

‘When they give you the nod, they give you the confidence’—Indigenous medical students’ perceptions of the Pre-Medicine Program

Lisa Watts¹, Amanda Ampt¹, Juanita Sherwood², Tessa Keenan²

¹Rural Clinical School, Faculty of Medicine, University of New South Wales, ²Nura Gili, Indigenous Studies and Indigenous Student Programs, University of New South Wales

Lisa Watts BSW (UNSW), MEd (UNSW) is a research officer in the Sydney Campus of the Rural Clinical School, Faculty of Medicine at the University of New South Wales. Her role is to contribute to the mission of the School to promote the practice of medicine in rural Australia and to undertake research into rural health and rural medical education. Recent projects in which she has participated include research into the Pre Medicine Program for Indigenous students and peer tutoring for rural undergraduate students. She is currently working with others in the faculty to further develop the teaching of rural medical ethics to undergraduate medical students. Lisa has a background in social work, education, public policy and research.

Closing the gap between the life expectancy of Indigenous and non-Indigenous Australians is a national responsibility and a matter of urgency. Indigenous doctors are essential to any approach in improving health outcomes for Indigenous people and therefore the medical schools of Australian universities have a strategic role to play. This paper focuses on a strategy used by some medical schools in the recruitment and retention of Indigenous medical students.¹ Indigenous medical students continue to be under-represented in Australian universities. In 2009 0.9% of medical students were Indigenous, despite Indigenous people making up 2.5% of the general population (1). While the number of Indigenous medical students has increased, the proportion compared to non-Indigenous medical students has decreased. In the 2005 report of the Healthy Futures Project commissioned by the Australian Indigenous Doctors’ Association (AIDA) it was noted that “Australian medical schools are not recruiting and retaining enough Indigenous students” and that “prior educational and other disadvantages severely impact on Indigenous students’ opportunities to successfully apply for medicine” (2, p 41).

A consistent finding in the literature is that medical schools with the highest numbers of Indigenous students usually have a multi-faceted approach towards recruitment and retention, and do not rely on just one strategy (2-3). One practise which has attracted considerable research overseas is the use of short preparatory courses prior to enrolment (4-5), however research into such courses is limited in the Australian context (6-7). The University of New South Wales (UNSW) has offered a four week intensive residential Pre-Medicine Program for Indigenous students for the past 12 years, with the numbers of participants ranging from 5 to 15 each year. It is one of few in Australia, and is designed to introduce students to university and to prepare them for studying in the undergraduate Medicine Program at UNSW, by providing an introduction to the content and experiences of self-directed and scenario-based approaches to learning which emphasise group work and reflective practice. Each student’s individual performance in this program, which is held in November, contributes towards the selection process with successful students being offered a position into undergraduate Medicine for the following year.

This paper reports on research into the preparatory aspect of the Pre-Medicine Program as perceived by a cohort of Indigenous medical students.

Aim

The aim of the research is to explore the perceptions of a cohort of Indigenous medical students about the extent to which the Pre-Medicine Program prepared them for the challenges of first year Medicine.

¹ Another major responsibility of universities that is beyond the scope of this research paper, is to educate and equip non-Indigenous medical students with culturally safe knowledge and skills to ensure quality health care for Indigenous people.

Method

The research team included researchers from the Rural Clinical School within the Faculty of Medicine, and from Nura Gili, Indigenous Studies and Indigenous Student Programs; both of which have joint responsibility for running the Pre-Medicine Program. The researchers had no direct academic or administrative relationship with the students in the research project. The research was approved by the University Human Research Ethics Committee.

Semi-structured questions informed by current literature (6, 8-11) and allowing for in-depth interviews were agreed upon by all members of the team, with the emphasis being on reflections of the Pre-Medicine Program through the lens of the first year experience. An initial pilot interview was undertaken with an Indigenous student who had attended a previous Pre-Medicine Program, and on the basis of this pilot no changes to the original open-ended questions were deemed necessary.

All ten Indigenous students in first year Medicine, who had attended the Pre-Medicine Program in 2009 were invited by email to participate. Interviews, ranging from thirty to forty minutes, were conducted by the Indigenous member of the research team. A focus group was then conducted in order to inform students about the progress of the research; to verify that the researchers' interpretations aligned with the meanings intended by the students; and as a form of data triangulation using the group as a separate entity (12). Both interviews and focus group were audio-recorded and professionally transcribed.

Analysis was an iterative process with all researchers independently listening to the recordings, reading the transcripts and applying open coding techniques. In this way, the researchers' different expertise and perspectives were utilised. While all members of the team had an education background, two specialised in rural health and medical education, and two specialised in Indigenous education and Indigenous health. Although team members approached coding the data differently, there was a high degree of consensus in the interpretation of the students' comments. The iterative process also allowed for specific issues that were raised by the students in the early interviews to be explored in more depth in subsequent interviews.

The four researchers met on a regular basis throughout the study comparing their coding, resulting in the agreement of four main over-lapping and interconnected themes.

Results

Participants

Seven students were interviewed. They ranged in age from 18 to 36 years, five were male and two female, and five had rural backgrounds. The same students participated in the focus group, with the exception of one older male student who had work commitments being replaced by a younger male rural background student who had been initially unavailable for individual interviewing. Their responses can be characterised by four broad themes which are discussed below, with supporting quotes presented in Table 1.

Theme One: Degree of preparedness

The students came to the Pre-Medicine Program with a range of prior learning experiences and different levels of preparation for tertiary studies. Some were recent high school graduates with a reasonably good grounding in science; while others were older with a range of work and life experiences. Some of the latter group had undertaken previous tertiary studies, but were less strong in basic sciences.

Students were very positive about the content of the Pre-Medicine Program, and noted that they had gained insight into the level of difficulty of undergraduate medical course work, alerting them to the areas on which they needed to focus their attention. Prior exposure to the learning and teaching approaches used in the Medicine course gave them a 'heads up' when they were in first year, as they already had a good understanding of expectations. It also enabled them to determine whether this approach to learning suited them personally. In addition, the introduction to specific academic skills as well as an introduction to the academic support services that would be available to them gave the students a sense of being better prepared once they commenced first year Medicine.

The Pre-Medicine Program introduced students to different types of assessment they would encounter in Medicine. Students recognised the importance of comprehending what lay ahead and if they were capable of performing at that level. Some students had never participated in group assignments before and this gave them a sense of what would be an integral part of the undergraduate program. There was however, understandably, a high degree of anxiety about the assessments in the Pre-Medicine Program and in particular the final exam as their results contributed to the final selection criteria. There was a general consensus from the participants in the study that in hindsight more detailed and individualised feedback about their exam would have assisted them during their first year studies.

Being prepared for undergraduate Medicine involves not just the academic aspect, but also adjusting to the disruption to family circumstances. The students who had come from a rural area reported that the Pre-Medicine Program was an important part of learning about living and studying away from family and community, and this experience ultimately made the transition to university much easier. They noted that the four weeks were quite a testing time but it was important preparation for the adjustment involved in relocating on a more permanent basis. This was equally important for the mature age students whose decision to do Medicine would not only affect themselves but also their partner and children.

Theme Two: Importance of the group, community and identity

All the participants in the study emphasised how important the formation of supportive friendships and a group identity in the Pre-Medicine Program was for their commencement of studying in first year. A number of students said that the preparation and contacts made in the Pre-Medicine Program were deciding factors for them in their choice of university.

They noted that the reality of first year involved studying on their own much more than they did in the Pre-Medicine Program, but instead of feeling isolated they found a high level of support from one another. An informal peer mentoring took place between the students during first year, with some of the younger students helping older students with academic issues, while in turn they were given help with life skills and living away from home issues by the more mature Indigenous students.

During the university wide Pre-Program period (when Indigenous students attend similar programs in other faculties), the students described how they met up with other Indigenous students and gained a sense of being a part of a wider Indigenous academic community.

Some students reported incidents of racist comments being made during their first undergraduate year and that the group support and connection with Nura Gili gave them a sense of not having to deal with this on their own. Nevertheless, a number of the students indicated it would have been helpful if they had been better prepared for experiences of cultural insensitivity, ignorance and racism which took some students by surprise, while some of the mature age students were 'simply used to it'.

Theme Three: Insider information

A common thread throughout the student comments revolved around gaining access to 'insider information'. Being 'caught out' or appearing not to be 'smart enough' to be in Medicine was a common fear. Students were acutely aware of how much knowledge in higher education, and Medicine in particular, is assumed. Students said that the Pre-Medicine Program helped them interpret some of the medical jargon and gave them a safe environment to ask questions and have access to the lecturers they would have in first year. It also went some way to demystifying university life in general and gave the students an insight into the culture of the Medicine Faculty and medical profession.

Theme Four: Academic self-concept

Students reported that it is helpful to be confident as a Medical student, particularly when there is such a focus on team work, communication skills and group discussions. There was strong agreement that one of the most important features of the Pre-Medicine Program was the authenticity of the experience; and if they were deemed suitable for Medicine based on their performance in the Pre-Medicine Program, the students gained enormous confidence (as the title of this paper suggests). In addition, it is also a means by which students said they could decide for themselves about their own capacity to study Medicine. Students reported that their confidence increased throughout the program with exposure to new learning experiences.

An unintended consequence of this ‘confidence building’ as reported by some students was that they may have become over-confident. When faced with an examination early in first year that covered some of the same content that had been presented in the Pre-Medicine Program, one student described how he passed with minimal effort, giving him a false sense of the amount of study that is usually required.

Table 1 Sample quotes from students

Theme	Student quotations
Degree of preparedness	<p>“it got you in the mode of the workload ... it’s a lot of work you know. It didn’t give you like 50% of what medicine is like. It was, this is what it is like ... a hundred per cent, and that was the best thing about it”</p> <p>“I think it was good to know how you are expected to learn when you get here ...”</p> <p>“another big thing for me was the people ... all the staff, learning about support networks that kind of thing ...”</p> <p>“we were taught about note taking and that’s something that I still do now. It stuck in my mind from day one”.</p> <p>“ the library research skills were helpful ... yeah that’s just a whole new thing ... so that was good that I already had a bit of an idea otherwise I would have been lost when I started med”</p> <p>“the Pre med course did certainly deliver, it showed what we could probably expect in terms of content, probably the bit that I would have found more helpful, just from my point of view ... I’m a bit older ... would be more along the study skills, exam techniques ‘cause that’s the sort of stuff that I’ve really fallen down on”</p>
Importance of the group, community and identity	<p>“I got offers from other unis ... but I guess it’s more the actual Pre program that did sell it. I knew the staff here from the med faculty, I knew the people who were running the program who were very supportive, the people at the college where we stayed, all my friends I made through the pre-programs and also I knew what the uni was like, I knew what this city was like ... I guess it was the Pre-Med program that sold it for me”</p> <p>“like I said before about the social network like that’s probably the biggest thing just knowing other people in the med course who you can sit next to in class”</p> <p>“it was very hard but it was also fun ‘cause living all on campus together I think it was a very good idea, especially ‘cause then the next year when we came here we already had like a close group of friends which was very helpful”</p> <p>“It’s really cool to meet other Indigenous people and the fact that they’re in the kind of same boat as you. They want to do academic stuff, they want to go to uni, was really cool”</p>
Insider information	<p>“all the lecturers who took us were fairly important in terms of med faculty so it was good just to sort of get to know them and sort of know how they lecture as well so you can sort of plan for that”</p> <p>“it prepares you for what they want you to do—what the medical faculty want you to be, as far as you know, the puffy stuff, the critical thinker and things like that it was really good that they covered that off because it is important, it’s very important for the medical faculty that you’re that sort of person”</p>
Academic self-concept	<p>“it was like a massive confidence boost because before that I would have thought like med’s just something a bit out of my league so to speak but now after Pre-med I was like, no I can do this”</p> <p>“Confidence is extremely important ... you’re always faced with something you don’t understand or don’t know but as long as you have the confidence to go ‘I’ll have a crack’, you’re already in front of half the people who just go, ‘ah I’m not going to bother’, and not only that starting hospital so early we started after first term, you need to be confident going into those situations or it’s just not even going to be of benefit ...”</p> <p>“I thought oh look I don’t really need a tutor ... I don’t want to waste anyone’s money ... I sort of thought well if no-one else needs tutors why can’t I do what they’re doing, but I needed that tutor and I still need him ... it is three hours of solid help and it’s the best—it’s three hours more like ten hours of work that you do by yourself ...”</p> <p>“I started thinking maybe I’m not cut out to do this ‘cause I can’t pass, but then I sat down and thought well why didn’t I pass and I started thinking well I didn’t study ... so I started thinking that’s the reason behind it”</p>

Discussion

What is clear from the literature is that there is very little research into the experience of Indigenous medical students and the factors that affect their progress through medical school (10). By exploring the experiences of one group of Indigenous medical students in relation to a Pre-Medicine Program, this small qualitative study aims to increase our understanding of what it is that prepares and assists Indigenous students to make the transition into Medicine.

Student perceptions about how well the Pre-Medicine Program prepared them academically for the demands of first year Medicine were overwhelmingly positive, with several students saying it surpassed their expectations. However a confounding issue for the researchers was that if the preparation that the students received was as useful as they perceived it to be, why then did some report underperforming at different points in the following year of first year Medicine? Did their perceptions not match the reality of the program's effectiveness, or were there other factors at play? While the answer to this question is undoubtedly complex and requires further research, the students' own accounts provide part of the explanation, including factors such as inadequate exam preparation, poor study habits and test-taking skills, and even a sense of initial over-confidence. A number of the students have subsequently found tutors and have reported improvements in study habits. All of the students who participated in this study have continued in their studies, and in certain instances in particular, this suggests a high level of personal resilience (8).

It can be argued that the Pre-Medicine Program plays an important role in assisting students to develop resilience. Importantly, it is the shared aspirations, group identity and peer support amongst the students themselves that is pivotal in developing the capacity to deal with success and failure and to persist with medical studies.

A limitation of the study is the timing of the interviews. There is a time lag between when participants attended the Pre-Medicine Program and the subsequent interviews, a period of about nine months. However as the main purpose of the study was to find out from students how useful the Pre-Medicine Program was in introducing and preparing them for the reality of being a medical student, the timing of the study in effect captured the thinking of the students in 'real time' as they were undergoing the intensity of first year.

A key finding from this study is that the Pre-Medicine Program can provide an educational antidote for many of the reported barriers that Indigenous students face in obtaining similar educational outcomes to their non-Indigenous counterparts, particularly in Medicine. These barriers include unfamiliarity with the roles of health professionals; lower levels of academic achievement; isolation within university; unfamiliarity with academic language and medical jargon (2). The Pre-Medicine Program is an important intervention at a critical psychological point when students are deciding whether to study Medicine and whether they are 'cut out for it'. The timing of the Pre-Medicine Program gives students some of the necessary knowledge and skills that will enhance their chance of getting established on a pathway of success and improve the quality of the learning experience. What can also be drawn from the study is that knowledge necessary to succeed extends beyond the curriculum, and learning is not simply about a transfer of information. Succeeding academically is inextricably related to confidence and having realistic expectations.

The qualitative findings from this study give strong support for the extent to which the Pre-Medicine Program prepared Indigenous medical students for the demands of first year undergraduate medical studies. While further quantitative research is needed to investigate whether the benefits of the Pre-Medicine Program are associated with improved retention and graduation rates, the findings of this study give some insight into the specific learning needs of a group of Indigenous medical students. Their perceptions confirm the important place that pre-medicine programs have in a continuum of recruitment and retention strategies aimed at increasing the number and proportion of Indigenous Medical Practitioners in Australia.

References

1. Australian Indigenous Doctors' Association. Aboriginal and Torres Strait Islander Doctors and Students. 2009; Available from: <http://www.aida.org.au/pdf/Numbersofdoctors.pdf>.
2. Minniecon D, Kong K. Healthy Futures: Defining Best Practice in the recruitment and retention of Indigenous medical students. Report: Australian Indigenous Doctors' Association 2005 September.
3. Lawson KA, Armstrong RM, Van Der Weyden MB. Training Indigenous doctors for Australia: Shooting for goal. *Medical Journal of Australia*. 2007;186(10):547-50.

4. Jackson EWP, McGlinn SMS, Rainey MP, Bardo HRP. MEDPREP-30 Years of Making a Difference. *Academic Medicine*. 2003;78(5):448-53.
5. Lipscomb WD, Mavis B, Fowler LV, Green WD, Brooks GL. The effectiveness of a postbaccalaureate program for students from disadvantaged backgrounds. *Academic Medicine*. 2009;84(SUPPL. 10).
6. Arkles R, Guthrie J, Sutherland S, Dance P, Dejanovik A, McDermott D, et al. Barawal Yana: Better strategies for the recruitment, retention and support of Indigenous medical students in Australia—A NSW Report. Chief Investigators: Dr David Sutherland, Dr Lisa Jackson Pulver, A/Prof. Sue Green. Report: Murru Marri Indigenous Health Unit, University of New South Wales 2007 September.
7. D'Antoine N, Paul D. Pre-medicine and Pre-dentistry Program: Creating Opportunity for Indigenous Students. *Aboriginal and Islander Health Worker Journal*. 2006 May/June 2006;30(3):6-8.
8. Chur-Hansen A, Herbert P, Caruso J, Barrett R. Indigenous Students Entering a Course in the Health Professions: A Qualitative Study of their Aspirations and Expectations. *Aboriginal and Islander Health Worker Journal*. 2008 Sept/Oct 2008;32(5):19-24.
9. Drysdale M, Faulkner S, Chesters J. Footprints Forwards: Better strategies for the recruitment, retention and support of Indigenous medical students. Final Project Report. Moe: Monash University School of Rural Health 2006.
10. Garvey G, Rolfe IE, Pearson SA, Treloar C. Indigenous Australian medical students' perceptions of their medical school training. *Med Educ*. 2009 Nov;43(11):1047-55.
11. Nakata M, Nakata V, Chin M. Approaches to the academic preparation and support of Australian Indigenous students for tertiary studies. *The Australian Journal of Indigenous Education*. 2008;37(Supplement):137-45.
12. Ritchie J. Not everything can be reduced to numbers. In: Bergland C, editor. *Health Research*: Oxford University Press; 2001. p. pp. 149-73.