Making a difference: the early impact of an Aboriginal health undergraduate medical curriculum

David Paul, Sandra Carr and Helen Milroy

ABSTRACT

Objective: To describe the implementation of an integrated Aboriginal health curriculum into the medical course at the University of Western Australia (UWA) and the early effect on students' perceptions of their knowledge and ability in the area of Aboriginal health.

Design, setting and participants: Final-year medical students at UWA in 2003 (first cohort) and 2004 (second cohort) were surveyed by questionnaire (with answers on a five-point Likert scale) to assess their attitudes to various aspects of Aboriginal health. A subset of students provided open-ended comments on key priorities in Aboriginal health, cultural security and suggestions for Aboriginal health policy.

Interventions: Integrated learning experiences were implemented within each year of the medical course, based on specific learning outcomes in Aboriginal health.

Main outcome measures: Changes in students' self-perceptions of their preparedness for and future commitment to working for change in Aboriginal health.

Results: Response rates were 76% and 85% in the 2003 and 2004 cohorts, respectively. Compared with first-cohort students, second-cohort students were more likely to agree with items relating to their preparedness and ability to work with and care for Aboriginal and Torres Strait Islander people ($P < 0.05$); second-cohort students also reported greater preparedness to advocate and improve the health of Aboriginal people ($P < 0.05$); 65% of respondents in the second cohort (versus 34% in the first) agreed they had a social responsibility to work for change in Aboriginal health ($P < 0.05$).

Conclusion: With a relatively small amount of targeted and structured teaching and learning in Aboriginal health, significant shifts in students' self-perceived levels of knowledge, skills and attitudes are possible.

MJA 2006; 184: 522–525

Health care workers' attitudes to and understanding of Aboriginal people do not occur in isolation and often reflect the same narrow ethnocentric views commonly held by other non-Aboriginal Australians.[1] Since the 1970s, many attempts have been made to introduce issues relevant to Aboriginal and Torres Strait Islander peoples' health into medical curricula.[2-6] All of these have focused on single events or activities in a single year of the medical course.[6]

Despite the presence of Indigenous health units within at least two medical schools in Australia in the late 1990s (at the University of Western Australia [UWA] and the University of Newcastle), there was increasing concern about the relative paucity of teaching of Aboriginal health to all health students.[7]

Both the Royal Commission into Aboriginal Deaths in Custody and the National Aboriginal Health Strategy made recommendations on improving the education of health care practitioners in relation to Aboriginal health issues.[8,9] The recommendations included guidance on the content and manner in which Aboriginal health curricula should be developed and delivered, with a particular emphasis on involvement of Aboriginal people. Countering assumptions and stereotypes requires moving beyond knowing about cultural appropriateness towards adopting culturally secure practice.[10] In a health context, "cultural security" means that health services are delivered in such a manner and setting that no person is "afforded a less favourable outcome simply because they hold a different cultural outlook".[11] Central to achieving effective change in this area is recognising that Aboriginal health is an important area of study that requires allocation of adequate time in the curriculum and sufficient teaching resources.[7] This was a key recommendation of the Committee of Deans of Australian Medical Schools Indigenous health curriculum framework project.[12]

Here we describe how UWA has recently embarked on such a program within its medical course. We document early findings on final-year students' perceptions of their preparedness, ability and future commitment in relation to Aboriginal health.

Changing the Aboriginal health curriculum at UWA

Beginning in 1984, final-year (Year 6) medical students at UWA were given a 2-hour seminar on Aboriginal health before starting their rural general practice placement.[3] In 1996, a guest lecture and a tutorial were added, bringing to 6 hours the maximum formal teaching allocation in Aboriginal health over the 6-year course (David Atkinson, former Director, Centre for Aboriginal Medical and Dental Health [CAMDH], UWA, personal communication).

The CAMDH was established in 1996. Its specific roles were to improve the recruitment and retention of Indigenous students; to develop Aboriginal health teaching within the Faculty of Medicine, Dentistry and Health Science; and to provide health-related support and resources for Aboriginal communities and organisations.

In 1999, as a part of the Faculty's submission to the Australian Medical Council for a new curriculum, CAMDH staff proposed the introduction of a comprehensive, course-long curriculum in Aboriginal health. The Australian Medical Council approved the new curriculum, which began to be progressively introduced in 2000 with the new intake of Year 1 students. The first cohort of students to experience the full core curriculum in Aboriginal health completed their final year in 2005, having had a minimum of 37 hours of direct teaching in the area. Some had had well over 150 hours, depending on how many Aboriginal health options they chose. Coexistent with the introduction of these curriculum changes was the establishment, in 2002, of the Rural Clinical School (RCS) within the Faculty. The RCS provides rurally based education for 25% of Year 5 students, who spend the whole of that year in one of eight sites across Western Australia.

Central to developing and implementing the integrated Aboriginal health curriculum has been the articulation, for each year level, of learning outcomes aimed at developing knowledge, skills and attitudes (Box 1).

Student cohorts

The first (baseline) cohort (Year 6, 2003) had a maximum of 3 hours' teaching in

Aboriginal health in Years 1 to 3; three problem-based-learning tutorials with some Aboriginal health content in Years 4, 5 and 6; and an Aboriginal health orientation seminar before their rural general practice placement in Year 6. This added up to a total of 7 hours of formal teaching and learning in Aboriginal health. Eight students in this cohort participated in the RCS program in their fifth year.

The second cohort (Year 6, 2004) had, in addition to the experiences of the 2003 cohort, a structured, small-group reflective program in Year 5, involving two 1.5-hour tutorials and a self-directed, self-chosen task. This resulted in a total of 11 hours of formal teaching and learning in Aboriginal health throughout their course. Twenty-one students in this cohort participated in the RCS program in their fifth year.

1 Year-level learning outcomes for the Aboriginal health curriculum at the University of Western Australia

Year	Learning outcomes
1	Explain the impact of historical, cultural and social factors on Aboriginal and Torres Strait Islander peoples' health and health care
2	Describe and discuss health and health care issues for Aboriginal and Torres Strait Islander peoples today
3	Discuss the special health care needs of Aboriginal and Torres Strait Islander peoples and demonstrate appropriate strategies to meet these needs
4	Demonstrate, through discussion, the ability to work in partnership with Aboriginal and Torres Strait Islander peoples, acknowledging the meaning that they attach to health and illness, including the cultural and other origins of that meaning, and taking into account their coping strategies
5.1	Illustrate, with examples, health and health care for Aboriginal and Torres Strait Islander peoples today
5.2	Apply knowledge of the sociocultural context of health for Aboriginal and Torres Strait Islander peoples
5.3	Plan and describe how to provide comprehensive, multidisciplinary health care and health services for Aboriginal and Torres Strait Islander peoples
Graduate	Demonstrate a working knowledge of the sociocultural context of health care of Aboriginal and Torres Strait Islander peoples and an ability to plan and provide comprehensive, multidisciplinary culturally secure care ◆

METHODS

Data collection

All Year 6 students in 2003 and 2004 were asked to complete a coded, confidential, 24-item questionnaire (the "Impact of the Aboriginal health undergraduate curriculum [IAHUC]" questionnaire) (Box 2) covering three main areas of Aboriginal health:

- Aboriginal health as a social priority;
- Aboriginal health issues, service provision, student preparedness and ability; and
- Future commitment towards Aboriginal health.

Participants were asked to rate their agreement with each statement on a five-point Likert scale (from 1 [no agreement] to 5 [full agreement]).

Participants were also asked to provide open-ended comments relating to key priorities in Aboriginal health, cultural security and suggestions for Aboriginal health policy. The content of the open-ended data was analysed to identify recurring themes and possible differences between cohorts in the students' responses.

Our survey was conducted in the first week of the students' last clinical rotation, during allocated time. In addition to the 24-item survey, students were asked to complete a "Preparedness to practise" questionnaire that included two items asking students to rate how well prepared they were to perform or practise skills and abilities related to Aboriginal health (Box 3). Students were administered this questionnaire at the beginning of Year 6 and, for the 2004 cohort, again on the first day of internship.

The IAHUC questionnaire was developed by the authors and piloted with a small group of four academics to improve the content validity and reliability of the scale. The "Preparedness to practise" questionnaire is an established evaluation tool within the Faculty of Medicine, Dentistry and Health Science and has a Cronbach α value of 0.95, indicating it to be internally consistent.

Statistical analysis

The median score and interquartile range for each questionnaire item, as well as the proportion of respondents expressing high or full agreement with each statement (ie, giving a rating of 4 or 5), were calculated using SPSS software version 11.5 (SPSS Inc, Chicago, Ill, USA). A Mann–Whitney *U* test was used to test for differences between cohorts.

RESULTS

Eighty-four of 110 Year 6 students (76%) responded to the IAHUC survey in the first cohort and 97/114 (85%) in the second cohort. The Cronbach α value for the IAHUC questionnaire was 0.84, indicating the scale was internally consistent. Between 35% and 75% of students and graduates responded to the "Preparedness to practise" survey (Box 3).

Median scores for IAHUC questionnaire items and the proportion of respondents agreeing with each statement are shown in Box 2. The highest level of agreement ($\geq$ 70%) in both cohorts was recorded for items related to Aboriginal health being a social priority, trust being a key issue for culturally secure health care, and feeling intimidated being a barrier to culturally secure health care.

Over 60% of respondents in both cohorts agreed that preventive health care in Aboriginal health was more important than curing sick Aboriginal people, that spiritual beliefs influence the health of Aboriginal people and that doctors need to think beyond the individual when considering Aboriginal health issues.

Items with the lowest level of agreement (< 30%) among respondents related to Aboriginal health care and service provision. Fewer students in the second cohort agreed that the health care issues for Aboriginal people were the same across Australia, but more agreed that their only role in improving Aboriginal health was in treating sick Aboriginal people in a hospital or clinic.

There was a significantly higher level of agreement among respondents in the second cohort on items relating to students' preparedness and ability to work with and care for Aboriginal and Torres Strait Islander people (Box 2). For example, students in the second cohort reported a higher ability to communicate with Aboriginal people and provide culturally secure health care. They also rated their preparedness to advocate and improve the health of Aboriginal people as higher. Sixty-five per cent of respondents in the second cohort agreed they had a social responsibility to work for change in Aboriginal health, and 48% agreed they would work for change in Aboriginal health

2 Impact of the Aboriginal health undergraduate curriculum survey: responses of Year 6 medical students (2003, 2004)

Item	Median score* (IQR) 2003†	Median score* (IQR) 2004†	*P*	% Agreement with item‡ 2003	% Agreement with item‡ 2004
Social priority					
1. The state of Aboriginal health is a social priority	4 (3–5)	4 (3.5–5)	0.703	71	70
2. Trust is key for culturally secure health care	4 (4–5)	4 (3.5–4)	0.048	83	73
3. Feeling intimidated is a barrier to culturally secure health care	4 (4–4)	4 (4–5)	0.963	79	73
Health service					
4. The Western medical model suits the health needs of Aboriginal people	2 (2–3)	2 (2–3)	0.097	31	12
5. The state of Aboriginal health depends on the availability of appropriate health services	4 (3–4)	4 (3–4)	0.999	59	57
6. The state of Aboriginal health is mainly due to lack of funding for health services	3 (2–3)	3 (2–4)	0.014§	12	26
7. Aboriginal people have the same level of access to health services as all other Australians	2 (2–3)	2 (2–3)	0.103	12	21
8. Aboriginal preventive health care is more important than being able to cure sick Aboriginal people	4 (3–4)	4 (3–4)	0.707	64	68
9. The health care issues for Aboriginal people are basically the same across Australia	2 (2–3)	3 (2–4)	0.001§	40	26
10. Aboriginal people should take more individual responsibility for improving their own health	4 (3–4)	4 (3–4)	0.225	61	51
11. Community control in Aboriginal health care services delivery is fundamental to the improvement of health for Aboriginal people	4 (3–4)	4 (3–4)	0.478	61	59
Preparedness and ability					
12. I feel well prepared by the UWA medical course to improve the health of Aboriginal people	3 (2.25–3)	4 (3–4)	< 0.001§	18	48
13. I feel well prepared by the UWA medical course to advocate for improvements in Aboriginal health	3 (2–3)	4 (3–4)	< 0.001§	20	56
14. I apply knowledge of Aboriginal health to provide culturally secure health care	3 (2.25–3)	4 (3–4)	< 0.001§	27	56
15. I practise equity in the provision of service by treating Aboriginal patients the same as all my other patients	4 (3–5)	4 (3–4)	0.262	64	59
16. I communicate appropriately with Aboriginal people	3 (3–4)	4 (3–4)	0.005§	38	61
17. I have a good understanding of the holistic concept of health in relation to Aboriginal matters	3 (3–4)	4 (3–4)	0.008§	39	57
18. The spiritual beliefs and practices of Aboriginal people have an influence on their health	4 (4–5)	4 (3–4)	0.021§	84	68
19. It is difficult to get Aboriginal people to adhere to medical treatment/advice	4 (3–4)	4 (3–4)	0.186	60	53
20. My only role in improving Aboriginal health is treating sick Aboriginal people in a hospital or clinic	2 (2–3)	3 (2–4)	0.007§	10	25
21. I have the ability to communicate effectively with Aboriginal patients by myself	3 (3–4)	4 (3–4)	< 0.001§	31	57
22. I need to think beyond the individual when considering Aboriginal health issues	4 (3–4)	4 (3–4)	0.684	73	68
Future commitment					
23. I will work for changes in Aboriginal health as a personal priority in my health practice	3 (2–3)	4 (3–4)	< 0.001§	21	48
24. I have a social responsibility to work for changes in Aboriginal health	3 (2.25–4)	4 (3–4)	< 0.001§	34	65

IQR = interquartile range. UWA = University of Western Australia. * On a five-point Likert scale. † *n* = 110 (2003); *n* = 114 (2004). ‡ Proportion of respondents expressing high or full agreement with each statement (ie, giving a rating of 4 or 5 on a five-point Likert scale). § Difference significant at 5% level. ◆

as a personal priority. The significant difference in student self-rated preparedness within the second cohort continued through to the commencement of their internship (Box 3).

Thirty-seven students in the first Year 6 cohort and 28 in the second cohort responded to the five open-ended statements (Box 4).

Data on IAHUC questionnaire responses of the RCS students in the 2003 and 2004 cohorts were not separately identified. However, 15/21 RCS students responded to the "Preparedness to practise" survey at the beginning of their internship in 2005. The RCS interns had a significantly higher perception of their ability to communicate with Aboriginal people and apply knowledge to provide culturally secure care than the urban-based UWA graduates.

DISCUSSION

We have shown that with a relatively small amount of targeted and structured teaching and learning in Aboriginal health, significant shifts in self-perceived levels of knowledge, skills and attitudes are possible. However, there is still room for improvement.

While students' self-rating of preparedness was a potential limitation, the results demonstrate positive effects of the additional learning experience offered to the students who completed Year 6 in 2004. There were significant improvements in students' preparedness to recognise Aboriginal health as a social priority and in their perceived ability, and future commitment, to work for changes in Aboriginal health.

Students' responses to the open-ended statements seem to demonstrate a shift from an individual focus towards a more meaningful understanding of culturally secure care at a community level. However, as only a third of students from each group provided open-ended feedback, this conclusion can only be very tentative.

The results reported here represent the beginning of a long-term evaluation to guide the refinement and expansion of the Aboriginal health curriculum in the medical course at UWA. We have already started to draw on our experience to develop further curriculum initiatives within the dental course at

3 Preparedness to practise survey: responses of Year 6 medical students (2003, 2004) and interns (2005)

Item	Median score* (IQR) Year 6 2003	Year 6 2004	Interns 2005	*P*	% Agreement with item† Year 6 2003‡	Year 6 2004‡	Interns 2005‡
I can communicate appropriately with Aboriginal people	3 (3–4)	4 (3–4)	4 (3–4)	0.005§	26	69§	49
I apply knowledge of Aboriginal health to provide culturally secure health care	3 (3–3)	4 (3–4)	4 (3–4)	< 0.001§	14	62§	53§

IQR = interquartile range. * On a five-point Likert scale. † The proportion of respondents expressing high or full agreement with each statement (ie, giving a rating of 4 or 5 on a five-point Likert scale). ‡ Response fractions: 82/110 (Year 6, 2003); 38/114 (Year 6, 2004); 64/107 (Interns, 2005). § Difference significant at 5% level. ◆

UWA. The development of reliable and valid assessment tools in the area of Aboriginal health is also a priority.

The Committee of Deans of Australian Medical Schools report offers a framework to guide the style, content and delivery of Aboriginal health curricula in medical programs.[12] We believe that, based on our experience, the keys to success in achieving learning outcomes are integrating the material presented, involving Aboriginal people in planning and provision of teaching and learning, and drawing on the skill and experience of the teachers.

It has been argued that "getting students out of urban hospitals and into places where Aboriginal people live is crucial to creating shifts in awareness and knowledge in relation to Aboriginal health".[6] We have shown that providing students with information and experiences that allow them to become better informed and challenge stereotypical attitudes and understandings does not require rural immersion. While experience in rural and remote areas can be challenging and effective, the majority of Aboriginal people live in urban areas, and the skills and abilities that practitioners need to work effectively with Aboriginal people apply equally in urban or rural settings.

The aim of the initiatives at UWA has been to ensure that our graduates in medicine will not only be more likely to provide culturally secure health care services, but will also be more likely to have an interest in and commitment to improving Aboriginal people's health. By educating medical students to be better informed, more experienced, and aware of the underlying issues, it is hoped that some of the barriers to access to health care services will be significantly reduced. Creating a more culturally secure health workforce is challenging, rewarding and achievable. Pursuing this path is essential, not only because of the important role medical education can make in improving Aboriginal health outcomes, but also because of its contribution to the larger issue of promoting better understanding and reconciliation.

4 Summary of 2003 and 2004 Year 6 students' open-ended responses (*n* = 65)

1. List the key priorities in Aboriginal health in Australia today. Both groups discussed access to health care and public health-related issues, but the 2003 cohort tended to focus more on individual diseases and the 2004 cohort more on health education and Aboriginal control.

2. Identify factors that are likely to influence the ability of Aboriginal people to adhere to health care treatment or advice. Both cohorts mentioned the importance of culturally appropriate care. The 2003 cohort tended to focus more on possible barriers for Aboriginal people (using words such as "prejudice" and "compliance"), whereas the 2004 cohort seemed to focus more on opportunities (using words such as "understanding" and "instruction").

3. What do you understand about the term "cultural security" in relation to health care services for Aboriginal people? Many respondents in the 2003 cohort stated that they did not know or wrote comments about the care being "culturally appropriate". The 2004 cohort wrote more expanded explanations of cultural security, such as "ensuring health care takes cultural issues into consideration" and "health care that is compatible with the culture".

4. Identify some possible solutions to the state of Aboriginal peoples' health in Australia. The predominant response from the 2003 cohort was to "produce more Aboriginal doctors". The 2004 cohort also documented the need for "more Aboriginal health care workers" and a broader community focus, including community-based "prevention and screening".

5. Identify what you, as a health care professional, intend doing about the state of Aboriginal peoples' health in Australia. Both groups documented similar comments about their intention to "work in rural areas", "practise culturally sensitive Aboriginal health care", "increase [their] own awareness", and "attempt to change stereotypes in friends and family". ◆

ACKNOWLEDGEMENTS

The support and guidance of Jill Milroy and all the staff of the School of Indigenous Studies have been pivotal in the development and sustainability of the Aboriginal health initiatives undertaken by the CAMDH. David Atkinson, as the initial Director of the CAMDH, played an instrumental role in the early development of, and support for, the curriculum changes described here. Former Dean of the Faculty, Lou Landau, provided essential support for these changes to the curriculum. For assistance with survey design, data collection and editorial comment we thank Giordana Hrga, Brian Sova, Gina Arena, Fiona Lake and Paula Edgill.

COMPETING INTERESTS

None identified.

AUTHOR DETAILS

David Paul, MB BS, BPolicyStudies(Hons), Senior Lecturer, Centre for Aboriginal Medical and Dental Health
Sandra Carr, RN, RM, MPH, Senior Lecturer, Faculty Education Centre
Helen Milroy, MB BS, FRANZP, Director, Centre for Aboriginal Medical and Dental Health
Faculty of Medicine, Dentistry and Health Science, University of Western Australia, Perth, WA.
Correspondence: david.paul@uwa.edu.au

REFERENCES

1 Kamien M. Aboriginal health care: between givers and receivers — a cultural chasm. *Current Affairs Bulletin* 1981; 58: 14-22.
2 Kamien M. Education in community medicine with an emphasis on the health of an Aboriginal community: a pilot project. *Med J Aust* 1975; 2: 509-513.
3 Kaufman A. Medical students and Aborigines: can prejudice be reduced? *New Doctor* 1984; 34: 24-26.
4 Rasmussen L. Towards reconciliation in Aboriginal health: initiatives for teaching medical students about Aboriginal issues. Melbourne: VicHealth Koori Health Research and Community Development Unit, University of Melbourne, 2001.
5 Copeman R. Medical students, Aborigines and migrants: evaluation of a teaching program. *Med J Aust* 1989; 150: 84-87.
6 Jamrozik K. Going bush: helping medical students learn from Aboriginal people. *Med J Aust* 1995; 163: 591-594.
7 Garvey G, Atkinson D. What can medical schools do to contribute to improving Aboriginal health? *New Doctor* 1999; 70: 34-36.
8 Johnston E, commissioner. Royal Commission into Aboriginal Deaths in Custody: national report. Canberra: Australian Government Publishing Service, 1991.
9 National Aboriginal Health Strategy Working Party. A national Aboriginal health strategy. Canberra: Australian Government Publishing Service, 1989.
10 Coker N, editor. Racism in medicine: an agenda for change. London: King's Fund, 2001.
11 Wilkes E, Houston S, Mooney G. Cultural security: some cost estimates from Derbarl Yerrigan health service. *New Doctor* 2002; 77: 13-15.
12 Phillips G. CDAMS Indigenous health curriculum framework. Melbourne: VicHealth Koori Health Research and Community Development Unit, University of Melbourne, 2004.

(Received 23 Feb 2006, accepted 10 Apr 2006) ❑