5th before and 9th after the program) however the ‘limited range of experience’ was ranked considerably higher after the RPP (10th before and 4th after the program).

This observation has direct implications for the recruitment of new dental graduates to public sector employment. As has been noted previously, the students were generally critical of the limited clinical experience and preventive approach to oral health care in the clinics that they visited. It is possible that the experience was skewed to ensure that the students were able to make a real contribution. It is however important to acknowledge that the RPP experience undoubtedly influences career direction and the majority of the 2003 cohort reported that they were very unlikely to consider public sector employment immediately after graduation.

**Student interest in a rural career**

Figure 11 demonstrates the pre- and post-placement career interest scores provided by the students. As noted previously, the 17 students who did not submit post-placement questionnaires were contacted by email and asked to provide this item by return. Three students did not comply with this request and the same three students failed to provide pre-placement scores. Figure 11 therefore shows career interest scores for the same 45 students before and after the RPP.
Figure 11: Student interest in a rural career before and after the RPP 2003

Despite the reported poor compliance with various elements of the program, the 45 students were more interested in a rural career after the RPP than they were before. The mean interest score before the RPP was 6.22 ± 1.76 and after the RPP it was 7.33 ± 1.65. A paired sample students T test provides t=-3.98 with 44 degrees of freedom with P<0.001. This was a highly significant outcome. An analysis of additional data is supplied in the overall analysis in Chapter 11.

Student contribution to oral health care

A review of the 18 logbooks (38%) submitted by students demonstrated that the students provided a range of treatment for patients at the host dental clinics. These were largely simple restorations, dental extractions, scaling and polishing. Table 28 summarises the clinical experience gained by the 18 respondents. ISOH data was requested from each of the mentors. Data was not provided however most mentors reported that the students had gained considerable clinical experience.

One mentor stated that he had not expected them to treat patients and had considered the RPP to be “more of an experience than an education”. This was an unexpected response as this mentor had been involved with the RPP in 2002 and had received considerable support in developing the local program. There had been a considerable emphasis placed on the clinical element in 2002 as reflected in the student experience.
Further discussion with this mentor revealed concerns that the placement of students in the clinic might put undue pressure on the clinicians however there was no evidence provided to support this.

During ongoing discussions with all of the mentors it transpired that they perceived the RPP to be a “tempter” and that they had not placed any emphasis on the provision of treatment. They considered the RPP to be too short to achieve all of its aims and had prioritised experience of rural lifestyle and enjoyment. This misunderstanding stresses the need to reinforce repeatedly the need for students to obtain clinical experience. It highlights the problems encountered when academic support is less than optimal.

The well-established programs at Broken Hill, Dubbo and Orange had had the benefit of considerable academic support over a four-year period. This academic support is obviously essential for a consistent approach to the program. While the RPP was an elective curriculum component the variable experiences were not of great significance. Should the RPP evolve to require specified clinical experience, this aspect will require greater academic support than provided in 2003.

**Table 29: Clinical experience during the RPP 2003**

<table>
<thead>
<tr>
<th>Clinical locations (n=18)</th>
<th>BH n=8</th>
<th>Dub n=8</th>
<th>Oran n=8</th>
<th>Lis n=4</th>
<th>Coff n=4</th>
<th>Albu n=4</th>
<th>Tam n=4</th>
<th>Hun n=4</th>
<th>Que n=4</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of logs</td>
<td>4 (50%)</td>
<td>8 (100%)</td>
<td>4 (50%)</td>
<td>Nil (0%)</td>
<td>Nil (0%)</td>
<td>2 (50%)</td>
<td>Nil (0%)</td>
<td>Nil (0%)</td>
<td>Nil (0%)</td>
</tr>
<tr>
<td>No. of OOS*</td>
<td>35</td>
<td>171</td>
<td>54</td>
<td>0</td>
<td>No ISOH data</td>
<td>50</td>
<td>No ISOH data</td>
<td>No ISOH data</td>
<td>No ISOH data</td>
</tr>
</tbody>
</table>

*Occasions Of Service

In the context of mandatory placement development and the possibility of extended placements, this variable clinical experience and commitment to record keeping will
require careful consideration. Further discussion and recommendations can be found in Phase 3 of this thesis.

Staff feedback
While the submission of data and comment was lower than in previous years, those staff who responded to a request for comment were extremely positive about their involvement with the RPP. Staff commented favourably on the enthusiasm, professionalism, communication and clinical skills of the students.

Through third party contact, it became apparent that those staff who did not respond considered that they had not been very well supported by the coordinator. This observation substantiated personal reflections as documented at various times during 2003 and summarised after the RPP 2003 was completed.

"Thought I could do it all! Really tried to give as many students as possible the widest range of experience but it was just too much – really out of control. Guess that I know what the aims etc are but I didn't support the staff enough on a personal basis. Feel like I really let the staff down by focusing so much on the students. The original placements were OK because they all know me and we have met on several occasions especially when all this began. They had a buy in to the program and had helped determine its course whereas the new staff are inheriting someone else's program so they are obviously less involved. Spent a lot of time on the phone but really I should have gone to every staff member to inform and enthuse. Guess I'm not superwoman after all! It was just not feasible to get everywhere with no identified funding for travel, accommodation etc and also based on having two days as week to do it all in. Looking at numbers – total of ~90 days to do the lot, including the NH&MRC stuff etc. Meetings with students before and after took ~5 days. RPP itself was ~30 days. Meetings with stakeholders took another ~5 days. ~10 days in Broken Hill. Admin stuff. Just too much. So what should I have done? Probably nothing different really – I have learnt heaps and now have much more of an
idea about recommendations for 2004. Bottom line is lots of students/programs = more academic support OR fewer students/programs = existing academic support. Need to really refine aims in terms of priorities and need to work with dr f to determine exactly what the focus should be. Is the RPP a two-week experience or is it a definitive contribution to clinical experience? This will guide assessment too"

DJC August 03

Improvements to the RPP

In addition to my personal reflections and the observations of the staff, students were asked to make recommendations for improvements to the RPP. Of the 31 students who submitted post-placement questionnaires, 11 (35%) would have liked to visit more private practices and 4 (13%) would have liked to visit fewer private practices. It was apparent that this feedback was location specific; for example, one mentor decided not to include any private practitioners in the RPP and the students would have liked to visit private practice. Of the 11 who would have liked to visit more practices, 10 noted that they would have preferred shorter visits at each practice. Four students (13%) would have liked more social time, six (19%) wanted additional clinical experience and five (16%) would have liked longer placements. Four students (13%) were critical of the local mentor stating that they never saw the mentor throughout the RPP. These students participated in the RPP during weeks 1 and 2 and consequent to their timely verbal feedback, this issue was addressed for the RPP during weeks 3 and 4. Three students (9%) would have liked to visit more remote communities and nine (27%) would have liked to have a car provided.

Strengths of the RPP

Table 30 summarises the perceived strengths of the RPP.
Table 30: Perceived strengths of RPP 2003

<table>
<thead>
<tr>
<th>Strengths of RPP 2003</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting more clinical experience</td>
<td>18</td>
</tr>
<tr>
<td>Experiencing rural lifestyle</td>
<td>16</td>
</tr>
<tr>
<td>Approachability of clinicians</td>
<td>14</td>
</tr>
<tr>
<td>Meeting new people</td>
<td>11</td>
</tr>
<tr>
<td>Balance between work and recreational time</td>
<td>9</td>
</tr>
<tr>
<td>Range of locations/activities</td>
<td>6</td>
</tr>
<tr>
<td>Spending time with student colleagues</td>
<td>6</td>
</tr>
<tr>
<td>Orientation Program</td>
<td>4</td>
</tr>
<tr>
<td>Organisation of the Program</td>
<td>3</td>
</tr>
<tr>
<td>Opportunity to fly with RFDS</td>
<td>3</td>
</tr>
<tr>
<td>Transport</td>
<td>1</td>
</tr>
</tbody>
</table>

These are in direct alignment with comments made in previous years and will be commented on further in Phase 3.

Graduate employment of RPP 2003 students

Of the 48 students who participated in the RPP 2003, 47 provided year one employment details. Eight (17%) elected to work in metropolitan teaching hospitals and twenty four (50%) accepted positions in metropolitan private practice. Two graduates (4%) worked in ‘Accessible’ areas of NSW and one (2%) moved overseas. A total of 12 graduates (25%) chose to work in ‘Moderately Accessible’ and ‘Rural’ areas; eleven of these (23%) were in rural NSW.

A full analysis of year one employment and associations with career interest scores is provided in chapter 11.

Reporting

Once again, the RPP received considerable attention in the local media. Newspaper articles and both radio and television interviews were conducted to the delight of the student participants.

Reporting to stakeholders was framed with the knowledge that the coordinator had gained new employment and would no longer be working at the Faculty of Dentistry.
A review of the outcomes of the RPP was essential, together with a clear commitment from both the UDRH and the Faculty to identify, recruit and support a new academic. This commitment was demonstrated through the appointment of an experienced academic with considerable knowledge of oral health issues facing rural communities.

It was also imperative that the previous coordinator ensured ongoing support for, and commitment to the RPP. This was obtained and the ADA NSW / GIFS resolved to provide $25,000 for the RPP 2004. The Oral Health Branch of NSW identified $8,000 to be accessed by the AHS hosting students. As an integral component of ongoing development of the RPP, academic handover included recommendations as described in Chapter 12, Phase 3.
CHAPTER 11

OVERALL ANALYSIS AND DISCUSSIONS

SECTION 1: PARTICIPANTS IN THE RURAL PLACEMENT PROGRAM 2000-2003

This section is structured with direct reference to the various research questions developed throughout the project. These questions are used as sub-section titles for clarity.

Study group

Between 2000 and 2003, a total of 128 students attended the Rural Placement Program. The numbers of students attending the RPP are summarised in Table 31.

Table 31: Students attending the RPP from 2000 to 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>RPP attendees</th>
<th>Total number of final year students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>24</td>
<td>52</td>
</tr>
<tr>
<td>2001</td>
<td>24</td>
<td>56</td>
</tr>
<tr>
<td>2002</td>
<td>32</td>
<td>59</td>
</tr>
<tr>
<td>2003</td>
<td>48</td>
<td>61</td>
</tr>
<tr>
<td>TOTAL</td>
<td>128</td>
<td>228</td>
</tr>
</tbody>
</table>

Research methods

Personal reflections

Over the four years of the research, I maintained the personal research and teaching portfolio referred to in previous chapters. The maintenance of, and reflection on the journal has undoubtedly enriched the qualitative and quantitative data obtained from the co-researchers.
Staff

All staff involved with the RPP received copies of the reports from each RPP and were invited to comment on open and closed response questionnaires. As the response rate was low, follow up telephone calls and emails were used to gain additional input. Table 32 shows the response rates from the clinicians who had been actively involved with clinical supervision at the Community Dental Clinics or in a mentoring role. It should however be remembered that a total of 159 private practitioners, mentors, allied dental personnel and administrators had been involved with the RPP from 2000 to 2003. Twenty (13%) of these colleagues provided verbal feedback to confirm their positive perceptions of the students and willingness to be involved with the RPP in the future. Several of these applied for, and received, honorary academic titles (see below).

<table>
<thead>
<tr>
<th></th>
<th>2000 (n=2)</th>
<th>2001 (n=4)</th>
<th>2002 (n=8)</th>
<th>2003 (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open and closed response questionnaire</td>
<td>2 (100%)</td>
<td>4 (100%)</td>
<td>8 (100%)</td>
<td>4 (40%)</td>
</tr>
<tr>
<td>One to one interviews</td>
<td>2 (100%)</td>
<td>4 (100%)</td>
<td>6 (75%)</td>
<td>2 (20%)</td>
</tr>
<tr>
<td>Written response to RPP report</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Follow up telephone interview</td>
<td>2 (100%)</td>
<td>4 (100%)</td>
<td>6 (75%)</td>
<td>None</td>
</tr>
</tbody>
</table>

As noted in Phase 2, as more students participated in the RPP in a four-week period, and as additional locations and mentors were recruited, the level of academic support decreased markedly. This trend is reflected in the decreasing response rates seen above and is supported by the comments relating to mentor involvement and program variability considered below.
Students

Between 2000 and 2003, various research and learning strategies were employed to research the RPP from the student, co-researcher perspective. These are summarised in Table 33.

As with the staff response rates, the student response rates also declined with the expansion of the project. There was insufficient time available to provide all 48 participants in 2003, with the level of academic support that had been possible in earlier years. In the first cohort, the response rate to all elements was over 80%: twelve students only selected the peer assessment strategy and all twelve completed this element (100%). The lowest response rates were to the ‘pre-RPP reflective statement’ (83%) and ‘self assessment’ (88%).

In 2001, the response rates were over 80% with the exception of ‘self assessment’ (58%) and the ‘clinical log book’ (66%). In both of these cohorts, there was a 100% response rate to both the pre- and post-placement questionnaires.

In 2002, students attended the RPP in three groups of 12 students. It was therefore possible to provide a similar level of academic support during the orientation programs but the coincident programs precluded site visits.

The increased student numbers in 2002 did not affect the response rates with over 80% of students submitting all required elements; the lowest response rates were to ‘self assessment’, ‘post-placement questionnaire’, ‘clinical log book’ and ‘post-placement reflective statement’. Those who did not attend the post-placement briefing failed to submit any of these items.

The post-placement briefing was intended to facilitate ‘reflection-on-experience’ and it is inferred that those who did not attend perceived the placement to be a discrete experience, with the pressures of their city-based studies taking precedence to ongoing
reflection. All of the students met with their mentors on the last morning of the placement; this provided an opportunity for de-briefing.

All twenty of the students (100%) who had been based in Broken Hill submitted all required items while six (50%) of those based in the Northern Oral Health Network (NOHN) responded. The use of the Information System for Oral Health (ISOH) in the NOHN would explain the low response rate for ‘clinical log books’ in this group as students may have assumed that the clinical data would be available through the ISOH system.

The RPP in 2003 comprised two groups of 12 and one group of 24. The larger group inevitably received less academic support than the two smaller groups. In 2003, there was a lower response rate to all items with only 25% submitting a ‘learning contract’ and 38% submitting ‘clinical log books’. The three students who failed to submit any required element were all based in Coffs Harbour. Of the 24 students who were based in Broken Hill, eight (33%) submitted ‘clinical log books’ and a ‘learning contract’. With 48 students staggered over a four-week period, it was impossible to conduct individual interviews. Those students based in Broken Hill participated in group interviews however the students attending the Sydney orientation were not always present (see chapter 10) and therefore available for interview. The residential nature of the Broken Hill placement undoubtedly facilitated both individual and group interviews.

While it is likely that the decreased level of academic support had a direct impact on response rates it should be remembered that the RPP was an elective program with no formal summative assessment requirements. With the introduction of mandatory placements students will be required to respond to the selected learning elements. The response rates obtained from 2000 to 2003 will influence these requirements and consideration of ongoing program evaluation will be required. This issue is discussed further in this section and recommendations are provided in chapter 12.
Table 33: Response rates for RPP elements 2000 to 2003

<table>
<thead>
<tr>
<th></th>
<th>RPP 2000 (n=24)</th>
<th>RPP 2001 (n=24)</th>
<th>RPP 2002 (n=32)</th>
<th>RPP 2003 (n=48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-RPP questionnaire</td>
<td>24 (100%)</td>
<td>24 (100%)</td>
<td>32 (100%)</td>
<td>45 (94%)</td>
</tr>
<tr>
<td>Post-RPP questionnaire</td>
<td>24 (100%)</td>
<td>24 (100%)</td>
<td>26 (82%)</td>
<td>31 (65%)</td>
</tr>
<tr>
<td>Career interest score</td>
<td>24 (100%)</td>
<td>24 (100%)</td>
<td>32 (100%)</td>
<td>45 (94%)</td>
</tr>
<tr>
<td>Learning Contract</td>
<td>24 (100%)</td>
<td>24 (100%)</td>
<td>N/A</td>
<td>12 (25%)</td>
</tr>
<tr>
<td>Learning Goals</td>
<td>N/A</td>
<td>N/A</td>
<td>32 (100%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Self-assessment</td>
<td>21 (88%)</td>
<td>14 (58%)</td>
<td>26 (82%)</td>
<td>35 (73%)</td>
</tr>
<tr>
<td>Peer Assessment</td>
<td>(n=12) 12</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Clinical Log Book</td>
<td>24 (100%)</td>
<td>16 (66%)</td>
<td>26 (82%)</td>
<td>18 (38%)</td>
</tr>
<tr>
<td>Mentor Assessment</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>46 (96%)</td>
</tr>
<tr>
<td>Pre-RPP reflective statement</td>
<td>20 (83%)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Post-RPP reflective statement</td>
<td>24 (100%)</td>
<td>N/A</td>
<td>26 (82%)</td>
<td>N/A</td>
</tr>
<tr>
<td>ADANSW Risk Management Session</td>
<td>24 (100%)</td>
<td>22 (92%)</td>
<td>32 (100%)</td>
<td>41 (85%)</td>
</tr>
<tr>
<td>questionnaire</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One on one interviews</td>
<td>24 (100%)</td>
<td>24 (100%)</td>
<td>32 (100%)</td>
<td>No</td>
</tr>
<tr>
<td>Group interviews</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (50% of attendees)</td>
</tr>
</tbody>
</table>

Outcomes

Was the RPP a student-centred program that promoted student learning?

The structure of the RPP undoubtedly provided a student-centred educational experience through student input to the orientation program (pages 98, 156, 202 and 237), identification of learning goals and outcomes (pages 117, 158, 204 and 245), negotiation of individual learning contracts (pages 117, 166, 204 and 254) and development of criterion-referenced self-assessment (pages 118, 168, 213 and 255). The students had an appreciation of the value of these elements and those attending in smaller groups had a higher level of participation in the educational components of the program as described above. There was evidence of student learning from these elements although the relative value of each element was not clear (pages 126, 174, 210 and 253). It was evident that individual students responded differently to the
educational elements, confirming the need for individual input to program structure and determination of outcomes.

It should also be remembered that all of the participating students had been educated in a traditional didactic curriculum and had had little exposure to student-centred curricula. In addition, there was no formal requirement for them to participate in any educational element of the program, as the RPP was a 'voluntary' vacation program. It was therefore encouraging that all of the students responded positively to the program and many embraced the various learning opportunities available to them (pages 120, 158, 174 and 210).

The importance of reflection in experiential learning was also appreciated (pages 113, 217 and 253) and the pre-and post-placement briefings provided semi-structured opportunities to develop reflective skills (pages 93, 102, 150, 158, 197, 204, 238 and 246). Through sharing accommodation, clinical experiences and social activities, opportunities for informal reflection were provided and the students generally valued peer support in their learning (pages 121, 133, 174 and 265).

Reflective statements provided insight into personal construct and participation rates were high. While these statements demonstrated reflective ability, the lack of objective criteria against which to assess these statements leads to concerns about the validity and reliability of this element for formal program assessment.

Although the Learning Journals, aimed at promoting personal reflection, were not formally reviewed, several students elected to submit their journals on completion of the program. All of those submitted demonstrated insightful observations and reflections (pages 113, 177, 217 and 258).

Several students commented that the various learning activities were too onerous and admitted that they had not bothered to maintain a journal. The students considered that it was of greater value to discuss their experiences with others rather than spend time writing in journals. While these discussions apparently enhanced learning for some
students (pages 113 and 213), evidence for personal reflection was not submitted by all students (see above).

The low attendance rates at later post-placement briefings (pages 158 and 246) would suggest that the RPP was perceived as a discrete experience and that ongoing learning was not considered important. The self-reported increase in clinical confidence levels after participation for some students indicated that the program had different benefits depending upon individual needs. On graduation, students will work autonomously and in relative isolation. The need for reflective skills and realistic self-appraisal is self-evident.

The development of self-assessment and peer-assessment strategies took much longer than had been anticipated (pages 118, 168, 245 and 255). The need to support the students in determining self-assessment strategies required specific attention in program development. Again, while self-assessment was a new concept for many of the students in the BDS rural program, BDent students will have been involved in self-assessment throughout their education (see chapter 2).

The elements of the RPP that were particularly valued by the students were the ability to share the experience with colleagues (pages 121 and 265), the support from motivated and enthusiastic mentors (pages 134, 172, 219 and 256), the exposure to a wide range of clinical activities (pages 139, 157, 203 and 265) and the organization of the program. The major strengths of the program, as indicated by 105 of the 128 participants (82% response rate), are summarised in Table 34. Students were asked to define the ‘three best things’ about the RPP and the categorised responses merely indicate the grouped response themes; this data cannot be extrapolated to give percentages.
Table 34: Categorised themes describing the ten major strengths of the RPP for whole cohort from 2000 to 2003

<table>
<thead>
<tr>
<th>Categorised themes</th>
<th>Number of times mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiencing rural lifestyle</td>
<td>66</td>
</tr>
<tr>
<td>Additional clinical experience</td>
<td>62</td>
</tr>
<tr>
<td>Approachability of clinicians</td>
<td>51</td>
</tr>
<tr>
<td>Range of locations and learning opportunities</td>
<td>42</td>
</tr>
<tr>
<td>Meeting new people (non clinicians)</td>
<td>31</td>
</tr>
<tr>
<td>Orientation Program</td>
<td>20</td>
</tr>
<tr>
<td>Organisation of program</td>
<td>19</td>
</tr>
<tr>
<td>Balance between work and recreation time</td>
<td>19</td>
</tr>
<tr>
<td>Opportunity to fly with RFDS</td>
<td>15</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>11</td>
</tr>
<tr>
<td>Spending time with student colleagues</td>
<td>7</td>
</tr>
<tr>
<td>Influenced future career direction</td>
<td>7</td>
</tr>
</tbody>
</table>

The references to the clinical learning opportunities, balance of experiences, mentors and program structure would suggest that the RPP provided a student-centred approach to learning.

The selected educational elements were admittedly excessive for the 2000 program (page 138) and as summarised above, these were amended in subsequent years. Despite a reduction in these elements the participation rate was variable. It is expected that the low response rate will be addressed by the development of mandatory program requirements. It is also not unreasonable to expect that future students of the new student-centred BDent program will be more familiar with student-centred philosophy and concepts and thus would be expected to participate more fully in reflective practice.

Several students indicated that they preferred starting the RPP in larger groups before working in local clinics in smaller groups (pages 133, 157, 183 and 224). They appreciated the efforts that were made to support them personally and professionally and repeatedly referred to the input from named individuals as being amongst the most important elements of the program (pages 134, 172, 219 and 265). While other rural programs are based upon regular rotation of paired students through rural placements

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[Richards, 2002 #22; Richards, 2002 #162; Odlum, 1999 #354], the RPP has value in promoting peer support particularly for the majority of participants who had not visited rural areas before and who were concerned about potential racism and bigotry.

While there were elements of the RPP which one or two individual students would like to have changed (pages 138, 181, 227 and 264), overall the structure of the RPP received positive feedback. The strengths of the program were clearly identified (pages 141, 183, 228 and 265) and the program undoubtedly had a significant impact upon the students’ perceptions of, and attitudes to rural practice (pages 128, 175, 221 and 259). The major limitations of the program indicated by 105 of the 128 participants (82% response rate), are summarised in Table 35. Students were asked to make three recommendations that would improve the program. Again, the categorised responses merely indicate the grouped response themes; this data cannot be extrapolated to give percentages.

There was no mention made of any of the learning requirements as being areas for improvement. It was interesting to note that several students would have liked longer placements and that an increase in clinical experience was the first-ranked area for improvement.

Table 35: Major improvements to the RPP as suggested by students from 2000 to 2003.

<table>
<thead>
<tr>
<th>Categorised themes</th>
<th>Number of times mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>More clinical experience</td>
<td>44</td>
</tr>
<tr>
<td>Provision of car during placement</td>
<td>34</td>
</tr>
<tr>
<td>Less time observing private practitioners</td>
<td>23</td>
</tr>
<tr>
<td>Improved accommodation</td>
<td>18</td>
</tr>
<tr>
<td>Longer placement</td>
<td>11</td>
</tr>
<tr>
<td>More recreation time</td>
<td>10</td>
</tr>
<tr>
<td>Introduce mandatory program</td>
<td>6</td>
</tr>
<tr>
<td>Increased opportunity to work with Aboriginal Medical Service</td>
<td>6</td>
</tr>
<tr>
<td>Shorter orientation program</td>
<td>3</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>6</td>
</tr>
</tbody>
</table>
Did the RPP result in positive attitudes to rural practice and lifestyle?

While previous chapters have amply described the outcomes of each RPP from a qualitative perspective, the career interest scores provided by students before and after each RPP provide data for analysis of impact on attitudes to rural practice and lifestyle. Paired t-Test results for students attending the RPP from 2000 to 2003 can be summarised to provide an objective measure of attitudinal change.

Data obtained from 2000 to 2003 was analysed using SPSS software# and a paired t-Test was used to compare paired means based on the assumption of normal distribution. The results from this analysis are shown in Table 36.

Table 36: Paired t Test results for career interest scores for RPP cohorts from 2000 to 2003

<table>
<thead>
<tr>
<th></th>
<th>2000 (n=24)</th>
<th>2001 (n=24)</th>
<th>2002 (n=32)</th>
<th>2003 (n=45)#</th>
<th>Whole cohort (n=125)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean before RPP</td>
<td>7.38 ± 1.884</td>
<td>6.42 ± 2.104</td>
<td>7.38 ± 1.699</td>
<td>6.22 ± 1.757</td>
<td>6.78 ± 1.896</td>
</tr>
<tr>
<td>Mean after RPP</td>
<td>7.33 ± 2.057</td>
<td>8.04 ± 1.334</td>
<td>7.59 ± 1.643</td>
<td>7.33 ± 1.651</td>
<td>7.54 ± 1.683</td>
</tr>
<tr>
<td>Mean difference</td>
<td>0.04</td>
<td>-1.62</td>
<td>-0.22</td>
<td>-1.11</td>
<td>-0.76</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.756</td>
<td>1.610</td>
<td>1.827</td>
<td>1.874</td>
<td>1.877</td>
</tr>
<tr>
<td>Standard Error of Mean</td>
<td>0.359</td>
<td>0.329</td>
<td>0.323</td>
<td>0.279</td>
<td>0.168</td>
</tr>
<tr>
<td>95% CI of difference</td>
<td>-0.07 to -0.78</td>
<td>-2.3 to -0.95</td>
<td>-0.88 to 0.44</td>
<td>-1.67 to 0.55</td>
<td>-1.09 to 0.43</td>
</tr>
<tr>
<td>t value</td>
<td>0.116 23df</td>
<td>-4.944 23df</td>
<td>-0.677 31df</td>
<td>-3.978 44df</td>
<td>-4.527 124df</td>
</tr>
<tr>
<td>Significance</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.503</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Based on this analysis it is concluded that the RPP had a strongly significant impact on the career interest scores of 2001 and 2003 RPP participants. Overall, the RPP had a

---

# SPSS 11.0 software. Copyright © 2001 by SPSS Inc., Chicago

*3 students did not provide 'career interest scores'
strongly significant impact on the career interest scores of the participating group from 2000 to 2003.

Histograms for each of the RPP cohorts can be found in the relevant chapters (see pages 131, 178, 224 and 261) and these suggest that the distribution of scores does not follow a normal distribution. Figure 12 shows the distribution of pre- and post-placement ‘career interest scores’ for the entire RPP group. This demonstrates that the distribution of career interest scores is non-parametric.

Figure 12: Histogram to show pre- and post-placement career interest scores for students participating in the RPP from 2000 to 2003 (n= 125; three scores missing)

Wilcoxon’s signed rank test uses the sizes and signs of the differences between the paired data to determine significance. The null hypothesis is that participation in the RPP makes no difference to career interest scores. This test was therefore applied to the data and the results can be seen in Table 37: the RPP was strongly associated with an increase in career interest score for the 2001 and 2003 cohorts. The effect of the RPP on the career interest scores of the entire group is highly significant.

It is interesting to note that despite qualitative evidence to the contrary, the first group of students was least influenced by the RPP with respect to career interest scores.
Despite concerns that the 2003 group received less support and participated at lower levels than the previous groups, this group was most significantly influenced by the RPP. This analysis and earlier qualitative comment support the fact that the RPP had a positive impact on students’ attitudes to rural lifestyle and practice.

Table 37: Wilcoxon’s signed rank test results for career interest scores reported by RPP students from 2000 to 2003

<table>
<thead>
<tr>
<th></th>
<th>RPP 2000 (n=24)</th>
<th>RPP 2001 (n=24)</th>
<th>RPP 2002 (n=32)</th>
<th>RPP 2003 (n=45)</th>
<th>Whole cohort (n=125)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-RPP score &lt; pre-RPP score</td>
<td>10</td>
<td>2</td>
<td>7</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Post-RPP score &gt; pre-RPP score</td>
<td>7</td>
<td>18</td>
<td>14</td>
<td>30</td>
<td>69</td>
</tr>
<tr>
<td>Post-RPP score = pre-RPP score</td>
<td>7</td>
<td>4</td>
<td>11</td>
<td>9</td>
<td>31</td>
</tr>
<tr>
<td>Z</td>
<td>-0.240</td>
<td>-3.667</td>
<td>-1.157</td>
<td>-3.441</td>
<td>-4.360</td>
</tr>
<tr>
<td>Significance</td>
<td>0.810</td>
<td>&lt;0.001</td>
<td>0.247</td>
<td>0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

The RPP therefore had a significant impact on the 2001 and 2003 cohorts. There was a significant impact on the career interest of the whole cohort.

**Did the RPP students contribute to oral health care for community members?**

The students provided 1230 documented Occasions of Service from 2000 to 2003 (pages 135, 179, 224, 262 and 280). This clinical experience was additional to that provided for by the BDS curriculum. Those Community Dental Clinics that had vacancies at the time of the RPP provided the students with existing infrastructure and support personnel without additional expense, opportunity cost or administrative effort for the clinics. Co-researcher input from these clinics indicated that the service contribution made would be likely to be reduced if there were no vacant facilities at the clinics. There was expressed concern that reallocation of employed staff to allow students to provide clinical work might have a negative impact upon clinic
productivity (pages 137, 180 and 224). Staff qualified this concern by recognising the likely long-term positive impact of the program on opportunities for recruitment.

The Northern Oral Health Network Manager provided the most comprehensive cost benefit analysis in 2002. This confirmed that the level of service delivery was dependent on staff vacancies, structure of the program and number of students attending. There is a demonstrated need to develop a clear strategy and accountability for Occasion of Service data collection and this obviously depends upon the future foci for the RPP. If the RPP clinical experience becomes an integral component of clinical education then this is accompanied by the need for students to accept greater responsibility for maintaining and submitting student logs. Financial accountability to stakeholders does require a consistent approach to data collection as discussed further in the recommendations in chapter 12.

Did the RPP staff support and inspire the students?
The expertise and enthusiasm of the mentors and various other staff involved, was a frequent observation made by many of the students. The absence of appropriate mentoring or evidence of staff disinterest had an impact on students as evidenced by qualitative data and decreased post-placement scores (pages 130, 177, 221 and 261).

Similarly, the positive impact that staff made on students has been documented (pages 124, 172, 219 and 256). Staff were regularly referred to as one of the ‘three best things’ about the program (Tables 9, 15, 22 and 31). On completion of the RPP, there were more references to ‘professional support’ as being an advantage of rural practice (Tables 7, 12, 19 and 28) and fewer references to ‘limited professional support’ as being a limitation of rural practice (Tables 8, 13, 20 and 29).
Were honorary titles an incentive to become involved with the RPP?
As described above, 159 individuals were involved in the RPP from 2000 to 2003. Their involvement ranged from dedicated clinical mentorship to program administration. All of those involved were invited to submit curriculum vitae for consideration for honorary academic titles. Of the 159, four (3%) had existing honorary titles and twenty seven (17%) were awarded titles over the four years, as a consequence of their involvement with the RPP. It is thus likely that while honorary titles are not an incentive to become involved with the RPP it is important that those who wish to apply for such positions are supported in doing so.

Did any staff recruit as a consequence of the RPP?
Over the four years, sixteen of the dentists who supported the RPP informed me that they were hoping to recruit an associate dentist as a consequence of their involvement in the program. It is feasible that other dentists were also hoping to recruit however this information was not volunteered. Of the 16, six (38%) recruited new graduates from the program. Three of these graduates were employed in the public sector and three in private practice. Of the ten dentists who did not recruit from the program, 3 (19%) employed dentists from other sources. All sixteen have indicated their desire to maintain involvement with the RPP.

Have the stakeholders supported the Faculty?
As described in earlier chapters, the four external stakeholders were defined as being the ADANSW, the Oral Health Branch (OHB) of NSW Health, the UDRH at Broken Hill and the Dental Board of NSW. Each of these stakeholders has provided immeasurable support for the RPP and therefore the Faculty. The support provided has been pivotal to the success of the RPP and can be summarised as follows.
ADA NSW

- Key personnel who developed and facilitated the Risk Management session at every RPP orientation (in conjunction with personnel from Ebsworth and Ebsworth)
- Support for welcome social function
- Financial support (in conjunction with Guild Insurance and Financial Services Ltd.) for travel bursaries to $25,000 per year
- Assistance in recruiting private practitioners to participate in program
- Professional recruitment and promotion

Oral Health Branch

- Establishment of Memoranda of Understanding to allow students to work in Community Dental Clinics in a total of nine Area Health Services
- Professional support for associated Rural Health Support Education and Training research project
- Central funding of $8,000 to cover accommodation costs and incidental expenses in 2001

UDRH at Broken Hill

- Academic multi-disciplinary support
- Contribution to joint fractional academic appointment
- Support for travel for academic staff member
- Staff and student accommodation
- Infrastructure to support program delivery

Dental Board of NSW

- Collaboration in the development of criteria for Community Dental Clinic accreditation in accordance with Section 57(4)(b) of the Dentists Act 1989.
• Accreditation of the various Community Dental Clinics
• Support for research into dental graduates attitudes to rural dental practice in 2000/1

Did the students learn through participation in the ADA NSW Risk Management session?

The evaluation of the Risk Management sessions was overwhelmingly positive and supporting data can be found on pages 169, 217, 258 and 283. Several students commented that the session should be made available to all final year students. As the RPP will be mandatory from 2004, this recommendation will eventuate with ongoing support from the ADANSW and GIFS. As a consequence of ADANSW involvement with the RPP, students have access to information and experienced personnel. This has assisted ADANSW in developing policy to support dental students.

Has there been any inclusion of oral health into other health curricula?

In 2002 and by virtue of my presence in the UDRH at Broken Hill, academic staff decided to offer an ‘Oral Health Elective’ as a component of their Community Health Worker program offered to Indigenous students. The curriculum for this elective was developed in collaboration with my successor as RPP coordinator, who had considerable expertise in Indigenous Oral Health. In 2003, one student applied for, and was accepted to, the Elective program.

Did the students achieve what they wanted to?

There is considerable evidence, documented in previous chapters, to positively support this statement (pages 112, 164, 210 and 253). ‘Learning contracts’ from 2000 to 2002 and subsequently ‘learning goals’ in 2003, provided a focus for goal-centred learning. As described by many students, having a learning focus enhanced the value of the experience (pages 117, 158, 204 and 245).

It was however observed that while many goals were achieved, there was insufficient time during the RPP to fully achieve all goals (pages 166, 183, 210 and 254). It was
also noted that, in the absence of any awareness of rural NSW by the majority of students, the development of goals prior to the placement was limited (pages 116, 165 and 264).

All of the students who submitted self-assessments awarded themselves a ‘pass’ grade (pages 118, 168, 213 and 255). The students in the 2000 to 2002 cohorts developed their own self-assessment strategies and the majority of the students aligned these with their placement goals. In 2003, the students were provided with a self-assessment template with space allowed for them to develop their own criteria within assessment area guidelines (Appendix 4). There was a lower rate of compliance with this format and as there was no specific area for assessment of goals, evaluation of goal achievement is limited. As documented at length in phase 2, interviews and reflective statements support the fact that most students achieved all or more than they had expected to.

Table 38 summarises the themed RPP goals for the entire RPP cohort. The majority of students indicated their desire to find out more about living and working in rural areas.

<table>
<thead>
<tr>
<th>Grouped themes for student goals</th>
<th>Number of students mentioning theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn about dentistry in a different setting</td>
<td>85</td>
</tr>
<tr>
<td>Experience rural lifestyle</td>
<td>73</td>
</tr>
<tr>
<td>Assist in career decision making</td>
<td>53</td>
</tr>
<tr>
<td>Learn about oral health issues in the country</td>
<td>41</td>
</tr>
<tr>
<td>Get more clinical experience</td>
<td>34</td>
</tr>
<tr>
<td>New life experience</td>
<td>34</td>
</tr>
<tr>
<td>Holiday</td>
<td>24</td>
</tr>
<tr>
<td>Meet new people (non dental)</td>
<td>23</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1</td>
</tr>
</tbody>
</table>

Both before and after the RPP, the students recorded their perceptions of the advantages and limitations of a rural career. Their perceptions were grouped in themes and this information is summarised in Tables 39 and 40. As the students were restricted to three items it is not possible to make specific comment however it is clear
that there were common themes. After the RPP, despite the lower response rate, there was a greater mention of ‘increased remuneration’, ‘decreased cost of living’ and ‘professional support’. The three advantages mentioned most often were the same before and after the program.

Table 39: Perceived advantages of a rural career before and after the RPP 2000 to 2003

<table>
<thead>
<tr>
<th>Grouped themes for perceived advantages</th>
<th>Number of comments pre-RPP (n=125)</th>
<th>Number of comments post-RPP (n=105)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural lifestyle</td>
<td>82</td>
<td>62</td>
</tr>
<tr>
<td>Range of clinical experience</td>
<td>79</td>
<td>67</td>
</tr>
<tr>
<td>Community spirit</td>
<td>51</td>
<td>63</td>
</tr>
<tr>
<td>Increased employment opportunities</td>
<td>39</td>
<td>27</td>
</tr>
<tr>
<td>Increased remuneration</td>
<td>19</td>
<td>27</td>
</tr>
<tr>
<td>Decreased stress</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Decreased cost of living</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Professional support</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 40: Perceived limitations of a rural career before and after the RPP 2000 to 2003

<table>
<thead>
<tr>
<th>Grouped themes for perceived limitations</th>
<th>Number of comments pre-RPP (n=125)</th>
<th>Number of comments post-RPP (n=105)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from family and friends</td>
<td>97</td>
<td>79</td>
</tr>
<tr>
<td>Professional isolation</td>
<td>69</td>
<td>59</td>
</tr>
<tr>
<td>Limited social activities</td>
<td>54</td>
<td>40</td>
</tr>
<tr>
<td>Accessibility of city</td>
<td>28</td>
<td>12</td>
</tr>
<tr>
<td>Need to be able to be independent</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>Limited education options for children</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Cultural isolation</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Limited services</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Community identity</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Limited opportunities to meet life partner</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Limited opportunities for spouse employment</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Difficult to leave area when established</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>
Again, despite the lower response rate, there was greater mention of the need to be independent. Students referred to the need to learn how to drive, cook and establish new social networks. Many of the students were apparently living at home with their parents and had not been required to develop social and domestic independence. Faced with the prospect of commencing work, it is likely that the additional need to develop independence would be a barrier to leaving home, especially to work some distance from family. Within the ‘miscellaneous’ category, students referred to limitations such as “weather” and “lack of ocean”.

The three major limitations of a rural career were the same before and after the placement. These are in alignment with medical and allied health literature (see for example (2, 136, 140, 142, 154, 156, 162)) and are discussed further in chapter 12.

This overall analysis of the perceived advantages and limitations indicates that the placement provides validation of many pre-conceptions. It is important to note that the effects on individual students vary immensely (pages 126, 174, 220 and 258) and this validates the decision to use triangulation as a basis for this thesis (page 66).

**Does the RPP provide a template for extramural education and optimising such opportunity?**

The structure of the RPP was successfully used as a basis for rural placements for pharmacy students and, following a presentation to veterinary science academics, has been used as a template for clinical placements in this area. While the RPP has been an apparent success in fulfilling its aims, there have undoubtedly been areas that could be strengthened. The need for academic support and presence was underestimated as the program developed. The need for consistent and accurate data collection from staff must be stressed; visible academic leadership would assist in this regard and this should influence the timing and location of student placements.
Can the RPP develop into a mandatory program?

The RPP will be a mandatory component of the BDent curriculum from 2004. This research will inform the structure, timing and location of the placements. It is important to review the basic aims of the RPP; the need to reconcile educational outcomes, service delivery, professional needs and experiential aims is important and this is discussed further in chapter 12.

Did the students meet other health students?

Those students who stayed in University or Hospital accommodation socialised with a range of health students including nursing, physiotherapy, pharmacy and medical students. Those who stayed in private accommodation, although having much more luxurious surroundings, did not meet other health students.

Did participants work in rural areas when they graduated?

114 of the participants in the RPP (90%) provided year one employment details. These data will also be considered, with data from non-participants, in Section 2 of this chapter. Table 41 summarises the year 1 employment locations for the RPP students and has been grouped according to ARIA classifications. As described in chapter 3, this classification categorises areas according to access to various services and groups these scores into ‘Very Accessible’ (VA), ‘Accessible’ (A), ‘Moderately Accessible’ (MA), ‘Remote’ (R) and ‘Very Remote’ (VR) (153). For the purposes of this research and clarity of reporting, “Rural” comprises areas categorised into the MA, R and VR groups.
In the table below, shaded cells indicate those students who attended the RPP and who subsequently worked in 'Rural' areas throughout Australia (areas \( >3.51 \) on map above). 'Accessible' (A) areas are represented by an ARIA value between 1.84 and 3.51.
Table 41: Year One employment locations for RPP attendees

<table>
<thead>
<tr>
<th></th>
<th>City: Teaching Hospital</th>
<th>City: Private Practice</th>
<th>Interstate: Rural+</th>
<th>NSW: Rural+</th>
<th>NSW: ‘A’ areas+</th>
<th>Overseas</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPP 2000 (n=20)</td>
<td>5 (25%)</td>
<td>6 (30%)</td>
<td>1 (5%)</td>
<td>7 (35%)</td>
<td>0</td>
<td>1 (5%)</td>
<td>0</td>
</tr>
<tr>
<td>RPP 2001 (n=28)</td>
<td>5 (18%)</td>
<td>10 (36%)</td>
<td>1 (3%)</td>
<td>7 (25%)</td>
<td>4</td>
<td>0</td>
<td>1 (3%)</td>
</tr>
<tr>
<td>RPP 2002 (n=32)</td>
<td>9 (28%)</td>
<td>10 (31%)</td>
<td>4 (13%)</td>
<td>7 (22%)</td>
<td>0</td>
<td>0</td>
<td>2 (6%)</td>
</tr>
<tr>
<td>RPP 2003 (n=48)</td>
<td>9 (19%)</td>
<td>24 (50%)</td>
<td>1 (2%)</td>
<td>10 (1%)</td>
<td>2</td>
<td>1 (2%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Whole cohort (n=128)</td>
<td>28 (22%)</td>
<td>50 (39%)</td>
<td>7 (6%)</td>
<td>31 (24%)</td>
<td>6</td>
<td>2 (1%)</td>
<td>4 (3%)</td>
</tr>
</tbody>
</table>

A total of 4 of the 128 RPP students (3%) could not be traced to determine their post graduation employment. Three students did not provide career interest scores and were therefore excluded. The study group therefore comprised 121 RPP students.

The career interest scores for these students are analysed and the results are tabulated below (Table 42).

---

* The Accessibility/Remoteness Index of Australia (ARIA) was used as a basis for the definition of rural. For the purposes of this project, 'Rural' comprises those areas defined as "Moderately Accessible", 'Rural' and 'Remote' (153). The 'Accessible' (A) areas were on the Eastern seaboard of NSW. Please also refer Figure 13.

* Four fourth year students participated in RPP 2000 and thus graduated in 2001. They are included in the 2001 data.
Table 42: Specific career interest score details for all students providing career interest scores and for whom year one employment location could be determined

<table>
<thead>
<tr>
<th>Pre-RPP score (n=121)</th>
<th>Number of students working in rural area</th>
<th>Number of students not working in rural area</th>
<th>Post-RPP score</th>
<th>Number of students working in rural area</th>
<th>Number of students not working in rural area</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>7</td>
<td>3</td>
<td>≥10</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>9 or higher</td>
<td>15</td>
<td>8</td>
<td>≥9</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>8 or higher</td>
<td>21</td>
<td>22</td>
<td>≥8</td>
<td>29</td>
<td>38</td>
</tr>
<tr>
<td>7 or higher</td>
<td>31</td>
<td>42</td>
<td>≥7</td>
<td>35</td>
<td>63</td>
</tr>
<tr>
<td>6 or higher</td>
<td>34</td>
<td>55</td>
<td>≥6</td>
<td>37</td>
<td>71</td>
</tr>
<tr>
<td>5 or higher</td>
<td>35</td>
<td>73</td>
<td>≥5</td>
<td>38</td>
<td>76</td>
</tr>
<tr>
<td>Under 5</td>
<td>3</td>
<td>10</td>
<td>Under 5</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>38</td>
<td>83</td>
<td>TOTAL</td>
<td>38</td>
<td>83</td>
</tr>
</tbody>
</table>

Constructing 2 x 2 tables allowed the chi squared test to be used to determine associations between pre- and post-placement scores and working in rural areas in year one. These results are shown in Table 43. It is apparent that a post-placement score under 5 is not associated with early rural practice although 3 students who recorded a pre-placement score of 5 did indeed chose rural employment. The program obviously resulted in an increased career interest score for these three students.
Table 43: Significance of associations between the value of pre- and post-placement scores and working in a rural area after graduating

<table>
<thead>
<tr>
<th>pre-RPP career interest scores</th>
<th>Observed percentage difference</th>
<th>x2</th>
<th>P</th>
<th>95% confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>40%</td>
<td>7.31; 1 df</td>
<td>0.007</td>
<td>12% to 71%</td>
</tr>
<tr>
<td>9 or higher</td>
<td>41%</td>
<td>15.07; 1 df</td>
<td>&lt;0.0001</td>
<td>19% to 62%</td>
</tr>
<tr>
<td>8 or higher</td>
<td>37%</td>
<td>9.41; 1 df</td>
<td>0.002</td>
<td>9% to 44%</td>
</tr>
<tr>
<td>7 or higher</td>
<td>27%</td>
<td>10.45; 1 df</td>
<td>&lt;0.0001</td>
<td>13% to 43%</td>
</tr>
<tr>
<td>6 or higher</td>
<td>25%</td>
<td>7.21; 1 df</td>
<td>0.007</td>
<td>11% to 41%</td>
</tr>
<tr>
<td>5 or higher</td>
<td>9%</td>
<td>0.46; 1 df</td>
<td>0.5</td>
<td>-16% to 34%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>post-RPP career interest scores</th>
<th>Observed percentage difference</th>
<th>x2</th>
<th>P</th>
<th>95% confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>46%</td>
<td>9.59; 1 df</td>
<td>&lt;0.0001</td>
<td>18% to 74%</td>
</tr>
<tr>
<td>9 or higher</td>
<td>25%</td>
<td>7.85; 1 df</td>
<td>0.005</td>
<td>7% to 43%</td>
</tr>
<tr>
<td>8 or higher</td>
<td>26%</td>
<td>9.83; 1 df</td>
<td>&lt;0.0001</td>
<td>12% to 42%</td>
</tr>
<tr>
<td>7 or higher</td>
<td>23%</td>
<td>4.44; 1 df</td>
<td>0.03</td>
<td>6% to 40%</td>
</tr>
<tr>
<td>6 or higher</td>
<td>27%</td>
<td>3.8; 1 df</td>
<td>0.05</td>
<td>10% to 42%</td>
</tr>
<tr>
<td>5 or higher</td>
<td>33%</td>
<td>3.4; 1 df</td>
<td>0.06</td>
<td>24% to 42%</td>
</tr>
</tbody>
</table>

There were 41% more students recording a pre-placement score of nine or higher who then worked in rural areas than those who recorded a pre-placement score of less than nine. This is highly significant ($x^2 =15.07; 1 df; P<0.0001$). The 95% confidence interval for the difference covered the range from 19% of those scoring nine and higher working in rural areas to 62% of those scoring nine and higher working in rural areas. There were 27% more students recording a pre-placement score of seven or higher who then worked in rural areas than those who recorded a pre-placement score of less than seven. This is also highly significant ($x^2 =10.45; 1 df; P<0.0001$). The 95% confidence interval for the difference covered the range from 13% of those scoring seven and higher working in rural areas to 43% of those scoring seven and higher working in rural areas.

On review of the post-placement scores, there were 46% more students recording a post-placement score of ten who then worked in rural areas than those who recorded a pre-placement score of less than ten. This is highly significant ($x^2 =9.59; 1 df; P<0.0001$). The 95% confidence interval for the difference covered the range from
18% of those scoring nine and higher working in rural areas to 74% of those scoring nine and higher working in rural areas. There were 26% more students recording a post-placement score of eight or higher who then worked in rural areas than those who recorded a post-placement score of less than eight. This is highly significant (x² = 9.83; 1 df; P < 0.0001). The 95% confidence interval for the difference covered the range from 12% of those scoring eight and higher working in rural areas to 42% of those scoring eight and higher working in rural areas.

This indicates that high career interest scores (9 and 10 before the placement and 10 after the placement) resulted in a significantly higher percentage of graduates working in rural areas. Generally, the higher the pre-placement career interest score, the higher percentage of graduates who worked in rural areas. The post-placement scores did not demonstrate this linear trend. Career interest scores for those students who did not attend the RPP were not collected.

In view of professional workforce needs (see Chapter 3), this information might inform student admission processes and this is discussed further in chapter 12.

**Can additional RPP clinical placements be developed?**

The existing Memoranda of Understanding and the accreditation criteria agreed by the Dental Board of NSW are applicable to any identified additional placement opportunities. As has been described in chapters 9 and 10, the major limitations to the development of new placements relate to the practicalities of providing adequate academic support for both staff and students involved with placements (pages 229, 268 and 328).

**What are the options for closer placements for mature students?**

There are numerous opportunities to work with colleagues in the Oral Health Branch and the Area Health Services in the Inner West and to the South of Sydney so that students unable to leave family may still participate in an extramural program. Such placements, while providing experience in a non-metropolitan location, could not be
labelled ‘Rural’ as this may lead to misconceptions by those students who have never left the city before. The students, who were based in Hunter Area Health Service in 2002 and 2003, spent the majority of their placements in the rural areas within the AHS and were able to differentiate between these areas and the Newcastle clinics. There was nevertheless concern that they were not having a ‘real’ rural experience.

It was interesting to note that students in 2003 who were offered closer placements in the Hunter AHS actually chose not to avail themselves of these placements. It is possible that students with family did not choose to apply for the RPP. The option of closer placements should be maintained for the more mature BDent cohort who will participate in mandatory placements (pages 236 and 328).

**Are longer placements achievable and/or desirable?**

While the RPP provides an overview of rural lifestyle and practice, the time constraints precluded full development of learning goals and contracts as mentioned above. Equally importantly, the level of patient care provided was limited by the range of experiences provided over a short period of time (pages 135, 179, 224 and 262). On completion of orientation and allowing for travel, students had a maximum of seven days to work in the Community Dental Clinics. The additional outreach, private practice and local orientation requirements further reduced this time and students noted that they would have liked to have more clinical experience (pages 139, 183, 227 and 265). This observation reiterates earlier comments that relate to the aims of mandatory placements and is discussed further in chapter 12.

**Is a Sydney-based orientation appropriate?**

The Sydney-based orientation held in 2003 had advantages. The students were able to attend the orientation as a larger group, the travel costs were minimised and additional academic support from Sydney-based colleagues was readily available. There were limitations to this orientation. The attendance rates and willingness to be involved with interviews and group discussions were disappointing and have been described. There was very little evidence of the camaraderie that characterised the group orientation in
Broken Hill. The size of this group (24) precluded individual support in the
development of self-assessment criteria with a low return rate of this element of the
program. The motivating factors listed by this group are discussed in chapter 10 and it
is possible that some students had no motivation to attend other than to have a holiday.
It is likely that when the RPP becomes a mandatory and assessable curriculum
component, attendance and compliance will improve. The need to evaluate a city-
based orientation in this context is apparent.

How many students should attend the RPP at one time?
In determining group size, it should be noted that the main limiting factor is the ability
to provide adequate academic and clinical support for all participants. The students
attending in 2000 and 2001 responded more favourably to all learning requirements.
They were more active participants in this research project than those who attended in
subsequent years. Additional considerations relate to availability of accommodation
and clinical opportunities. The local mentors provide much of the required daily
support and it is important that they are consulted about the number of places
available. Based upon this project, the smaller groups of 12 were supported at a higher
level as supported by the response rates quoted above; the group size did not have any
impact on student interest as demonstrated by career interest scores.

What were the outcomes for the RPP students from rural backgrounds?
Of the entire cohort who completed questionnaires (98%), seven students were from
rural backgrounds according to their home postcode location during primary and
secondary education (pages 126, 174, 221 and 258).

Of these seven, three (43%) were employed in rural areas after graduation. These three
students had career interest scores $\geq 8$ both before and after the program. The other
four students had career interest scores $< 8$ before and after the program. Table 44
compares these students with other participants in the RPP who were not from rural
backgrounds.
Table 44: 2 x 2 table summarising year one employment locations for RPP students from rural and non-rural backgrounds

<table>
<thead>
<tr>
<th>(n=124, data for four students missing)</th>
<th>Rural employment</th>
<th>Non-rural employment</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural background</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Non-rural background</td>
<td>36</td>
<td>81</td>
<td>117</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39</td>
<td>85</td>
<td>124</td>
</tr>
</tbody>
</table>

The small number of students from a rural background means that statistical analysis is limited however the odds ratio for this group is 1.69. Based on these small numbers students from rural backgrounds who attended the RPP were not significantly more likely to work in rural areas on graduating. This does not support the findings from other studies (137, 154-157, 160) and a meta-analysis of predictors for rural careers (160).

SECTION 2: COMPARISON OF RURAL PLACEMENT PROGRAM COHORT WITH NON-PARTICIPATING FINAL YEAR STUDENTS

Phase 2 of this thesis describes and evaluates the introduction of the RPP from qualitative and quantitative perspectives. The preceding section includes the outcomes of the RPP based upon the data obtained from participants. This section includes an analysis and comparison of the data from the entire RPP cohort with those students who did not participate. Early career choices for the majority of dental graduates have been determined and this provides useful information for all stakeholders in the RPP.

Study group for overall analysis

During the period 2000 to 2002, a total of 128 final year dental students participated in the RPP. The total number of students graduating from the Faculty of Dentistry over this time was 228. Those students who participated in the RPP therefore comprised 56% of the graduating students from 2000 to 2003.

Of the 228 graduates, it was possible to locate 214 (90%) and determine their year 1 career choice. Four RPP students and ten RPP students could not be traced through
public records. As many of the 128 RPP participants had maintained varying degrees of contact, email was used as an initial basis for data collection. The dental register, maintained by the Dental Board, and ADA records validated information and provide details of practice location for 114 dental graduates.

Year one career choice

Tables 45 a) - e) summarise the year one career choices made by each of the graduating cohorts and all of the graduates of the Faculty of Dentistry from 2000 to 2003. ARIA classifications have been used as described previously. Graduates working overseas have been included in the 'non rural' group. The outcomes and analyses therefore relate to those graduates who chose to work in 'Rural' (MA, R and VR) areas anywhere in Australia compared with those not working in 'Rural' areas.

Table 45a: 2 x 2 table to show year one career choice for dental graduates from 2000

<table>
<thead>
<tr>
<th></th>
<th>Working in 'Rural' area</th>
<th>Not working in 'Rural' area</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended RPP</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Did not attend RPP</td>
<td>7</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>TOTAL</td>
<td>15</td>
<td>35</td>
<td>50</td>
</tr>
</tbody>
</table>

A total of 15 students (30%) chose to work in rural areas on graduation. 16% more RPP students worked in rural areas than non-RPP students. The odds ratio was 2.19 however the chi-squared test confirmed that this result was not statistically significant ($x^2 = 1.587; 1\text{df}; P=0.21$). The 95% confidence interval for the difference covered the range from 9% more rural employees in the non RPP group to 43% more rural employees in the RPP group.
Table 45b: 2 x 2 table to show year one career choice for dental graduates from 2001

<table>
<thead>
<tr>
<th>(n=52, four missing values for three non-RPP and one RPP students)</th>
<th>Working in ‘Rural’ area</th>
<th>Not working in ‘Rural’ area</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended RPP</td>
<td>8</td>
<td>19</td>
<td>27</td>
</tr>
<tr>
<td>Did not attend RPP</td>
<td>9</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>TOTAL</td>
<td>17</td>
<td>35</td>
<td>52</td>
</tr>
</tbody>
</table>

A total of 17 (33%) students chose to work in rural areas on graduation. This proportion is similar to that of graduates in the 2000 graduating group (30%). 30% of RPP students were working in rural areas and 36% of non-RPP students were working in rural areas. The odds ratio for this group was less than one (0.75). The RPP did not have a statistically significant effect ($x^2 = 0.239; 1df; P=0.62$) on the 2001 cohort compared to those who did not attend. The 95% confidence interval for the difference covered the range from 31% more rural employees in the non RPP group to 19% more rural employees in the RPP group.

Table 45c: 2 x 2 table to show year one career choice for dental graduates from 2002

<table>
<thead>
<tr>
<th>(n=53, six missing values for two RPP and four non-RPP students)</th>
<th>Working in ‘Rural’ area</th>
<th>Not working in ‘Rural’ area</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended RPP</td>
<td>11</td>
<td>19</td>
<td>30</td>
</tr>
<tr>
<td>Did not attend RPP</td>
<td>9</td>
<td>14</td>
<td>23</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
<td>33</td>
<td>53</td>
</tr>
</tbody>
</table>

A total of 20 (38%) students chose to work in rural areas on graduation. This is a similar proportion of graduates to the 2000 and 2001 graduates (30% and 33% respectively). 36% of RPP students were working in rural areas and 39% of non-RPP students were working in rural areas. Again, the odds ratio for this group was less than
one (0.9). The RPP did not have a statistically significant effect ($x^2 = 0.033; 1$ df; $P=0.85$) on the 2002 cohort compared to those who did not attend. The 95% confidence interval for the difference covered the range from 28% more rural employees in the non-RPP group to 23% more rural employees in the RPP group.

Table 45d: 2 x 2 table to show year one career choice for dental graduates from 2003

<table>
<thead>
<tr>
<th></th>
<th>Working in ‘Rural’ area</th>
<th>Not working in ‘Rural’ area</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended RPP</td>
<td>12</td>
<td>35</td>
<td>47</td>
</tr>
<tr>
<td>Did not attend</td>
<td>1</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>RPP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>13</td>
<td>46</td>
<td>59</td>
</tr>
</tbody>
</table>

A total of 13 (22%) students chose to work in rural areas on graduation. This is a lower proportion of graduates than the 2000, 2001 and 2002 graduates (30%, 33% and 38% respectively). 25% of RPP students were working in rural areas and 8% of non-RPP students were working in rural areas; 17% more RPP students worked in rural areas than non-RPP students. The odds ratio for this group was 3.77. These percentages were not statistically significant ($x^2 = 1.646; 1$ df; $P=0.2$) for the 2003 RPP cohort compared to those who did not attend. The 95% confidence interval for the difference covered the range from 9% more rural employees in the non-RPP group to 43% more rural employees in the RPP group.

Table 45e: 2 x 2 table to show year one career choice for all dental graduates from 2000 to 2003

<table>
<thead>
<tr>
<th></th>
<th>Working in ‘Rural’ area</th>
<th>Not working in ‘Rural’ area</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended RPP</td>
<td>39</td>
<td>85</td>
<td>124</td>
</tr>
<tr>
<td>Did not attend</td>
<td>26</td>
<td>64</td>
<td>90</td>
</tr>
<tr>
<td>RPP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>65</td>
<td>149</td>
<td>214</td>
</tr>
</tbody>
</table>
30% of the entire cohort worked in rural areas immediately after graduating. 31% of all RPP students were working in rural areas and 29% of non-RPP students were working in rural areas. The odds ratio for this group was 1.13; this is not significant. The 2% percentage difference was highly statistically significant ($x^2 = 24.12; 1\text{ df}; P<0.0001$) for the 2003 RPP cohort compared to those who did not attend. The 95% confidence interval for the difference covered the range from 9% more rural workers in the non-RPP group to 14% more rural employees in the RPP group. This confirms that over the entire group, there was no significant difference in rural year one employment for RPP and non-RPP students.

**Implications**

While the RPP had a statistically significant impact on the career interest scores of the 2001, 2003 and whole cohorts (pages 177, 261 and 277), this did not result in a statistically significant impact on year one career decision for any of the groups or the entire RPP cohort. It is important to note while the effect on the entire group is not significant, the program undoubtedly influenced several students at an individual level (pages 130, 177, 223 and 261).

The average percentage of new graduates from 2000 to 2003 who chose to work in rural areas during their first year of employment was 30%. If there are 64 graduates from the Faculty each year, this is likely to result in approximately 20 graduates working in rural areas on an annual basis. There are no graduate destination data available prior to 2000 against which to make a comparison. It is possible that the introduction of the RPP and the fact that most participants would recommend rural practice to colleagues had an impact on all of the students. A survey of those graduates who chose ‘rural’ employment in year 1 may provide valuable information on their career decision making and the potential influence, whether direct or indirect, of the RPP. The effect of the RPP on career decision making in subsequent years would also be worthy of future investigation. Over the entire cohort, 18% of graduates chose to work in a teaching hospital environment. It is possible that the introduction of similarly
supported year one experience in regional and rural areas may be of greater attraction to new graduates.
CHAPTER 12

CONCLUSIONS AND RECOMMENDATIONS

The 128 students who participated in the RPP were placed in a total of nine Area Health Services accredited by the Dental Board of NSW. The students were based in eleven community dental clinics and provided additional clinical services on an outreach basis.

The RPP was developed and implemented by an academic coordinator, supported by twelve local coordinators, twenty six clinical mentors and over one hundred additional staff. Many of these staff had ongoing involvement from 2000 to 2003.

Stakeholders in the RPP were the Faculty of Dentistry, ADA NSW, the UDRH at Lismore and Broken Hill, the Oral Health Branch of NSW Health and the Dental Board of NSW. ADA NSW provided over $25,000 to support travel bursaries and the Oral Health Branch provided additional local support.

The original aims of the RPP were achieved. The program provided a student-centred experiential learning opportunity, contributed to clinical care for local residents and resulted in positive attitudes to rural lifestyle and dental practice.

Using an action research methodology with triangulation of qualitative and quantitative methods, additional research questions were generated throughout the study and an overall analysis has been provided. This provides future direction for research associated with rural placements and opportunities for collaboration with stakeholders to investigate other recruitment and retention strategies.

This chapter summarises the findings from the research in five separate sections. Recommendations are made in each section and are summarised at the end of this chapter.
EXPERIENTIAL LEARNING

Practical considerations

The strengths and limitations of the RPP have been described. Based on personal reflections, student and staff feedback the program was undoubtedly student-centred however total commitment to providing such an opportunity over a two-week period was demanding for both staff and students.

Program structure

The balance and structure of the program was recognised with students appreciating the range of experiences provided for them. Location-specific limitations were reported. These were due to either local mentor’s interpretation of the aims of the program or the unavailability of various opportunities. An example of the latter was the students’ desire to work with the RFDS dentist when such opportunities are only available at Broken Hill. Within very broad guidelines, local mentors were encouraged to develop programs that optimised existing clinical opportunities. While the program structure differed at the various locations, an opportunity to share the various learning experiences was provided at the post-placement briefing. The attendance at these sessions was variable.

The introduction of mandatory placements necessitates consideration of a more ‘standardised’ experience, particularly if the clinical care provided during the program is an integral element of clinical experience and assessment. The RPP has successfully provided students with a brief exposure to rural lifestyle and practice and if this continues to be the primary aim, variable program structures will not be detrimental. Independent of future directions and based on outcomes from 2002 and 2003, basic program structure guidelines that define specific program elements, should be provided to mentors.
Pre-placement briefing

As described, the aims of these sessions varied according to the program structure and were achieved to a varying extent dependent upon the numbers of students attending. Considerable time was spent addressing the practical concerns despite the students having been provided with a comprehensive handbook and the opportunity to email the coordinator with such concerns. As the BDent students will be fully conversant with the use of Information Technology and will be used to receiving and providing web-based information, it is anticipated that this element of the pre-placement briefing will be significantly reduced. It is recommended that the handbook is available through the BDent website and that the RPP coordinator is available through an electronic forum.

Reflection on previous learning and attitudes was included in the session in 2000 and 2002 when reflective statements were a requirement of the program. In 2001 and 2003 there was insufficient time to include this element however the acknowledged value of pre-experiential reflection for subsequent learning indicates that this element should be a component of the pre-placement briefing.

As the students were required to develop individual learning contracts and self-assessment criteria this required unanticipated levels of academic support. While students were able to develop learning themes, academic support was required to develop these into learning contracts. The BDS students were generally unfamiliar with the concepts and practicalities of self-assessment. It is expected that the BDent students will have worked with learning contracts and have existing self-assessment skills. This is likely to decrease the requirement for academic support. Learning contracts and self-assessment are considered further below.

The motivating factors for student participation were highly consistent and in alignment with individual learning goals. These were used to establish core components of the orientation program. In light of mandatory participation and based upon co-researcher input into this study, this element will not be required in future pre-placement briefings.
Two week placement

The RPP structure was developed with specific reference to students’ identified goals and motivating factors. The orientation program components, range of experiences and opportunity to provide clinical care were designed to be in alignment with these goals. This student-centred structure and the consequent experiential learning opportunities, should be maintained however it is important to consider the primary role of the RPP. Of the three original RPP aims, the development and implementation of a student-centred experiential learning experience should now be considered as an RPP objective.

The RPP aims therefore become twofold; to develop a positive attitude to rural lifestyle and dental practice, and to contribute to dental care for rural residents. As the RPP is a two-week program with a maximum of seven working days available for clinical care and mindful of the findings from this study that indicate the major strength of the program was the exposure to rural lifestyle and practice, it is recommended that the latter becomes the primary focus for the mandatory RPP. Obviously this does not preclude clinical experience during the RPP; opportunities for additional clinical experience were clearly identified as student goals and have implications for stakeholder involvement.

Opportunities to develop additional optional rural experience, with clinical experience as a primary aim, should be investigated. Many students referred to the possibility of longer placements and noted that the development of learning contracts and goals was limited by their lack of prior rural experience. Initial investigative experiential placements would facilitate the development of rigorous learning contracts with the opportunity for longitudinal research projects based in rural locations.

Orientation

Orientation programs held at the UDRH at Broken Hill were more successful than those held in either Sydney (2003) or in Port Macquarie (2002). Camaraderie and peer support for learning were evident with students resident in the orientation location. In
addition, the academic support provided by the multi-disciplinary staff at the UDRH ensured that all planned elements of the orientation took place. The ability to develop learning contracts and self-assessment with individual students on an ad hoc basis was a strength; academic support was provided before breakfast, during lunch breaks and while transporting students around Broken Hill.

Modifications to the learning and assessment elements (see below) would mean that this level of academic support would no longer be required and this might support larger group orientation at a central location. This would also undoubtedly decrease program expenses.

If orientation were to be centralised, potentially in Sydney, this would reduce the time commitment made by academic and professional colleagues who facilitate the various orientation components. The input from the UDRH staff would be limited although additional learning sessions could be arranged for those students subsequently based at Broken Hill. In this situation, orientation could then be provided on a whole-group or smaller group basis. If the former, this would need to take place at the beginning of the year to ensure that all students participated prior to their placements. Students attending the RPP later in the year may have limited recollection of an early-year orientation and this would favour smaller group orientation just prior to the clinical placement. In either case, the length of the clinical placements would be increased.

From a practical perspective central orientation has significant merits however the RPP experiences to date have indicated that those students attending the orientation at Broken Hill have benefited from the larger group size in terms of peer support. The sense of camaraderie and adventure had a significant impact on several students who, by their own admission, had spent little time with student colleagues prior to the RPP.

From a personal perspective, the immeasurable support provided by the staff at the UDRH was invaluable in program administration, organisation and delivery. The commitment to rural dentistry was integral to associated research and political endeavours.
The content of the orientation will be determined by the learning and assessment requirements however the program should include cross-cultural awareness, the ADANSW Risk Management session, Area in Context and Oral Health issues in rural and remote areas. The orientation also provides scope to include additional curriculum competencies according to need and applicability. The coordinator should liaise with the Associate Dean (Curriculum) to develop problem-based learning opportunities to achieve these competencies.

The RPP orientation included social elements and it was apparent that students attending orientation outside Sydney participated in, and enjoyed, the social program. The majority of students referred to their enjoyment of the RPP and the social elements are likely to have been influential. As the aim of the RPP is to support the development of positive attitudes to rural lifestyle, social elements remain a key component. This is a central role for the UDRH at Broken Hill who have a full-time student coordinator to assist in the provision of such opportunities.

It is therefore recommended that the RPP in 2004 provide an opportunity to evaluate the two different approaches to orientation. Providing half of the BDent cohort with a Broken Hill based orientation and half with a city-based orientation would allow evaluation of costs, benefits and outcomes.

Clinical placements
As described above, broad guidelines for program development were provided to local mentors. Mentors were encouraged to develop and submit proposed clinical rosters for coordinator input. This was achieved in 2000 and 2001 as the program was smaller and the level of academic involvement higher. The coordinator amended rosters to optimise clinical experience and minimise non-clinical time.

In 2002, some of the mentors were unable to finalise and send rosters to me prior to the placements. This led to a wider variation in experience than had been anticipated. In an
attempt to address this in 2003, mentors were provided with a ‘roles and responsibilities’ document that defined timing requirements. Despite this, two mentors did not supply draft rosters and again, the program structure was varied. It transpired that one of the mentors had been inundated with offers of support from local dentists and had arranged practice visits with all of these dentists. All of the students attending these placements indicated that they would have liked more clinical experience and less observation. Another mentor had not pursued contacts with the local profession and as a consequence the students did not visit any practices.

Independent of considerations of program aims, it is recommended that mentors be provided with a ‘roster template’ to indicate desired program structure with an indication of the amount of clinical experience desired. It should be remembered that each mentor has different resources (infrastructure, support personnel and clinical supervisors) available and that this will have an impact on clinical rostering. It is recommended that an agreement be established with the OHB and the local mentors to ensure that minimum clinical session numbers are attained. This would require an acceptance that OOS for the duration of the program may decrease (see below). If clinical experience remains a primary aim for the RPP, the number of clinical sessions expected may be higher than if this becomes a secondary aim (see above).

There were no staff or student concerns about clinical supervision and it is therefore assumed that the terms of the MOU and the level of staff support provided were adequate. This should be maintained and all staff involved should be aware of supervisory requirements.

**Post-placement briefing**

The attendance at these sessions was variable. There was no discussion of ‘critical incidents’ although students enthusiastically discussed their positive experiences from the RPP. This information has been quoted elsewhere in this research. As described in chapter 2 the BDent students will participate in a conference week at the end of Year 4. Students will be required to present their research and to report on experiences from
their elective and rural placements. Reflection on these experiences will facilitate shared learning and will provide an opportunity for discussion of career paths and issues of professional development. This will fulfil the aim of the current post-placement briefing session. It is recommended that students submit learning and assessment elements electronically thus obviating the need for this post-placement session.

**Placement locations**

All of the mentors at the existing clinical placement locations have indicated their ongoing support for the program. The need to accommodate 64 students on mandatory placements and on a continuing basis requires careful consideration. This is compounded in 2004 by the need to provide elective RPP opportunities for final year BDS students. It is also important to avoid placing excessive demands on mentors and host clinics.

It is therefore suggested that in 2004, two placement options are provided for BDent students. Placement 1 would be based in Broken Hill with students attending clinical placements in Broken Hill, Dubbo and Orange. Placement 2 would comprise a Sydney orientation with students subsequently attending clinical placements in the Northern Oral Health Network. Students wishing to stay close to Sydney would be accommodated in the Hunter AHS and in newly established locations. Independent of any decision to introduce longer elective rural placements, additional placement locations will need to be identified for those students unable to leave family for two weeks. Such opportunities may exist within the Greater Sydney area. The criteria for placement in closer locations will need to be defined.

Placements 1 and 2 would be offered at different times during the year. BDS students could be offered placements in Broken Hill, Albury and Queanbeyan during the four-week inter semester break. This would provide up to 28 placements. Orientation for this entire group would be in Sydney. Additional placements could be developed to increase the number of BDS places.
If the recommendation for mandatory rural placements followed by extended elective rural placements is accepted, consultation with mentors at the existing clinical placement locations should be initiated to determine the viability of both short and long placements in their areas. With the support of the Oral Health Branch, additional locations could be developed as described in chapter 11.

Participants

All final year students will be required to attend the RPP. If longer additional rural placements are developed, the number of places available will need to be determined mindful of local mentors and service provision requirements in the teaching hospitals.

Timing

While 2004 provides a unique challenge in accommodating two final year cohorts, the timing of the RPP is dependent on several factors. Students attending the RPP will obviously not be able to provide clinical care at the teaching hospitals; if all of the students attend the program en bloc there will be clinical care implications. While there are two groups of final year students there will undoubtedly be pressure on the existing teaching hospital infrastructure. The opportunity to rotate students to extramural facilities will ease this pressure.

The level of clinical expertise is likely to vary within the final year cohort. While many students will have the skills and expertise to provide care in a rural setting, other students may benefit from additional experience in the teaching hospital environment.

Simultaneous placement of all final year students would place considerable pressure on the RPP coordinator. The level of personal support would be greatly diminished. Based on the experiences in 2004, this could result in decreased support from RPP staff and decreased compliance from students. The latter could by addressed through learning and assessment requirements.
It is recommended that the RPP be staggered with four placements spread over the final year. With a maximum student cohort of 64, up to 16 students would attend each placement. Placements 1 and 2 would be alternated to avoid excessive demands on rural mentors. Each location would therefore have 4-5 students present for a maximum of four weeks per year (under four weeks for the Placement 1 students who would have orientation in Broken Hill). Students would indicate their placement preference and finalise this in consultation with their academic mentors in the teaching hospitals.

**Academic support**

Currently, the academic appointment of the RPP coordinator is at Senior Lecturer level on a 0.4 Full Time Equivalent (FTE) basis and is jointly funded by the Faculties of Medicine, through the UDRH at Broken Hill, and Dentistry. Appointment at this level has intrinsic research, service and administration requirements, particularly for academic career advancement.

The level of academic support required throughout the RPP is high, as participating students require considerable input into learning and assessment requirements. Rationalisation of these components would ease the academic burden. Facilitation of orientation components during the program is also required. The larger numbers of students and placements associated with the RPP 2003 demonstrated that large numbers of students in diverse locations resulted in sub-optimal levels of support. Staggered placements would address this issue.

The initial development and subsequent revision of the RPP required considerable administrative effort. As noted throughout this thesis, considerable time was spent travelling between the various locations. Electronic communication and teleconferencing assisted with staff support however those mentors who received personal, face-to-face support had a greater appreciation of the RPP. While some travel expenses were provided by the UDRH at Broken Hill, a large proportion of the RPP associated expenses were borne by the coordinator. It is recommended that all travel
and communication expenses are provided and that this should be negotiated between the Faculties.

Fractional appointment has considerable advantages in terms of employment diversity, career flexibility, personal development and income generation, and more generally, the benefits offered by university employment. The nature of this academic appointment does however require sufficient flexibility that the coordinator can spend blocks of time on site.

With four two-week placements and the associated administrative load, and more particularly, the pressure of two cohorts in 2004, the need for decreased research and/or service requirements should be considered. If longer rural placements are developed, it is likely that a full time rural academic would be required. Full time employment would allow sufficient time for all academic commitments and would therefore have greater appeal for an academic seeking career advancement.

**Information Technology**

There was a low level of use of electronic communication during the RPP. It is expected that the BDent students, who have participated in web-based education throughout their degree program, will have higher levels of participation. The use of web-based forums to contribute to group discussion and evaluation is also likely to be higher and should be promoted to the students. As mentioned above, the ability to submit learning and assessment elements electronically should also be investigated.

While videoconferencing provides the possibility for rural orientation on site, this technology was not readily available at all clinical sites during this study. As the technology becomes more reliable, it is feasible that all students could travel to clinical locations and participate in orientation and problem-based learning via this medium. This would be particularly beneficial if longer rural placements were developed; students on placement would be able to participate in all teaching hospital based curriculum elements. It is also likely that videoconferencing would reduce the
requirement for site visits for academic support and it is recommended that this option be pursued.

**Student learning**

The RPP allowed the opportunity to use various student-centred learning and assessment tools.

Reflective statements provided considerable insight into personal construct and there was a high level of response to this element. It was suggested that students should maintain a ‘learning journal’ to support the compilation of the statements and several of these were submitted in 2000. While journals were advocated to subsequent groups, the level of emphasis was far less than in 2000. All students were aware that these journals were confidential and were for personal learning benefit. The number of students using journals therefore cannot be determined. From a personal perspective, the use of a journal from 2000 has allowed me to review and reflect on incidents that I could not even remember! The journal has also allowed me to reflect on my personal and professional growth as a researcher. This is discussed further below. It is recommended that students be required to submit reflective statements in fulfilment of PPD requirements (see chapter 2). Despite the lack of objective evaluative tools for such statements, evidence of reflection, attribution of meaning and evidence of ongoing learning are evidence for desired graduate outcomes.

At various times, and as described in Phase 2, ‘learning outcomes’, ‘learning goals’ and ‘learning contracts’ were included within the RPP structure. While there were reported student benefits to each of these, the variable response rates and the annually changing requirements preclude definitive conclusions as to which element was most effective in promoting learning. It is apparent that the RPP experience itself was of immense learning value to the students and it is arguable that this learning would have occurred independent of the selected learning strategy. Fulfilment of learning contracts undoubtedly provides opportunity to objectively assess the student. There was an eclectic group of learning contracts defined by RPP students; these were constructed
with reference to personal goals and showed considerable diversity in content area and depth. If completion of a learning contract is used as an assessment tool, there will need to be guidelines for such contracts. Mindful that the program is relatively short and the support levels required are high, there is potential to develop a list of learning contracts for students to choose from. This strategy might assist future research into rural placements and may also provide a structure for other areas of rural research. This may also provide opportunity to focus student learning onto oral health issues affecting rural and remote communities.

**Student assessment**

As an integrated and mandatory curriculum component, there is a need for academic rigour with regard to assessment of the RPP. Any strategy must be in alignment with University and Faculty assessment principles (see chapter 2) and should also be aligned with the curriculum objectives.

With the primary aim of having a positive impact on perceptions of rural lifestyle and practice, the RPP clearly lies within the PPD theme. Elements of the program also lie within the D&C theme and there is potential for an increased D&C component based on the comments relating to learning contracts above. LS and TPC theme content could also be included within a problem-based approach however it is recommended that the primary thematic domain for this assessment is PPD. If longer placements are developed then opportunities exist to include TPC and clinical competency assessment methods.

The lack of objective criteria to assess personal writing has been discussed. It is therefore recommended that the RPP assessment be non-graded and summative for PPD (see later)

The value of self-assessment has been considered at length and with reference to the literature (see chapter 3). The students also acknowledged the value of this assessment and generally, despite the voluntary nature of the program, response rates were high.
As the BDS students had scant knowledge of self-assessment, considerable support was required to develop areas and criteria for assessment. While the BDent students are likely to be more conversant with this strategy, the current structure still requires students to determine the areas in which they wish to assess themselves and then develop appropriate criteria for this assessment. Inclusion of the RPP within the PPD theme provides structure for both of these elements and it is likely that an existing self-assessment strategy can be modified for use in the RPP. It is therefore recommended that existing self-assessment methods used in the PPD theme are reviewed and amended as required for use in the RPP.

Peer assessment was used in the RPP 2000. Half of the students selected this method and reported that they had found this a difficult and unreliable method to use. As there was intensive academic support required and in view of the additional academic burden imposed by mandatory placements, it is recommended that peer assessment is not included in the RPP.

Several students commented that the ability to provide clinical care without formal assessment assisted their learning in this environment. In 2003, clinical supervisor assessment was included as an element of the program and there was a high level of compliance with this. Some students sought assessment from all staff involved and others selected mentor assessment only. During subsequent discussions, it appeared that external assessment was used for personal validation. This is difficult to substantiate however as fewer students returned self-assessments than staff assessments. It is recommended that students be encouraged to obtain oral feedback from staff and reflect on this, in conjunction with their self-assessment, in their reflective statements.

Based on these observations it is therefore recommended that the RPP be summatively assessed within the PPD theme in a non-graded fashion. Successful completion of the RPP would require students to submit as a minimum, a

a) reflective statement (with reference to staff feedback), and
b) self-assessment.
Depending upon the introduction of additional problem-based learning, there is an option to use learning contracts although this will require further consideration as described above.

Students failing to submit either or both of these requirements would be required to complete an additional PPD assessment requirement as decided by the Theme Head.

**Program evaluation**

Many of the evaluative tools used during the RPP were designed to serve the dual function as research tools. Individual and group interviews were originally designed for research purposes only but as has been discussed elsewhere, the relationships between fourth generation evaluation, qualitative research methods in the context of action research and action learning are symbiotic. While this research concludes with the 2003 cohort there is considerable scope for the RPP research to continue. Areas for future research are considered later in this chapter. If research into this program is to continue, it is recommended that evaluation tools include the same measure of career interest as used in this study. As a minimum, investigations into perceptions of advantages and limitations of rural careers would also inform stakeholders and future professional initiatives although the method for collecting this data might be improved (see later).

Mindful of the Faculty's decision to develop evaluative tools that consider both outcomes and delivery, an appropriate open and closed response questionnaire should be made available on the BDent website through a rural bulletin board. A brief pre-placement questionnaire would facilitate ongoing research as discussed above. Both forms should be submitted electronically. The use of the website for submission of evaluation data and immediate feedback has been highly successful and this facility will be used for RPP feedback from 2004.
The role of the stakeholders has been discussed in Phase 2 and ongoing evaluation of the ADANSW Risk Management session will be required. In order that this is tailored to the needs of ADANSW, it is recommended that this discrete evaluation be administered on completion of the session. If longer placements are developed, it may be pertinent to request feedback in the form of a modified Student Experience Questionnaire to determine approaches to learning during the RPP (see later). While this tool would also be valid for the shorter RPP, it is important that students are not subjected to excessive evaluation processes. Use of the Student Experience Questionnaire with specific additional open response items is worthy of consideration and investigation of this option is recommended.

**Professional collaboration**

The role and importance of the various stakeholders has been discussed. The need for ongoing collaboration and reporting is apparent. As the RPP involves more students and if longer placements are developed, additional support from both existing and additional stakeholders will be required. Program costs could be minimised with central orientation and as suggested above, this option should be pursued.

Should further clinical locations be identified, support from the Dental Board will be required for accreditation purposes. It has been suggested that students could provide clinical care for public sector patients under the Oral Health Fee for Service scheme; this provides authority for the provision of care in private practice. The lack of professional practice accreditation processes means that accreditation by the Board would be problematic, however as professional accreditation evolves, this may become possible in the future.

There is a national and state precedent for supporting rural placements for health students; despite repeated attempts from 2000 to 2003, support for dental students has not been forthcoming. It is recommended that attempts to garner national and state funding for the RPP continue. The central funding provided by the Oral Health Branch provides $8,000 for local costs. This equates to $125 for each of the 64 students. As
noted by the Network Manager in 2002, the approximate cost to the Network for each student was $450. There is obviously a need to request additional funding to cover the additional student places. In addition the existing MOU with the various Area Health Services expire in 2005 and will require re-establishment. Should additional placements be developed, new MOU will be required.

It was apparent during the RPP, particularly in 2003, that the students considered the range of clinical service provided within the public sector to be limited. This information has direct relevance to the Oral Health Branch as it develops recruitment and retention strategies (see below).

The existing level of funding provided by ADANSW and GIFS will provide an average of almost $400 for each of the ultimate cohort of 64 students. As travel costs vary according to destination, it is recommended that the travel bursaries be allocated to each student according to the cost of public transport to their destination. The students may then choose to pool this money and travel by private vehicle. At the time of writing an MOU to this effect, between the Faculty and the ADANSW, is under consideration.

The outcomes of this research support the need for further research and the development of additional recruitment and retention strategies. The dental workforce issues affecting rural communities have been documented in chapter 3. More recently, a report from the Dental Statistics Research Unit at Adelaide has estimated that in order to address projected dental workforce needs, each dental school needs to increase its number of graduates by 25 per year (215). While this may provide the number of dentists required, it is important that strategies to recruit and retain dentists in the rural, and especially public sector, workforce. The report also confirmed the existing differences between metropolitan and rural areas.

In 2002 (152) there were 47 dentists resident and practising in 'Moderately Accessible' (MA), 'Remote' (R) or 'Very Remote' (VR) communities (153). The majority of these dentists had graduated more than 20 years ago and 46 were male. 19 of this group
(40%) responded to a questionnaire and of these 18 (95%) indicated that they planned to retire or leave their rural practice within the following five years. As described, it was anticipated that the RPP would assist in efforts to recruit new graduates to rural areas.

While the program had a significant effect on rural career interest scores, there was no significant difference in the percentage of the participating students who worked in rural areas in year one of employment compared with those who did not participate in the program. On average from 2000 to 2003, 30% of each year chose to work in rural areas throughout Australia in the first year of employment; this equates to approximately 19 graduates per year. If all of these graduates chose to work in rural NSW, this would maintain the status quo however it would not provide sufficient numbers for the predicted increased workforce needs.

Any increase in recruitment is therefore significant. In light of this and despite the statistics for the entire RPP cohort, the program undoubtedly led to at least six participants choosing to work in rural areas. Personal email messages attest to the influence that the RPP had on their decision-making. However, based on reported outcomes, the RPP in itself will not address the current and predicted rural workforce issues. Other schemes such as student scholarships and bonding should be considered.

This study considered the year one career choices made by all final year graduates. As the RPP made a significant difference to career interest scores, a longitudinal study of all RPP participants is warranted to determine whether there is any significant impact on later career choice.

The advantages and limitations of a rural career, as documented by the RPP students, provide insight into barriers to recruitment (see chapter 11). It is recommended that strategies to both maximize the perceived advantages and/or minimise the perceived limitations be developed in collaboration with stakeholders. Such strategies might include a targeted promotion campaign to new and recent graduates that focuses on the rural lifestyle, range of clinical experience and the associated community spirit. Either
direct or indirect, for example through student loans, financial enhancement might be offered to offset costs associated with visiting family and friends. Strengthening professional support may also assist and, as a consequence of the RHSET project (152), this is an initiative being developed by the ADA, in the form of a Rural Dentists Network. As many of the perceived advantages and limitations are specific to individuals, the provision of individual mentoring and practical support may also be of assistance. As many new graduates (average of 22% over the whole RPP cohort) chose to spend their first year in the supportive teaching hospital environment, strategies such as Vocational Training in both rural and metropolitan areas would assist in recruitment and thus allow a focus on the development of individual retention strategies and packages.

Provision of clinical care

While the RPP students provided clinical care for residents, the amount of clinical experience obtained was varied. There were no reported adverse clinical incidents and patients were reportedly pleased with the clinical care that the students provided. Staff feedback was positive with reference to their professionalism, communication and clinical skills. In its current format, the RPP provides a maximum of seven days for students to provide clinical care. Realistically, this is unlikely to make a significant difference to clinical output unless vacant facilities exist. As mentioned above, it is recommended that mentors be provided with an indication of minimal clinical experience required. As has also been previously recommended, clinical experience should be considered a secondary aim for the RPP and longer additional elective placements, with a major focus on clinical care, should be developed. Some students commented that the range of clinical experience obtained was limited. This is not considered to be a significant issue for the RPP however if longer placements are developed, the range of clinical experience obtained will require greater scrutiny.

A major deficiency of this study (see below) was the inability to determine exact records of treatment provided on which to determine clinical output during the RPP compared with usual clinical output. During the RPP it became apparent that there was
little motivation for either the staff or the students to maintain accurate statistical records. Additional academic support and guidance is required. The available evidence would suggest that there is little difference between the Occasions Of Service (OOS) provided during the RPP. This is consistent with rural placement experience in South Australia [Richards, 2002 #22].

The Information System for Oral Health (ISOH) has this capacity however compliance with the request for such data was limited. As students are familiar with this system it is difficult to explain why the data was not consistently collected. Additional staff support is required in this area to develop accurate accountability. It is highly recommended that a consistent approach to the recording and reporting of OOS data is developed and implemented.

RESEARCH CRITIQUE

The decision to use an action research methodology and both qualitative and quantitative methods was valid. While the statistical analysis in chapter 11 provides an oversight into the outcomes of this study, the thesis is enriched by the qualitative data provided by co-researchers. The action research methodology allowed the research aims and methods to be continually revised based on the outcomes of the previous research cycles.

This cohort study included all RPP participants but did not include any data from non-participants. The research would have been enriched by collecting data from non-participants specifically with regard to rural background, perceived advantages and limitations of rural careers, and rural career interest scores. Statistical analysis of participant career choice indicated that an average of 30% of participants selected rural practice on graduation. The ability to determine year one career details for non-participants from public records and personal contacts, has demonstrated that there is no significant difference in career choice between the two groups. The need for a longitudinal study of graduate career destinations is apparent as the RPP may have an impact on later career choice.
The only variable considered in the analysis of the two groups was participation in the RPP. There are numerous other factors that contribute to career decision-making and using the non-participants as a control group is therefore flawed. Ideally, the final year student group would have been randomly allocated to attend the RPP. As the aim of the voluntary RPP was to provide as many students as possible with the opportunity to participate, this was not considered to be an option.

The student-centred program was developed in alignment with BDent curriculum goals (see chapter 2). It would have been interesting to investigate the outcomes from a traditional, didactic program to determine whether the student-centred program was of greater significance, particularly in terms of supporting the development of positive attitudes to rural lifestyle and dental practice.

Ethical requirements meant that students' failure to participate was not questioned and those who did not respond were not subject to any prejudice. As several of the research methods were also educational requirements of the program, this meant that submission of these elements was not enforceable. As the students were aware of this it resulted in a minority of students who attended the RPP 2003, failing to comply with any of the required educational elements. This could have been addressed by clearly differentiating between research methods and educational elements however the amount of qualitative data available would have been reduced.

Action Research requires involvement of the chief researcher and as a consequence, I was personally involved with all elements of the RPP. As a participant, the researcher is unable to be 'objective' and the co-researchers had full awareness of my role. This may have led to bias during data collection. As I had initiated the RPP concept, was involved in program delivery and was also researching outcomes, it was not difficult for students to determine my commitment to the program. Strong personal relationships and empathy were established during the program and it is possible that students recorded increased levels of interest and provided positive comments, in an attempt to respond in the way that I wanted them to. This might be countered by
evidence from the 2003 cohort, with whom I spent considerably less time, but on whom the program had a significant effect (chapter 11).

Time constraints and the end of my employment contract meant that I was not able to obtain the same amount of information from stakeholders and co-researchers after the RPP 2003. This was a limitation of this research although it had originally been anticipated that the research would encompass the RPP from 2000 to 2002. The addition of data from 2003 has supported the findings from previous years and more importantly, has provided valuable input to the recommendations in this chapter.

While this thesis contributes to knowledge in the area of rural placements to students, the outcomes cannot be generalised. The failure of co-researchers to formally validate RPP reports is a limitation however it can be argued that a failure to question the reports infers tacit approval. The verbal validation obtained by telephone contact would support this assumption.

There are limitations to this research however the outcomes contribute to the developing literature relating to rural dentistry and specifically, dental student placements. There has been little research into the latter and this research provides a platform for future research.

AREAS FOR FUTURE RESEARCH

Based on this research and as stated above, the RPP in isolation is not likely to address rural workforce needs. There are however areas worthy of future research. These can be grouped into two broad categories.

Research into rural placements for dental students

The introduction of mandatory placements provides an opportunity to research their impact against that of the voluntary RPP program. Similarly, a decision to focus the RPP aim (as recommended above) would provide opportunities for comparative analysis.
The development of a RPP database, that maintains employment records for all participants, would facilitate investigation into the later career choices made by those attending the RPP.

As all students will participate in the RPP from 2004, there is the opportunity to research the impact of the various program elements. As described above, the development of two different placements provides an opportunity to evaluate elements such as the location of the orientation program and the subsequent clinical placement.

Collection of OOS data will allow research into student productivity and will contribute to a valid cost benefit analysis of the RPP. There are opportunities to collaborate with other dental schools in comparative studies; the educational aims and dedicated student clinics associated with the South Australian model provide scope for comparative studies.

The introduction of a longer elective rural placement would be accompanied by research into short- and long-term outcomes. There would also be an opportunity to research the clinical experience obtained by participating students with those based in a metropolitan teaching hospital.

**Research into recruitment strategies**

As previously described, the findings from this research provide additional research opportunities and it is recommended that the faculty promote the establishment of a rural workforce group with stakeholder representation. This would provide leadership for professional collaboration in recruitment and retention strategies and would provide a research focus for all staff and students involved with the RPP.

In Chapter 11 I describe the associations between pre- and post-placement career interest scores and year one career choice. The faculty’s admissions procedure allows evaluation of applicant motivation for a research career; the use of a career interest
score in its admissions policy would provide an indication of future career direction and, if approved by the Admissions Committee, would promote selection on this basis.

If longer elective placements were introduced this would provide significant opportunity to investigate other elements of the rural workforce and service provision. Students commented on the limited range of treatment provided in the Community Dental Clinics; this could be further investigated. Attitudes of dentists working in the rural public sector could be investigated. Similarly, there is only one female dentist working in MA, R and VR areas of NSW. As the proportion of female graduates increases this has significance and investigation of gender specific recruitment and retention strategies has merit.

Establishment of a rural workforce group would thus initiate, prioritise and coordinate collaboration in research into the rural oral health workforce. This would also provide opportunities for the recruitment of postgraduate research students.

SUMMARY OF RECOMMENDATIONS

Generic recommendations
It is recommended that the RPP should be included within the PPD and D&C theme group and that the Head of this theme should contribute to RPP development.

Assessment for the RPP should be summative and non-graded and should include reflective statements and self-assessment. The former should include reference to feedback from clinical supervisors and the latter should be based on an existing self-assessment template. Both of these elements should be submitted electronically on completion of the RPP.

The RPP should comprise a pre-placement briefing, an orientation program and clinical placements. It is recommended that the conference week, planned for the end of year 4, is structured to provide shared learning from the RPP.
The aims of the pre-placement briefing should be to establish collegiality and to introduce reflective practice and reflective statements. The RPP Handbook and self-assessment templates should be made available on the BDent website.

The RPP coordinator should liaise with the Associate Dean (Curriculum) to determine curriculum theme and competency requirements for the RPP and to revise the existing orientation program components to this end. It is recommended that the cross-cultural workshop, area in context session and ADANSW Risk Management session be retained in the orientation program.

RPP mentors should be provided with an indication of minimum clinical experience required for each student during the RPP. Mentors should access the BDent website to facilitate communication with students and the RPP coordinator.

It is recommended that a consistent approach to Occasions Of Service (OOS) data is developed and supported, and that there is agreement with the Oral Health Branch that the clinical placement of students during the RPP takes priority over OOS, to allay mentor concerns about decreased productivity. The OHB should be approached with regard to increasing central funding available to cover student accommodation and incidental program expenses.

The RPP evaluation should be based on the University’s Student Experience Questionnaire with the addition of career interest scores and of open response items that relate to advantages and limitations of rural careers. It is recommended that the Faculty’s existing web-based evaluation tools be expanded to allow electronic submission of RPP evaluative data. Evaluation of the ADANSW Risk Management session should be completed in hard copy on site.

It is recommended that the RPP coordinator’s travel and communication expenses be supported, subject to discussions between the Faculty and the UDRH at Broken Hill. Videoconferencing should be used to support staff development to minimise the need for travel.
Efforts to obtain federal and state funding for rural placements must continue. It is recommended that the Faculty establish a rural working group to support research and lobbying. The working group, with professional representation including rural practitioners, would initiate, prioritise and coordinate collaboration in research into rural oral health workforce issues.

Practical recommendations for rural placements in 2004
It is recommended that all BDent students should attend a two-week RPP during 2004 with the existing aims of promoting positive attitudes to rural lifestyle and dental practice, and contributing to service delivery. BDS students should be offered elective RPP places during the mid-semester break as determined by placement availability in the Southern and Western Networks. Additional clinical placements should be developed to allow maximum opportunity for BDS students and to provide additional, closer options for BDent students unable to leave Sydney. It is suggested that options in the greater Sydney area be pursued to this end.

The BDent RPP should be staggered throughout the final year with up to 16 students attending the RPP at any one time. It is recommended that two RPP options are developed, one based in the Far West Network and the other based in the Northern Network, and that these are used alternately. The former would comprise local orientation and the latter would comprise city-based orientation. Pre-placement briefings should be held in Sydney and post-placement briefings would be replaced with the shared learning opportunity provided by the Year 4 conference week.

It is recommended that the BDS students participate in pre-placement briefings, orientation and post-placement briefings in Sydney. The existing RPP structure and content should be retained for this group.
Recommendations for rural placements from 2005

It is recommended that from 2005 the RPP have a primary focus on the development of positive attitudes to rural lifestyle and practice with students able to provide clinical care during the program.

Opportunities for rural placements for more junior students should be investigated and elective programs optimised.

It is also recommended that additional, longer rural placements be developed for students. Selection criteria for these longer placements should be developed and suitable placements and mentors identified. The primary aim of the longer placements would be clinical care and students would attend as a rotation component of their final year of studies. To this end, the Faculty is developing six-month placements for final year students.
REFERENCES


87. Callan C, O'Neil D, McAllister L. Adventures in two to one supervision: Two students can be better than one. SUPERvision 1993; 18:15.


113. Woolliscroft J, Tentlaken J, Smith J, Calhoun J. Medical students' clinical self-assessments: Comparisons with external measures of performance and the


143. NRHA. Rural Health Information Paper No.2: Fighting Rural Decay - Dental Health in Rural Communities; 1998.


172. Tinanoff N. Community Clinical programs at the School of Dental Medicine, University of Connecticut. Journal of Dental Education 1999; 63(12):948-950.


## APPENDIX 1: SCHWAB’S TABLE OF INVENTION

<table>
<thead>
<tr>
<th>University of Sydney</th>
<th>Faculty of Dentistry</th>
<th>Students</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. University of Sydney</strong></td>
<td>- Need for community education ref strategic plan</td>
<td>- Optimise collaborative work</td>
<td>- Quality education</td>
</tr>
<tr>
<td></td>
<td>- Commitment to rural ed.</td>
<td>- Ensure good ed outcomes</td>
<td>- VFM</td>
</tr>
<tr>
<td></td>
<td>- Inter-fac collaboration</td>
<td>- Community / Professional involvement</td>
<td>- Generic attributes</td>
</tr>
<tr>
<td><strong>2. Faculty of Dentistry</strong></td>
<td>- Policy</td>
<td>- Curriculum development</td>
<td>- Community responsibility</td>
</tr>
<tr>
<td></td>
<td>- Student support</td>
<td>- Policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Strategic direction</td>
<td>- Research</td>
<td></td>
</tr>
<tr>
<td><strong>3. Students</strong></td>
<td>- Infrastructure</td>
<td>- Quality education</td>
<td>- Student-centred</td>
</tr>
<tr>
<td></td>
<td>- Student support</td>
<td>- Broad experience</td>
<td>- Competency</td>
</tr>
<tr>
<td></td>
<td>- Policy</td>
<td>- Mentoring</td>
<td>- Generic attributes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Input to decision-making</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Consultation</td>
<td>- Ed opportunities</td>
</tr>
<tr>
<td><strong>4. Stakeholders</strong></td>
<td>- Clear protocols</td>
<td>- Communication</td>
<td>- Friendship</td>
</tr>
<tr>
<td></td>
<td>- Recognition</td>
<td>- Opportunities for collaboration</td>
<td>- Peer support</td>
</tr>
<tr>
<td></td>
<td>- Collaboration</td>
<td></td>
<td>- Group learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Cultural support</td>
</tr>
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</table>
### APPENDIX 2: DEVELOPMENT OF THEMATIC

#### TABLE

<table>
<thead>
<tr>
<th>Co-researchers</th>
<th>Motivating factors</th>
<th>Research questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Students</strong></td>
<td>Various: shared and individual – generated in pre-placement briefing</td>
<td>Did students achieve what they wanted to?</td>
</tr>
<tr>
<td><strong>Me</strong></td>
<td>Provide experiential learning opportunity</td>
<td>Did I provide an experiential learning opportunity?</td>
</tr>
<tr>
<td></td>
<td>Broaden OH into general health</td>
<td>Were the students aware of the role of OH in general health?</td>
</tr>
<tr>
<td></td>
<td>Address OH workforce issues</td>
<td>Has there been any impact on workforce?</td>
</tr>
<tr>
<td></td>
<td>Expand education beyond Uni</td>
<td>Does the RPP provide a template for extramural education?</td>
</tr>
<tr>
<td></td>
<td>Expose others to OH</td>
<td>Has there been any consequent inclusion of OH in other courses?</td>
</tr>
<tr>
<td></td>
<td>Keep teaching!</td>
<td>Did I keep teaching and did my skills develop?</td>
</tr>
<tr>
<td></td>
<td>Research</td>
<td>Did I learn how to do action research?</td>
</tr>
<tr>
<td></td>
<td>Enjoyable learning</td>
<td>Was it fun?</td>
</tr>
<tr>
<td><strong>Staff</strong></td>
<td>Desire to support students</td>
<td>Did the staff support the students?</td>
</tr>
<tr>
<td></td>
<td>Honorary titles??</td>
<td>Was this an incentive?</td>
</tr>
<tr>
<td></td>
<td>Recruit colleagues</td>
<td>Did any staff recruit as a consequence of the RPP?</td>
</tr>
<tr>
<td></td>
<td>Passion for rural practice</td>
<td>Did the staff inspire the students?</td>
</tr>
<tr>
<td><strong>Faculty</strong></td>
<td>Develop student-centred curriculum</td>
<td>Is the RPP a student-centred curriculum?</td>
</tr>
<tr>
<td></td>
<td>Optimise educational opportunity</td>
<td>Did the RPP optimise educational opportunity?</td>
</tr>
<tr>
<td></td>
<td>Trial placements for BDent</td>
<td>How can the RPP develop into mandatory component?</td>
</tr>
<tr>
<td><strong>UDRH</strong></td>
<td>Multi-disciplinary student facility</td>
<td>Did the students meet other students?</td>
</tr>
<tr>
<td></td>
<td>Introduction of OH into other courses</td>
<td>Did we introduce OH into other programs?</td>
</tr>
<tr>
<td></td>
<td>Positive impact on workforce</td>
<td>Has there been any impact on workforce?</td>
</tr>
<tr>
<td><strong>NSW Health</strong></td>
<td>Support Faculty</td>
<td>Did they?</td>
</tr>
<tr>
<td></td>
<td>Increase service in RPP clinics</td>
<td>What difference did the students make?</td>
</tr>
<tr>
<td></td>
<td>Address rural workforce issues</td>
<td>Has there been any impact on rural workforce?</td>
</tr>
<tr>
<td><strong>ADANSW</strong></td>
<td>Support Faculty</td>
<td>Did they?</td>
</tr>
<tr>
<td></td>
<td>Address rural workforce issues</td>
<td>Has there been any impact on rural workforce?</td>
</tr>
<tr>
<td></td>
<td>Introduce Risk Management to students</td>
<td>Did the Risk Management session fulfil its aims?</td>
</tr>
<tr>
<td></td>
<td>Increase exposure</td>
<td>Are the students more aware of the ADA?</td>
</tr>
<tr>
<td><strong>Dental Board</strong></td>
<td>Support Faculty</td>
<td>Did they?</td>
</tr>
<tr>
<td></td>
<td>Address rural workforce</td>
<td>Has there been any impact on rural workforce?</td>
</tr>
</tbody>
</table>
### APPENDIX 3: GROUPED RESEARCH THEMES

<table>
<thead>
<tr>
<th>Area of interest</th>
<th>Research questions</th>
<th>Research methods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional collaboration</strong></td>
<td>Has there been any impact on the rural dental workforce? Did the RPP staff support and inspire the students? Were honorary titles an incentive to become involved with the RPP? Did any staff recruit as a consequence of the RPP? What contribution did the students make to patient care? Have the stakeholders supported the Faculty? Did the Risk Management session fulfill its aims? Are the students more aware of the ADA?</td>
<td>Establish data for existing workforce and compare. Post questionnaire Staff questionnaire/uptake Staff questionnaire Staff questionnaire / ISOH records Staff questionnaire / faculty opinion Session evaluation Post questionnaire</td>
</tr>
<tr>
<td><strong>Educational opportunity</strong></td>
<td>Did the students achieve what they wanted to? Is the RPP a student-centred experiential learning opportunity? Does the RPP provide a template for extramural education and optimising such opportunity? Can the RPP develop into a mandatory program?</td>
<td>Post questionnaire / review self-assessment / interviews Analysis of program and learning Transferability to new centres/new curricula Stakeholder feedback Post questionnaire</td>
</tr>
</tbody>
</table>
APPENDIX 4: RURAL PLACEMENT PROGRAM

ASSESSMENT
### LEARNING CONTRACT

### STUDENT ASSESSMENT

<table>
<thead>
<tr>
<th></th>
<th>UNSATISFACTORY</th>
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<th>SATISFACTORY</th>
<th>Tick box</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Clinical skills</td>
<td>Totally dependent upon supervisor</td>
<td></td>
<td>Minimum input from supervisor</td>
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</tr>
<tr>
<td>b) Communication skills</td>
<td>Unable to establish working relationships with colleagues</td>
<td></td>
<td>Established good working relationships with colleagues</td>
<td></td>
</tr>
<tr>
<td>c) Interest and involvement in the RPP</td>
<td>Totally focussed on own needs</td>
<td></td>
<td>Identified needs and made appropriate and creative response</td>
<td></td>
</tr>
<tr>
<td>d) Attendance</td>
<td>Attended less than 90% of all sessions with inadequate explanation</td>
<td></td>
<td>Attended 90%+ of all sessions</td>
<td></td>
</tr>
<tr>
<td>e) Knowledge</td>
<td>Inadequate knowledge base and unable to identify learning needs</td>
<td></td>
<td>Excellent knowledge base and able to identify areas for development of knowledge</td>
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</tr>
<tr>
<td>f) Overall performance</td>
<td>Total unsatisfactory (75)</td>
<td></td>
<td>Total satisfactory (75)</td>
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</tr>
</tbody>
</table>

Did the student fulfill the learning contract? If not, why?

_____________________________________________________________________________________________________________________________________________________________________

Please comment on any aspects of the student’s participation that were particularly impressive.

_____________________________________________________________________________________________________________________________________________________________________

Please comment on any aspects of the student’s participation that caused you concern.

_____________________________________________________________________________________________________________________________________________________________________

MENTOR’S SIGNATURE: ........................................... DATE: ...........................................

STUDENT’S SIGNATURE: ........................................... DATE: ...........................................
University of Sydney - Faculty of Dentistry
STUDENT SELF-ASSESSMENT FORM
(Please ensure that this form is completed and returned to Dr C on completion of the RPP).

Name of Student: ......................................................
Name of Academic Advisor: ...........................................
Name of RPP Supervisor: ..............................................

LEARNING CONTRACT

<table>
<thead>
<tr>
<th></th>
<th>UNSATISFACTORY</th>
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<th>SATISFACTORY</th>
<th>Tick box</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b)</td>
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<td>c)</td>
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<td></td>
</tr>
<tr>
<td>f)</td>
<td></td>
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</tr>
</tbody>
</table>

Did you fulfill your learning contract? If not, why not?
.................................................................................................................................
.................................................................................................................................

Please comment on any aspects of the RPP that were particularly valuable to you.
.................................................................................................................................
.................................................................................................................................
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Please comment on any aspects of the RPP that caused you concern.
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ACADEMIC ADVISOR'S SIGNATURE: ................................................. DATE: ................................
RPP SUPERVISOR'S SIGNATURE: ................................................... DATE: ................................
STUDENT'S SIGNATURE: ............................................................. DATE: ................................
Name of Student: 
Name of Academic Advisor: 
Rural Placement Location: 

LEARNING CONTRACT:

<table>
<thead>
<tr>
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<th>SATISFACTORY</th>
<th>Tick box</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Development of learning contract</td>
<td></td>
<td>Developed contract with minimum input from supervisor</td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>Communication skills</td>
<td></td>
<td>Established good working relationships with colleagues</td>
<td></td>
</tr>
<tr>
<td>c)</td>
<td>Interest and involvement in the project</td>
<td></td>
<td>Identified needs and made appropriate and constructive progress</td>
<td></td>
</tr>
<tr>
<td>d)</td>
<td>Accessing information</td>
<td></td>
<td>Obtained, analysed and evaluated information</td>
<td></td>
</tr>
<tr>
<td>e)</td>
<td>Self-assessment ability</td>
<td></td>
<td>Able to discuss RPP meaningfully and recognise strengths and weaknesses</td>
<td></td>
</tr>
<tr>
<td>f)</td>
<td>Overall performance</td>
<td>Total unsatisfactory (5)</td>
<td>Total satisfactory (5)</td>
<td></td>
</tr>
</tbody>
</table>