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ORIGINAL RESEARCH

'What makes it really good, makes it really bad.' An exploration of early student experience in the first cohort of the Rural Clinical School in the University of Western Australia

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ABSTRACT

Introduction: The Australian Commonwealth Department of Health and Ageing has implemented the Government's Regional Health Strategy. This strategy provides funding to universities for the establishment of Rural Clinical Schools (RCS) on a national basis. The strategy aims to secure a rural education and training network to increase the availability and viability of rural health services in the long term. The University of Western Australia set up the RCS in 2002 with the objective of setting up a full 5th year medical course in remote communities (RRAMA [Rural Remote and Metropolitan Area Classification] 4-7) for the 2003 academic year. There were 21 students in five areas: Kalgoorlie/ Esperance (9 students), Broome (4 students), Port Hedland (3 students) and Geraldton (5 students). These students covered the 5th year curriculum with internal assessment and final examinations, in the same manner as city students. Only the delivery was different, according to geographical location.

Methods: Structured questionnaires using open-ended questions were distributed to students on two occasions. At the sixth month, semi-structured interviews were held with each student. The interviews were transcribed and a thematic analysis of the data was undertaken. Constant comparison of data was undertaken, themes identified and relationships among the themes clarified.

Results: In general, students were very happy with the teaching and learning opportunities they had during the first half of the year. However the initial themes of curriculum content, curriculum delivery, and assessment, were eclipsed by an overarching theme of anxiety and its management. The issue of student anxiety was addressed during the analysis. A number of factors were identified which ameliorated student anxiety or contributed to increased anxiety. From this evaluation a number of contributory

factors to such student anxiety were identified. The investigators became more cognisant of the impact of group dynamics and of the need to structure the 'unstructured' environment of rural and remote medicine. In this way, students focus on only a few learning tasks at a time. They complete each topic with at least one other student so they can share the experience. The key role of each site coordinator also became apparent. The site coordinator should know the curriculum thoroughly and transmit this information to other teachers and preceptors at their site. It was also found desirable that the RCS was clear as to which assessment processes were flexible and which were 'fixed'. The medical school must clarify which curriculum content is essential, which is desirable and which is additional. Issues of workload must be monitored, and good work practices must be encouraged and supported. It was found that the high level of commitment to learning lead to the potential for burnout, generating the student comment: 'What makes the RCS really, really good makes it really bad...'

Conclusions: Setting up an innovative program is always a major task, but setting up five different offices with four centers of learning separated by thousands of kilometers has not been undertaken, apparently, anywhere else in the world. It has been a 'fast uphill journey' that has been subject to evolving change as the RCS has adapted to conditions not expected from an academic point of view. Key contributory factors to student anxiety were identified and organizational strategies were implemented immediately, where possible, to reduce such anxiety. These insights were also used in the preparation for, and implementation of, the 2004 curriculum.

Key words: community-based medical education, innovation, rural clinical school, student anxiety, undergraduate curriculum.

Introduction

The Australian Commonwealth Department of Health and Ageing has implemented the Government's Regional Health Strategy. This far-sighted strategy provided funding to universities for the establishment of Rural Clinical Schools (RCS) on a national basis. The aim of this strategy was to secure a rural education and training network to increase the availability and viability of rural health services in the long term. The funding was established with the expectation that students who had received a substantial amount of their clinical experience in a rural setting, would be more likely to undertake a sustained period of practice in the country[1-3].

The University of Western Australia established its RCS in 2002 with the objective of setting up a full 5th year medical course in remote communities (RRAMA [Rural Remote and Metropolitan Area Classification] 4-7) for the 2003 academic year. The School took 21 students in five areas: Kalgoorlie/Esperance (9 students), Broome (4 students), Port Hedland (3 students) and Geraldton (5 students). The students covered the normal 5th year curriculum: general practice, paediatrics, internal medicine, obstetrics and gynaecology, musculoskeletal medicine and cancer. The curriculum, internal assessment and final examinations were the same as for city-based students. Only the geographical location of delivery was different. The brief was very similar to the tasks reported by other rural colleagues[4,5]. However, the difference was that the RCS had to develop five teaching sites concurrently that had not previously been involved with long-term teaching commitments to medical students.

After the appointment of the head of school (based in Kalgoorlie), medical coordinators (generally local doctors with a half-time commitment) were appointed at the five sites. A lecturer in curriculum design was given the task of reconfiguring the curriculum from a rural perspective. Communication was established with potential teaching and tutorial staff in each centre. Office accommodation and administrative support was set up in all five towns, and accommodation found and furnished for the students. Student selection was completed and an induction program was developed for the new year, along with ongoing evaluation of the course for immediate and longer-term

feedback. The five rural sites meant that staff had to be distributed over six locations that represented thousands of kilometers distance. All this was accomplished in time for the students to start on 20 January 2003. The School recognized that much of 2003 would be a relationship and team-building exercise with city-based disciplines and rural-based teachers. Developmental strategies were employed throughout the year in response to curriculum delivery, the outline of which facilitated the design of key changes required for 2004.

A comprehensive internal evaluation was undertaken during the year. The evaluation aimed to identify and deal with issues as they arose. This article was generated from the findings of the 'student experience' portion of the mid-year evaluation.

Methods

Qualitative data were collected using structured questionnaires with open-ended questions. The questionnaires were distributed to students on two occasions: after 3 months, and at or about the sixth month of study. Each student and staff member was interviewed during the sixth month. The interviews were semi-structured and varied from 20 to 70 min, with an average of approximately 50 min. Students and staff were asked what had worked, and what had not worked during the year, how they had experienced various aspects of the curriculum and delivery, some questions about their general living experience in the rural area, and whether they had advice for future students.

The paradigm for this study was an extension of the philosophy underlying patient-centered clinical medicine[6], whereby students' perceptions and interpretations were accepted as valid. When differences in interpretation occurred between students and staff, a framework that incorporated both understandings was developed.

Interviews were transcribed and a thematic analysis of the data was undertaken. Constant comparison of data was employed, themes identified and relationships among the themes clarified. Data were triangulated from student to student, from site to site and among students, regional coordinators, regional administrative staff and other academic staff in the RCS.

Results

Of the 147 pages of data, initial thematic analysis, or open coding in grounded theory terminology, produced the predominant themes:

1. The essential role of the coordinator in the rural environment, from the perspective of the students.
2. Curriculum content.
3. Suggestions for improvement in curriculum delivery.
4. Assessment and marking.
5. Student and staff perceptions of workload and the potential for burnout.
6. A general category of student experience incorporating personal, social and community aspects.

In spite of a general student belief that teaching and learning opportunities were delivered well, there was a constant theme of student anxiety. This anxiety encompassed all dimensions of the predominant themes. Consequently, the student anxiety was chosen as the overarching theme for this exploratory study. Each category was reassessed and factors that ameliorated student anxiety or contributed to increased anxiety were identified.

Methodologically, the present study became a mixture of grounded theory and action research. The RCS did not have the luxury of leaving all change until the end of the year. Therefore, where there were indications that easily changed factors could improve conditions for students and staff, changes were immediately implemented. As a result, the themes reflect discussion of the results, because the RCS immediately used the information in order to understand current student dynamics and, where possible, to improve the delivery of the program.

Group dynamics

There was noticeably less anxiety among the students at one particular site. The students at that site attributed this to the number of students (9) making a supportive group that shared clinical insights and supported each other in academic learning. They also supported each other in their personal lives when things became difficult. The students not only worked together and studied together, but they also 'played together' in their time off. Nine was a large enough group to 'avoid the claustrophobic feeling' which they believed might have occurred in smaller groups.

The other sites suffered anxiety in relation to the number of students: the fewer students, the greater their anxiety. Group dynamic theory is well known in education, and the impact of small numbers of students became obvious in retrospect, rather than being something given sufficient thought in the early stages.

Curriculum content

Students had a very strong desire to know that they were learning what the Medical School required for the end of year examinations. Because the students were to sit the same examinations as their city colleagues, they were keen to know that that were not going to be disadvantaged by the types of patients they were seeing in their rural settings. Students' anxiety was related to how well the coordinators could reassure them that their learning was related to the curriculum.

With the exception of one senior academic who transferred to a rural site, all the coordinators were new to the university system, had worked most of their time in clinical practice, and did not know the curriculum to the level desired by the students. Their ability to reassure students was therefore limited, because the students knew the coordinators were not working from a position of knowledge. In addition, almost all the other clinical teachers in hospital and general practice were new to teaching and assessment of undergraduate students. It was the role of the coordinator to support such adjunct teachers in their role, educating them about the curriculum, university expectations and assessment procedures. Because the coordinators were new to clinical teaching this was difficult. Such a requirement of the coordinators had been insufficiently understood at the beginning of the process.

A further issue relating to the curriculum was that whether what was printed in the curriculum was what the metropolitan students actually covered. The 5th year curriculum was informally regarded by many metropolitan academic staff as being ambitious and it was not fully covered, even in the city. The students were aware of this and wanted to know what was considered vital and what was desirable. This meant that students felt they were 'between a rock and a hard place': unable, due to learning in the country, to gather nuances of what was important by attending the city lectures and clinics; and unable to learn directly from the departments what was considered to be high priority learning.

Curriculum delivery

This was the first year for the RCS. Many of the rural doctors approached to assist with teaching were initially wary about taking on extra duties in addition to their heavy clinical load. Coordinators, most of whom had lived locally for a considerable period, were sympathetic to their colleagues and good relationships were a requisite to their continuing working together in a small rural town. The net result was that while most physicians were happy to have students observing their practice, they were slow to take on an active teaching role. Because of this, tutorials on specific topics, problem based learning and case based learning was delayed, leading to students having to fit these into a short period of the year.

Only one center was large enough for students to undertake one discipline-specific rotation at a time. All other centers had to fit their rotations around available patients. This sometimes made it difficult to access patients in, for example, children's wards. Students and coordinators needed

to be creative in seeking the required paediatric clinical experience within general practice, and in accident and emergency settings. The situation in obstetrics and gynaecology was similar: there were some weeks in some centers when very few babies were born. Consequently, some students were studying the full range of patients in any clinical week. It was obvious from the interviews that the more a student was able to focus on one, two or three disciplines, the lower their anxiety rate. The students who attended different clinics each half day without continuity of learning had much higher stress levels than the students whose primary focus may have been split, for example, obstetrics with a secondary focus of general practice. Securing this kind of exposure was a new approach to student learning and one which generated some anxiety throughout the year. Such anxiety was essentially related to the structure of the year and a perceived loss of boundaries that clerkship terms in a city based curriculum offered. As a consequence, the RCS has become aware of the importance of structuring the curriculum in what is essentially an unstructured setting. The students need assistance to focus on what is available, the particular features of each center and as few topics as possible at any one time as they take themselves through the assessment process. In addition, those centres that had two or more students focusing on the same topics concurrently reported less anxiety than those where each student was totally self-directed and separate from their student colleagues.

Assessment

While it was desirable that students focus on maximizing their clinical experience, it was also accepted that the year's training was dominated by the need to pass the various formative and summative assessments. The RCS set out to deliver an identical curriculum to that delivered in the metropolitan area, including assessment. This led to some difficulties because all internal assessments were not necessarily suitable for the rural setting. For example, city students routinely gain 'ward ratings' from their clinical tutor for presentations on ward rounds. In the country, there were some hospitals without ward rounds because each general practitioner was in charge of their own patients and called to see patients as their time allowed. Initially the RCS did not clarify with each discipline their flexibility of interpretation regarding the assessment process. On the one hand, a senior metropolitan academic said that students should be adult enough to take the intention of the assessment, and if conditions were not the same they should adapt. On the other hand, in another discipline, students were told that there was no flexibility and that they had to do exactly the same as their city counterparts.

Students strongly articulated a request for a complete review of the assessment procedures for future years. They wanted to be assessed on what they learned and what they knew, rather than what the metropolitan students were doing. While this may be possible in future, it will require the usual academic committee procedure to assure equity and standards are maintained.

Workload and burnout

It was noticeable that the least anxious students worked an average of 1-3 h per day more in the first half of the year, compared with students who were more highly stressed. Cumulatively, this appeared to have an enormous effect, the difference being they were able to spend an additional 15%-50% of time learning. In order to identify if this was a student-specific problem, rather than anxiety-related (as suggested by Stewart[7]), results from previous years were reviewed to assess whether the more anxious students had a history of lower marks. This was not the case. The results from the previous year confirmed that the more anxious students were at least as competent as their peers. Subsequently, the end of year results also showed there was no relationship between anxiety and student performance. Some of the most and least anxious students were among those who had the best results in the year.

The high level of commitment to learning led to the potential for a different problem. With quite a few coordinators and adjunct teachers becoming very enthusiastic for the students to learn, they called them in to see interesting patients.

What makes the RCS really, really good makes it really bad. Like the coordinator or teacher calls up and suggests we come and see something out of hours and that's really good, because we want to see these special cases. But we also have some early morning tutes, some starting at 7 a.m. Doing so much, you can burn out really, really fast. At the mid-year break I was really exhausted and stressed and not enjoying it. And I was thinking I might need a year off next year just because the year was so busy, so long and so relentless. The teachers expect you to be there all the time and you feel guilty about taking half a day off to do some research and write up because they ring up and say, 'Where are you?' Balance and boundaries are not yet realistic.

Not all students had the life experience to set personal boundaries nor to undertake useful time management by separating out the important from the urgent, the so-called '4th generation' time management[8]. The issue of burnout was something addressed during the rest of the year and in the development of the 2004 program.

General Student Experience

Almost all students would recommend the experience of rural training to potential students. They appreciated the teaching and learning opportunities, the provision of accommodation and Internet facilities, and the opportunity to live and socialize in their rural community. However most would qualify that with some explanation of the personal cost of loneliness, the difficulty of leaving home for the first time, the difficulty of being the first students in the RCS and the impact this had on curriculum content and delivery. The process was generally much harder than they thought it would be when they took up the opportunity.

You need to be realistic about your expectations. It's a fantastic opportunity, one you will never get again. If it is right for you, grab it with both hands, use the year, make friends, go exploring, learn heaps about medicine, heaps about life, heaps about yourself. But there is a downside. It's a commitment to being away from your friends, away from your family, away from all your supports, away from all the things you like doing. It's being lonely, being homesick at first, having to learn from scratch in a new environment. Talk to friends and family about what it means before you go.

Students wanted it recognized that while a lot of things had been excellent, they had to work hard for this. This meant setting things up, like relationships with those they wanted to teach them.

We have to go and be enthusiastic, really into it 100% of the time because you have to get the teaching and if you feel awful and don't want to go in, they might not want to teach you again… you have to end up doing crazy hours and always having to be 100%, which is a real strain, because otherwise you might not get the teaching and you will flunk at the end of the year.

It's a small place and you can't get away. Everyone knows everything about you and you have to accept that. You can't be a slacker because there is nowhere to hide. If you go down town in the afternoon the consultant or patient is sure to see you.

Students were told of the need to be self-directed learners before they took up the position and were selected on the basis of staff's belief that they would be able to drive their own learning. This was easier in practice for some than others, especially during the somewhat disorganized early months. However by the mid-year, many found the self-directed nature rewarding.

It's an empowering experience because you are in control and have to make decisions and if you don't do something its your responsibility and you feel more adult in your learning, not being told everything. It's coming a lot more from us. It's not appropriate in the city but here it's a real bonus. Study is a lot easier. You are more involved, you feel

more welcome on the team. There is a real relationship with your teachers, it's a real factor in motivating you to study and learn and do your own work.

The form of clinical teaching has worked. You get more exposure, with less students competing for patients. The teachers are teaching from a clinical perspective that's more relevant. The consultants have more time to walk you through it and give feedback. It concretes the learning in more. It's a better atmosphere.. learning from the clinical approach rather than the text book. That's with most specialties, not all. The responsibility is on you to do the reading but because you have seen the cases its more interesting and easier to understand. It's a more effective way of learning, [it] *suits my learning style.*

Conclusion

Setting up an innovative program is always a major task, but setting up six different offices with five centers-of-learning, separated by 1500 kilometers has not been undertaken, to our knowledge, anywhere else in the world. It has been an uphill journey that has been subject to evolving change as the RCS has established itself, not only in the rural and remote setting, but also in the medical school as a whole. It is significant, therefore, that this report only reflects the first 6 months of the new school

All exploratory studies such as these have limitations. Qualitative studies do not have automatic generalization to other settings and other questions. A different approach might well have elicited substantively different but, in our opinion, not contradictory findings. However the concern, as a new academic school, was to review staff and student perceptions as part of the internal evaluation of the implementation of government policy.

The RCS will in-take 29 students in the 2004 cohort. Some of the major lessons learned in 2003 affected the preparation and delivery for this next year. The school recognizes that high student anxiety may compromise commitment and enthusiasm to student's chosen career, particularly to a future in rural and remote medicine.

As with any new initiative, a period of consolidation and growth in organization is essential. As teachers and organizational strategies mature over time, the outcomes from data such as is reported here may considerable change the level of student anxiety. Incremental publication of the way in which key areas of student anxiety were addressed will provide landmarks in planning and establishing subsequent schools of learning across Australia.

From the present evaluation, information about contributory factors to such student anxiety, and indeed coordinator anxiety, has become available. In future years and schools, note must be taken:

- Of the impact of group dynamics.
- Of the need to structure the 'unstructured' environment of rural and remote medicine so that students focus on only a few learning tasks at a time, and with at least one other student.
- That each site coordinator knows the curriculum thoroughly and transmits this information to other teachers and preceptors at their site.
- That the school is clear as to which assessment processes are flexible and which are 'fixed'.
- That the medical school clarify which curriculum content is essential, what is desirable and what is additional.
- That issues of workload and burnout must be monitored and good work practices encouraged and supported.

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