

The Miroma Bunbilla Pre-entry to Medicine program for Aboriginal and Torres Strait Islander people

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Introduction

The University of Newcastle and the University of New England both offer a five-year Bachelor of Medicine Program that delivers the same curriculum content, known as the Joint Medical Program. In 2012, the Miroma Bunbilla Pre-entry to Medicine program was developed to increase the number of Aboriginal and Torres Strait Islander students successfully completing the Joint Medical Program. This case study reports on the development, implementation and evaluation of the first pilot program of Miroma Bunbilla by the Discipline of Aboriginal and Torres Strait Islander Health in the School of Medicine and Public Health at the University of Newcastle, and discusses student outcomes.

The University of Newcastle has played an historic role in graduating Aboriginal and Torres Strait Islander students from its medical program. Professor Sandra Eades and Dr Louis Peachey were the first Aboriginal doctors to graduate from the University in 1985. Since that time the School of Medicine and Public Health has made the recruitment and graduation of Aboriginal and Torres Strait Islander medical students a priority with a number of targeted initiatives which began with Indigenous entry program developed after researching the barriers to enrollment and exploring pre-entry programs offered in Canada and New Zealand (Lawson, Armstrong & Van Der Weyden 2007; Kay-Lambkin, Pearson & Rolf 2002).

In 2004 the total number of Aboriginal and Torres Strait Islander medical students in Australia was 102, with 24 (23.5%) enrolled in the Joint Medical Program (Minniecon & Kong 2005). In 2014 it was estimated that there were 260 Aboriginal and Torres Strait Islander medical students (AIDA 2014), 48 (18.46%) of whom were enrolled in the Joint Medical Program. In that same year, there were around 180 Aboriginal and Torres Strait Islander doctors in Australia (AIDA 2014); of these 66 (36.6%) graduated from the University of Newcastle or the University of New England.

The requirements for the Aboriginal and Torres Strait Islander Entry Pathway at the University of Newcastle, and more recently through the Joint Medical Program that commenced in 2006, have changed over the years. In the mid 1990s, Aboriginal and Torres Strait Islander applicants were interviewed in their home community prior to being invited to attend a mandatory, one-week pre-entry to medicine program. Following the completion of the program, the applicants were then assessed based on their performance during the week – along with their academic ranking and the medical program interview – to determine if they would be offered a place. This program ceased

in the late 1990s and was replaced with an assessment of the applicant's academic ranking, an interview (the same as for all other applicants) and an interview to confirm the Aboriginality of the applicant.

From 2008–2011 a one-week orientation program was offered to successful applicants prior to the commencement of Semester 1. In addition, ongoing student support also involved one-on-one and group tutoring for each subject via the Indigenous Tutorial Assistance Scheme, cultural camps, pastoral support and a mentoring program. Additional student support was provided by a past graduate of medicine from the University of Newcastle Aboriginal and Torres Strait Islander Entry Pathway, who was employed to provide intensive academic support.

Despite these additional supports, it was concerning that Aboriginal and Torres Strait Islander medical students were still not achieving the required marks to continue through to graduation. In one of the student cohorts of that period, only 25% of students commencing first year continued on to second year, with the completion of the medical science and professional practice courses being identified as significant barriers to success. Outcomes such as this motivated a review of the selection and support processes and resulted in a revision of the Aboriginal and Torres Strait Islander entry process.

Aims and Objectives

The Miroma Bunbilla Pre-Entry to Medicine program was developed as a five-day intensive course with the aim of better preparing Aboriginal and Torres Strait Islander students for the Joint Medical Program with a view to improving graduation rates. Miroma Bunbilla was offered as a pilot program in 2012 and 2013, and following a positive evaluation became a mandatory component of the Aboriginal and Torres Strait Islander Entry Pathway into the Joint Medical Program.

The objectives of Miroma Bunbilla program are to:

- strengthen the selection process for potential Aboriginal and Torres Strait Islander medical students;
- ensure Aboriginal and Torres Strait Islander students accepted into the Joint Medical Program have the required skills to graduate; and
- provide appropriate support for Aboriginal and Torres Strait Islander students to graduate from the Joint Medical Program.

Approach

Before planning of the Miroma Bunbilla program commenced, we conducted a review of the literature and a web search of existing pre-entry programs offered in universities across Australia. The review highlighted that there was no definitive length or common content for any of these pre-entry programs. While many universities had no pre-entry programs for Aboriginal and Torres Strait Islander students, those that did varied in length from four weeks to 12 months (LIME 2014).

The Miroma Bunbilla program was funded and developed by the Wollotuka Institute and the School of Medicine and Public Health. The name Miroma Bunbilla comes from the Awabakal language and means 'Permit... take care of', which is reflective of the program's aim to take care of and support

Aboriginal and Torres Strait Islander medical students. It was developed as a five-day pilot program that aligned with the first year learning outcomes of the Joint Medical Program. Five days was chosen as a suitable length of time to ensure the program was accessible to prospective students, after taking into consideration their family, community and work commitments (Holliday 2013).

Once finalised, the program was presented for approval to the Joint Medical Program Admissions Committee and the Pro Vice-Chancellor (Academic) both of whom approved it to be offered as a pilot program in 2012 and 2013. As a pilot program, an evaluation of its content and structure was an important element. The subsequent evaluation of the program took into account the assessment tools used by tutors to rate students' performance, students' participation and engagement in the activities, and the method of collation and review of the marks that informed offers of placement in the Joint Medical Program (Holliday 2013). Those participating in the pilot programs of 2012 and 2013 still had to apply through the existing channels to be offered a place in the Joint Medical Program, and were given no special consideration as a result of participating in the Miroma Bunbilla program (Holliday 2013).

Aboriginal and Torres Strait Islander applicants who applied to the Joint Medical Program through the Universities Admissions Centre were contacted by phone. Those applicants who satisfied the minimum academic criteria, or whose results were pending, were invited to attend. In addition, those students who were required to repeat Year 1, Semester 1 were invited to participate.

Regular communication by phone, email and mail was an important element of engaging with the students. An information booklet was specifically designed that provided information about the University, the program and the accommodation (Holliday 2013). Accommodation was arranged at the Durungaling Aboriginal Hostel and a mini bus was rented to transport the students to Wollotuka and drop them back to the hostel in the evening. Staff of Wollotuka prepared all meals.

The program timetable and content were developed to maximise the experience for participants and to measure the student performance with assessment, feedback and evaluation. On the first day, time was allowed for introductions and information about the program, including an orientation of the anatomy laboratories (mandatory for all students). There was also a discussion about the problem-based learning model, the opening of the first learning problem and the requirements of 15-minute viva voces (oral presentations). Time was allocated throughout the week for research so that students could prepare for these tasks.

Across the week, two problem-based learning tasks were included, each having an opening and closing session. The aim of this was to provide participants with an insight into elements of Year 1 of the medical program. Students were assigned groups and given different tutors for each task. Tutors then assessed students according to the relevance of their contribution to the topic, participation, and how they worked within a group setting.

On the first day of the program each student was asked to select a learning target from one of five topics that was to be the subject of their viva voces to be presented on Day 4. Two tutors were assigned to assess each student using the following criteria: how the student was able to summarise the problem; how the learning target arose; their approach to the learning target; the information from the learning target; and how they conceptualised the learning target.

Staff members also conducted an individual assessment of each student's participation, motivation, timeliness and teamwork, and Confirmation of Aboriginality interviews were scheduled throughout the week. Toward the end of the program, Multiple Station Interviews and Personal Quality Assessments (Personal Qualities Assessment, 2015) were undertaken, aligning with the requirements for all applicants to the Joint Medical Program (University of Newcastle 2015).

An orientation workshop was organised for the problem-based learning tutors to discuss the program, their role, the assessment tools and the content of the evaluation. To further strengthen the program, current Joint Medical Program Year 1 tutors were engaged to facilitate the problem-based learning tasks (Holliday 2013). At the end of the program, the students completed an evaluation that gave them the opportunity to reflect on the value of the program and the ways in which it could be improved. At the same time, tutors completed the tutor feedback sheets, which gave them the opportunity to reflect on the program and the assessment tools, and to suggest improvements to the overall assessment of future participants.

Results

In total, two cohorts of applicants attended the Miroma Bunbilla pilot programs in 2012 and 2013. In 2012 a total of 18 Aboriginal and/or Torres Strait Islander people attended the Miroma Bunbilla Pre-entry to Medicine program, with offers of a place in the Joint Medical Program made to 12 of them. All of the offers were accepted with 11 commencing in 2013 and one deferring until 2014. Participants of Miroma Bunbilla who were not offered a place in the Joint Medical Program were later contacted, given feedback and offered alternative study pathways to allow them to apply again at a later date. Three students indicated they would be commencing other programs and then reapplying in 2013.

A multi-layered approach to student recruitment and graduation is required as single strategies will have little or no impact (Watts et al. 2011). Thus, the students who accepted their offer to the Joint Medical Program were encouraged to enrol in the Summer School courses of Introduction to Human Biology, Foundation Chemistry and Introduction to Physics, which are offered at the University of Newcastle at no cost to the student. The students were also invited to a two-day orientation workshop, which was held prior to the commencement of Semester 1. As part of this orientation, a first aid course was offered and students were given an opportunity to complete the required paperwork for tutoring via the Indigenous Tutorial Assistance Scheme and scholarships.

Discussion

Through their evaluations, students provided constructive feedback on how to improve future programs. Some of these suggestions included the following:

- amend the scheduling of the problem-based learning opening and closing days to allow more time for research;
- include a Fixed Resource Session (lecture) after the anatomy laboratory to reflect the medical program curriculum;
- include visits to the University, John Hunter Hospital and Awabakal Aboriginal Medical Service;

- provide temporary library access to allow the participants to research problem-based learning tasks and viva voce;
- provide clear information regarding footwear requirements for the laboratory; and
- allow time in the laboratory session to mark and discuss the worksheet.

Other learnings from the pilot program include:

- involving staff from Oorala, University of New England to work in partnership with staff at the University of Newcastle;
- ensuring current Aboriginal and Torres Strait Islander students are there to discuss their experiences with participants;
- inviting the Head of School and Deputy Head of School and Program Officer of Medicine and Public Health to meet the participants and answer any questions;
- asking the Scholarships and Indigenous Tutorial Assistance Scheme Co-ordinators to provide information; and
- inviting Aboriginal Employment Co-ordinators from the Hunter New England and Central Coast Local Health District to discuss employment opportunities.

Successes

Although it is early days, there are promising outcomes from the two Miroma Bunbilla pilot programs, with all 11 students completing Year 1 with a 100% retention rate in 2013 (Holliday 2013).

The students who commenced the Joint Medical Program in 2013 after participating in the pilot program were asked to give feedback about the usefulness of the Pre-entry to Medicine program, six weeks into Semester 1. The responses were overwhelmingly that the program, especially the problem-based learning component, had been invaluable to their learning experience. In particular, it had helped students to become aware of the depth of knowledge required for the learning targets (Holliday 2013).

Throughout the week of the Miroma Bunbilla program there is an opportunity to assess the communication skills and ability of the participants to adapt to a new learning environment. In some cases, there was a noticeable change in the students over the course of the program, with several students being shy and introverted at the beginning, but by the end of the week participating actively as team members. This also gave the staff insight into the kinds of academic and tutorial support that participants would need if they were offered a place in the Joint Medical Program (Holliday 2013).

The students who had completed the Miroma Bunbilla program had formed relationships and were familiar and comfortable with each other. This provided an added support mechanism for those who later started the Joint Medical Program (Holliday 2013).

Challenges

The challenges faced when developing alternative pathways into medicine for Aboriginal and Torres Strait Islander people are multi-faceted. These include creating entry processes for potential students who may not meet the standard academic entry requirements (Shannon 2004), and countering the idea that by differing the entry requirement there is a risk of also lowering academic standards (Hensley, cited in Lawson, Armstrong & Van Der Weyden 2007). It was, therefore, important that the Miroma Bunbilla program was carefully developed and piloted.

Although the program was fully supported by the Wollotuka Institute and the School of Medicine and Public Health, approval for the 2012 program was only given three and a half months before it was scheduled to start. This resulted in a number of challenges around scheduling, sending out information to applicants, securing accommodation and confirming staffing – just to name a few (Holliday 2013).

When planning the Miroma Bunbilla program, another challenge was timing. We needed to ensure that the scheduling aligned with that of programs from other universities, the completion of school and university examinations, and the Joint Medical Program interviews for students. If times conflicted with any of these considerations, applicants may have had to choose another medical program.

Conclusion

The outcomes of the 2012 Miroma Bunbilla Pre-entry to Medicine program are preliminary and will form part of continuing research to examine the efficacy of the program and to improve student recruitment, retention and graduation (Phillips 2004). Ethics approval will be sought to allow for ongoing evaluation both to measure and to report on student outcomes. It is hoped there will be a future opportunity to review the outcomes of the participants in the Miroma Bunbilla Pre-entry to Medicine program who are also offered a place in the Joint Medical Program.

The Miroma Bunbilla Pre-entry to Medicine program has now been approved by the Senates of the University of Newcastle and the University of New England. From 2014 it has been a mandatory component Aboriginal and Torres Strait Islander pathway and forms part of a multi-layered approach to student recruitment (Watts et al. 2011).

A further initiative being planned to strengthen Aboriginal and Torres Strait Islander entry is to analyse the results of the Personal Qualities Assessment, which is a psychometric, non-cognitive admissions test (University of Newcastle 2014). By collating the results of those Aboriginal and Torres Strait Islander people completing the Personal Qualities Assessment, we will have the data needed to identify any cultural biases, with a view to using the results to inform the selection process of Aboriginal and Torres Strait Islander students to the Joint Medical Program (Holliday 2013).

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In the initial planning stages of the Pre-entry to Medicine program, staff from the University of Newcastle visited the University of Western Australia and met with Professor Helen Milroy and staff; there were also discussions with other universities. The information gained from these visits and discussions were invaluable.

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