



THE AUSTRALIAN NATIONAL UNIVERSITY

**Centre for  
Aboriginal  
Economic  
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Research**



**Indigenous participation in health  
sciences education: recent trends in  
the higher education sector**

**R.G. Schwab and I. Anderson**

**No. 171/1998**

**Discussion Paper**

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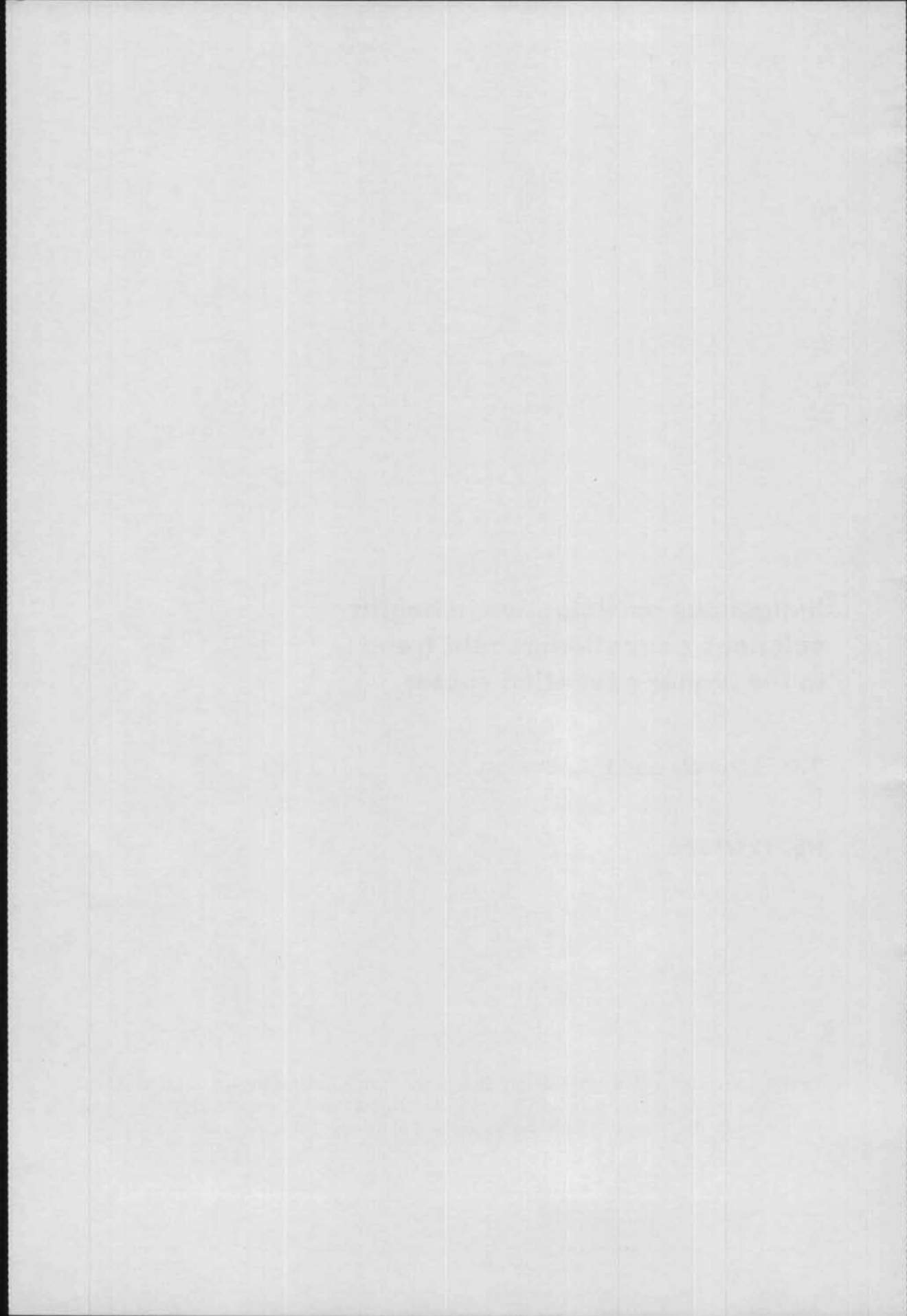
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ISSN 1036-1774  
ISBN 0 7315 2606 6

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## Summary

The focus of the exploratory research detailed in this paper is on indigenous participation in health sciences education and training. While there is evidence in recent years of increasing levels of participation in higher education in general by indigenous students, until now it has been unclear to what degree that trend has carried over into the health fields. The research was undertaken in order to identify and analyse available data pertaining to indigenous health training participation in higher education with an aim to assist policy makers in shaping workforce development efforts in the various health fields. The research articulates with a broad base of policy study, strategy and framework documents relevant to the continuing development of an indigenous health workforce.

## Data sources and key variables

This research involved analysis of higher education data compiled annually by the Department of Education, Training and Youth Affairs (DETYA), previously Department of Employment, Education, Training and Youth Affairs (DEETYA). These data are reported by the 43 (in 1997) public higher education institutions receiving government operating grants. The unpublished DEETYA data analysed in this study provide a useful depiction of current patterns of indigenous participation in higher education health training. The key variables used in this analysis are: field of study; State/Territory; level of course; and gender and enrolment type. These variables are framed within two types of student data sets used by DEETYA on commencing students and award course completions.

## Findings: commencing students

The analysis of data related to indigenous higher education students commencing studies in health reveals that:

- In 1997, there were 351 indigenous higher education students who commenced studies in the field of health, a decline from the previous two years.
- While the proportion of all Australian students in health was steady at about 11 per cent during the period 1995-97, the indigenous proportion dropped from 12 per cent to 9 per cent.
- 50 per cent of commencing students in 1997 were enrolled in the health support activities field of study, a field that includes courses of study related to health administration, counselling and surveying, environmental health and occupational health and safety.
- 34 per cent of 1997 students were enrolled in health sciences and technologies. Most in this field of study were nursing students.
- The number of indigenous students commencing studies in nursing declined by 32 per cent (from 132 to 90) between 1995 and 1997.

- The number of commencing students in medicine doubled between 1995 and 1997 (from 6 to 12), yet only one indigenous student commenced study in the field of dentistry in 1997.
- The highest numbers of commencing students in 1997 were in New South Wales (104) and Western Australia (71).
- Overall, between 1995 and 1997, declines in the numbers of commencing students were apparent in New South Wales, Victoria, Tasmania and for the multi-campus Australian Catholic University. Between 1995 and 1997, modest increases in commencing student numbers were apparent in the Northern Territory, Queensland and South Australia.
- Declines in the numbers of bachelors and non-award commencing students were offset by increases at both the pre-bachelor and post-bachelor levels.
- In 1997, males comprised 27 per cent of all commencing indigenous students in health; in comparison, 24 per cent of all Australian commencing students in health were male.
- Between 1995 and 1997, full-time enrolments increased while part-time enrolments declined; in 1997, 75 per cent of commencing students were full-time students.

### **Findings: course completions**

The analysis of data related to indigenous higher education students completing courses of study in health reveals that:

- Indigenous completions in health are rising, climbing 65 per cent between 1994 and 1996. There were 158 completions in 1996.
- Nearly half (45 per cent) of all completions in 1996 were in the health support field of study; these represent completions at lower qualification levels.
- 42 per cent of completions in 1996 were in health sciences and technologies (most of these were in nursing).
- In 1996, the proportion of indigenous students completing courses in health was higher than the proportion of all Australian students (about 17 per cent and 14 per cent, respectively).
- Most of the course completions in 1996 were in New South Wales, the Northern Territory and Queensland, accounting for over 75 per cent of all completions.
- 53 per cent of completions were at the bachelor's level in 1996.
- Indigenous students were far more likely to have completed lower level (pre-bachelor) courses in 1996 than other Australians (34 per cent versus 1 per cent), and indigenous students are much less likely to have completed higher level (post-bachelor) courses than other Australians (13 per cent versus 2.5 per cent).



- Completing students in 1996 were predominantly female (66 per cent) but the male proportion was growing. In comparison, females comprised 78 per cent of completing students among other Australians.
- 59 per cent of completions in 1996 were by full-time students.
- Females who completed courses in 1996 were nearly four times more likely than males to be external students.

### **Implications for policy**

Among the policy implications identified are:

- There is a need to implement a system for routine performance monitoring of indigenous student participation in the higher education health sector.
- There remains a need to develop an effective inter-sectoral relationship between departments such as DETYA, Department of Health and Aging (previously Department of Health and Family Services) and State and Territory governments with respect to the development of a coherent national strategic framework for Aboriginal health worker education and training.
- There is a need to promote the development of a national strategy involving a targeted recruiting program for indigenous students to undertake studies in health sub-fields relevant to specific indigenous health problems (e.g., nutrition, health counselling and podiatry).
- The number of indigenous students commencing studies in nursing, a field traditionally of interest to indigenous students, appears to be declining rapidly. Given the critical role played by nurses in health provision, particularly to remote indigenous communities, this issue requires immediate attention.
- The highest proportion of indigenous commencing students is in health support, a field of study which tends to yield a relatively lower level of qualification. The lack of depth in the current profile of students raises significant questions about existing capacity to develop and sustain a cadre of indigenous public health and health sciences leaders and policy makers.
- Indigenous health education students in the higher education sector are predominantly female. This pattern mirrors an existing gender bias in the public health field in Australia, but has significance for indigenous health care provision where cultural constraints surrounding interaction between the sexes may affect the willingness of indigenous men to seek out health care.
- A high proportion (75 per cent) of indigenous students in health sciences programs begin their studies as full-time students, but only 59 per cent of completing students are enrolled full-time (this is similar to the pattern for all Australians). This suggests that it is important that programs to promote and assist part-time study among such health workers be supported.

### **Acknowledgments**

The research conducted for this paper was originally undertaken by the Centre for Aboriginal Economic Policy Research (CAEPR) at the Australian National University under contract to the Department of Health and Family Services' (now Department of Health and Aging) Office of Aboriginal and Torres Strait Islander Health Services (OATSIHS). OATSIHS commissioned the research to identify and analyse available data pertaining to indigenous participation in post secondary health education in order to develop appropriate policy directions for workforce development in the various health fields.

Preliminary findings from the project were presented at a CAEPR seminar in late May 1998, and we are grateful for the many useful comments provided by participants in that seminar. We would also like to acknowledge the patient and helpful assistance of Wayne Shippley of the Department of Employment, Education, Training and Youth Affairs who facilitated access to the higher education sector data necessary for this project. Finally, we wish to thank Linda Roach and Hilary Bek for editorial assistance and Jennifer Braid for her layout and production efforts.

## Introduction

While there is evidence in recent years of increasing levels of participation in higher education by indigenous students, until now it has been unclear to what degree that trend has carried over into the health field.<sup>1</sup> The exploratory research detailed in this paper charts recent indigenous participation in health sciences education and training.

The research is significant in that it addresses the critical intersection of two of the core elements of current Aboriginal affairs policy: education and health. The findings are of particular value in the development of strategies to enhance indigenous participation in health sciences training in general and indigenous workforce strategies in particular. The research articulates with a broad base of policy study, strategy and framework documents relevant to the continuing development of an indigenous health workforce. Prominent among the themes to emerge from these varied documents are the promotion of appropriate and accessible education and training programs, an emphasis on holistic approaches, encouragement of models of community control and advocacy of a public health orientation with an emphasis on primary health care.

Recognition of the need to address the provision of health sciences education and training to indigenous health workers goes back many years, but issues related to workforce development gained national prominence in 1989 with the publication of the *National Aboriginal Health Strategy* (National Aboriginal Health Strategy Working Party 1989). Additional relevant policy discussion has continued to appear in a wide variety of contexts such as: the Australian Health Ministers' Advisory Council's *A National Framework for Education and Training Arrangements for Rural Health Service* (1994); the Commonwealth Department of Human Services and Health's *Public Health Workforce Education and Training Study* (Rotem 1995); and the National Health and Medical Research Council's *A National Training and Employment Strategy for Aboriginal and Torres Strait Islander Health Workers and Professionals Working in Aboriginal and Torres Strait Islander Health* (1997).

## The nature and limitations of the data

Various types of higher education data are compiled annually by the Department of Education, Training and Youth Affairs (DETYA), previously Department of Employment, Education, Training and Youth Affairs (DEETYA). These data are reported by the 43 (in 1997) public higher education institutions receiving government operating grants. The unpublished DEETYA data analysed in this study provide a useful depiction of current patterns of indigenous participation in higher education health training. The key variables presented here are framed within two types of student data sets used by DEETYA: commencing students and award course completions.

Commencing student data sets portray students who commenced study in the years 1995, 1996, and 1997.<sup>2</sup> Commencing students are persons who enrolled for the first time in a particular higher education course at a particular higher education institution between 1 April of the year prior to the reference year and 31 March of the reference year.

Award course completions data sets include those students who completed courses of study in the years 1994, 1995 and 1996.<sup>3</sup> Course completion data depict students who have successfully completed all the academic requirements of a course (e.g., required attendance, assignments, examinations, assessments, dissertations, practical experience and work experience); it does not designate the actual conferring of an award but provides a measure of the number of students who have completed specific courses of study.

## **Key variables**

In this paper, data on indigenous students involved in courses of study in the field of health within the commencing student and award course completions data sets are presented. The key variables examined within these sets are: field of study; State/Territory; level of course; and gender and enrolment type.

### **Field of study**

DEETYA field of study data are organised hierarchically within ten broad fields of study. The broad field of study, health, includes six major fields of study classifications: health—general; dentistry; health support activities; health sciences and technologies; medical Science, medicine; and rehabilitation services.<sup>4</sup>

### **State and Territory**

The report portrays participation of indigenous students in health sciences education by State and Territory. These data depict combined participation levels in individual higher education institutions in each State and Territory as well as participation in the Australian Catholic University which, as a multi-campus institution crossing State and Territory boundaries, is shown separately.

### **Level of course**

DEETYA group courses according to five levels: higher degree; other postgraduate; bachelor; other undergraduate; and enabling, non-award and cross-institution. Indigenous participation data presented in this report follow this system of classification.<sup>5</sup>

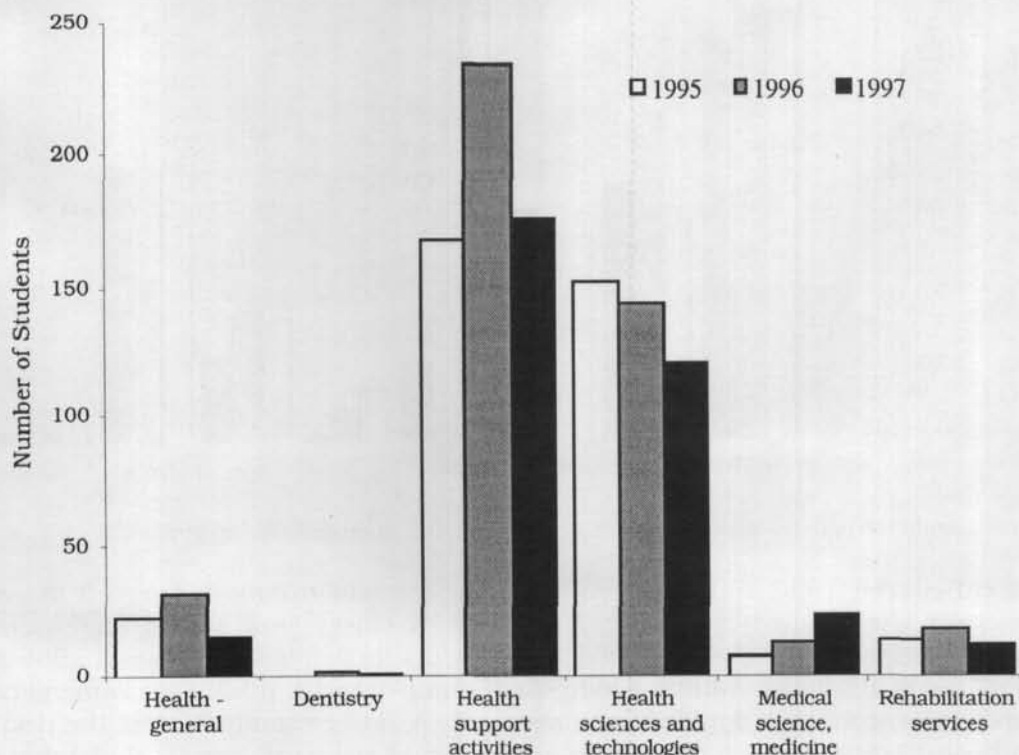
## Gender and enrolment type

Finally, the higher education data for indigenous participation is presented here according to student gender and enrolment type. Three specific enrolment statuses are used here: full-time, part-time and external. External enrolments are those units of study for which special arrangements are made whereby lesson materials and assignments are delivered to the student and attendance at the institution is incidental. This mode of study is often referred to as distance learning.

## Findings: commencing students

Figures 1 to 4 portray indigenous higher education students who commenced study in the health field during the years 1995–97. Figure 1 (and Appendix Table A1) shows numbers of commencing students across the six major fields of study for the period 1995–97.

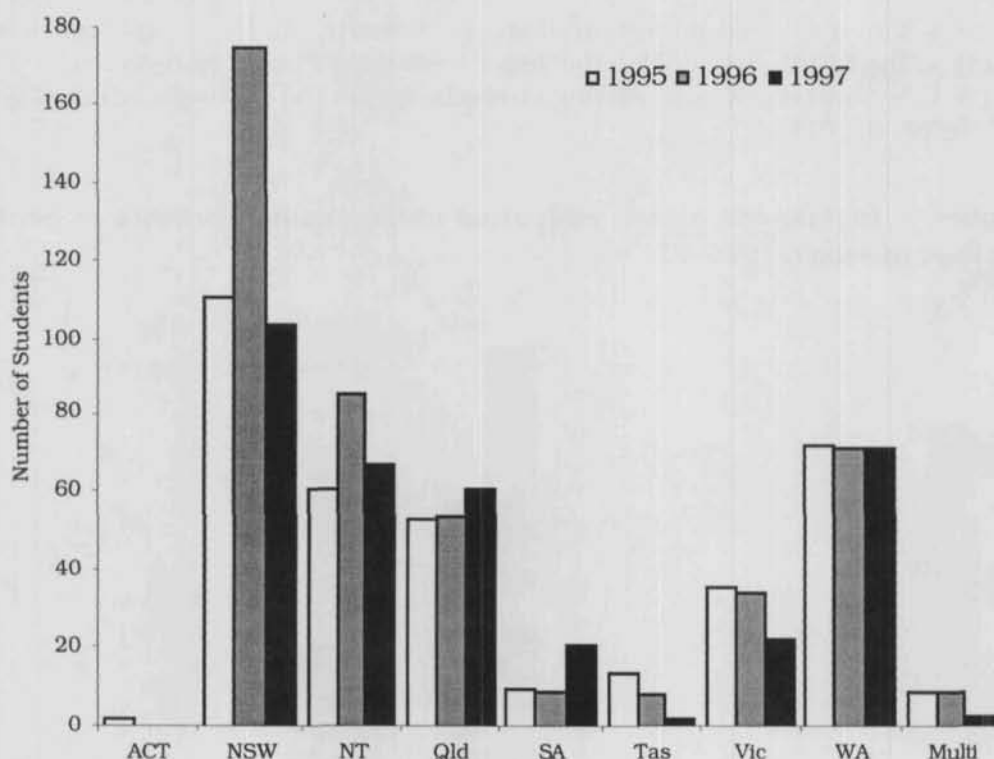
**Figure 1. Indigenous higher education commencing students in health by field of study, 1995–97**





Though total numbers of students increased from 368 to 446 during the period 1995 to 1996, the total dropped to 351 in 1997. Acknowledging that this research focuses on only three years of data, it is still useful to consider this decrease in the context of all students in the field. While all Australian commencing students in health have held relatively steady at about 11 per cent as a portion of all indigenous commencing students in all fields, indigenous commencing students have declined from 12 per cent to 9 per cent from 1996 to 1997.

**Figure 2. Indigenous higher education commencing students in health by State/Territory, 1995-97**



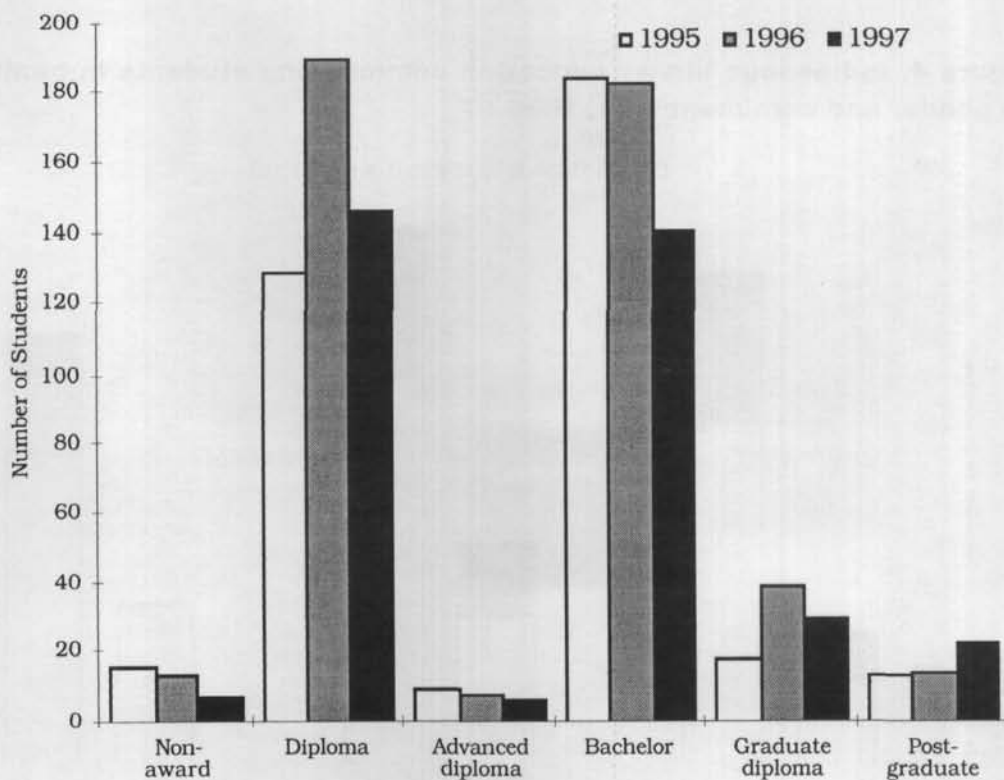
Note: Multi refers to the Australian Catholic University, an Australia-wide institution.

Between 1996 and 1997, commencing student numbers dropped in every category except medical science/medicine. A closer look at the increases in medical science/medicine commencing students indicates that between 1995 and 1997 medical science numbers increased from two to 12; during the same period, medicine enrolments doubled from six to 12. A closer examination of the decline in health science and technologies commencing students reveals that numbers dropped between 1995 and 1997 for nursing, basic (98 to 82 to 72) and nursing, post basic (34 to 26 to 18). The decline of commencing student numbers in 1997

was most apparent in the health support field of study and may reflect a return to more normal numbers after a dramatic increase in commencing students in 1996. The 1996 increase involved growth in the numbers of students in the health support, other field, an increase from 34 in 1995 to 80 in 1996. Of these, 55 were diploma courses, an increase from 19 in 1995.<sup>6</sup>

Figure 2 (and Appendix Table A2) shows the distribution of commencing indigenous higher education students among the various Australian States and Territories for the period 1995–97. The highest numbers of commencing students in 1997 were in New South Wales (104) and Western Australia (71). Between 1995 and 1996 commencing numbers increased in New South Wales and the Northern Territory. The increase was particularly large in New South Wales, but that increase was followed by a sharp decline in 1997.

**Figure 3. Indigenous higher education commencing students in health by level, 1995–97**



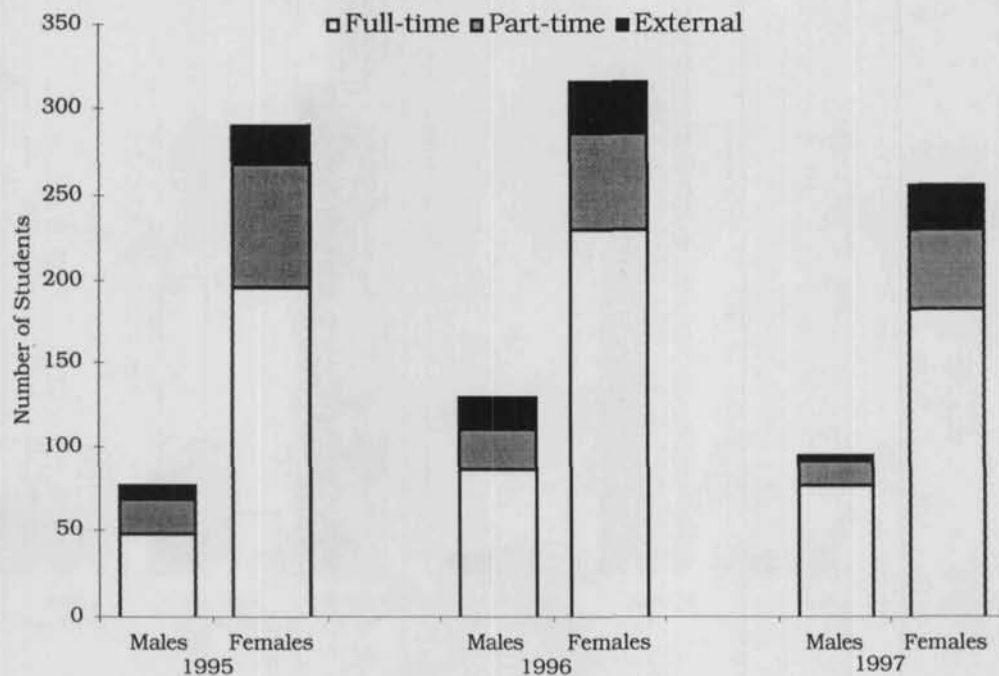
Overall, between 1995 and 1997, declines in the numbers of commencing students were apparent in New South Wales, Victoria, Tasmania and for the multi-campus Australian Catholic University. Between 1995 and 1997, modest increases in commencing student numbers were apparent in the Northern

Territory, Queensland and South Australia. Though numbers were very small, it is notable that in Tasmania numbers dropped seven-fold (from 14 to two) between 1995 and 1997. During this same period, the number of commencing students dropped markedly in New South Wales falling from 175 to 104 (nearly 40 per cent).

The lack of commencing students in Australian Capital Territory is notable. Though courses are available, the Australian Capital Territory had a relatively small proportion of Australia's commencing students in health in 1997 (256 of 29,498 students or 0.87 per cent), it is surprising there were no indigenous students commencing study there in 1996 or 1997.

Figure 3 (and Appendix Table A3) portray indigenous commencing students by course level. Numbers of commencing students at the bachelor's level decreased between 1995 and 1997 (from 184 to 141) while the number of non-award commencing students declined (from 15 to seven) during this same period. These declines were offset by increases at the lower diploma and higher graduate diploma and post graduate levels.

**Figure 4. Indigenous higher education commencing students in health by gender and enrolment type, 1995-97**



The proportion of indigenous commencing students in bachelor's level courses declined from 50 per cent to about 40 per cent of all courses between 1995 and 1997. Other commencing undergraduate award courses (diploma and

advanced diploma) increased marginally from about 38 per cent to around 43 per cent during this same period. Post-bachelor commencing courses increased from about 8 per cent to nearly 15 per cent.

The sudden increase in 1995 and subsequent decline in 1996 also should be considered in light of Gender and Enrolment Type figures. As Figure 4 (and Appendix Table A4) shows, declines in the numbers of commencing students between 1995 and 1997 have not been uniform across gender or enrolment type. Full-time enrolments, on the other hand, increased from 245 to 263 while part-time enrolments decreased from 95 to 58. During this same period, the number of female commencing students decline (from 290 to 256) while male numbers increased (from 78 to 95). In 1997, males comprised 27 per cent of all indigenous commencing students, an increase from 21 per cent in 1995. In comparison, among all Australian commencing students in 1997, males comprised 24 per cent.

### Findings: award course completions

Award course completions data presented here include those indigenous students who completed higher education courses of study in health in the years 1994, 1995 and 1996<sup>7</sup>. These data depict students who have successfully completed all the academic requirements of a course (e.g., required attendance, assignments, examinations, assessments, dissertations, practical experience and work experience).

**Figure 5. Indigenous higher education award course completions in health by field of study, 1994-96**

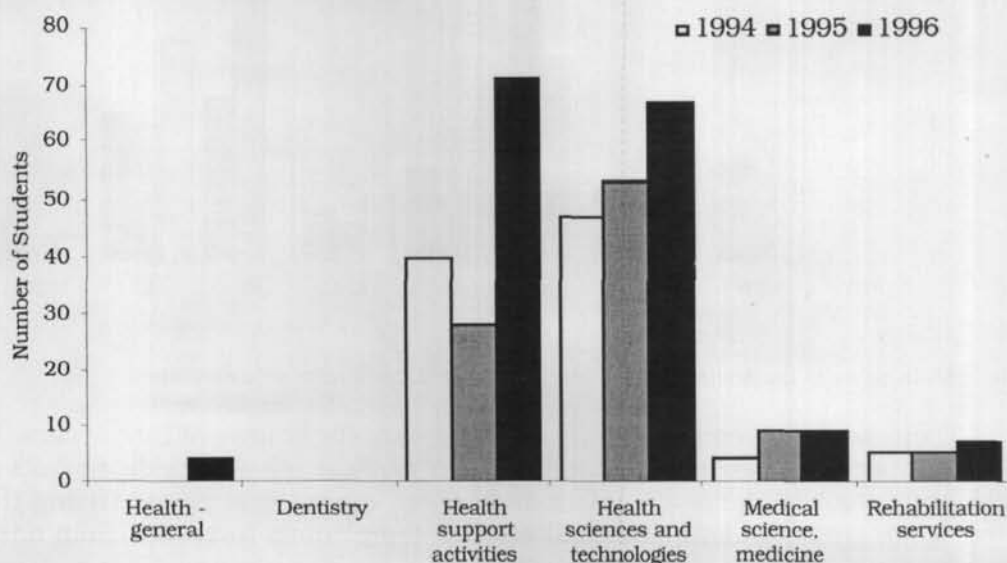
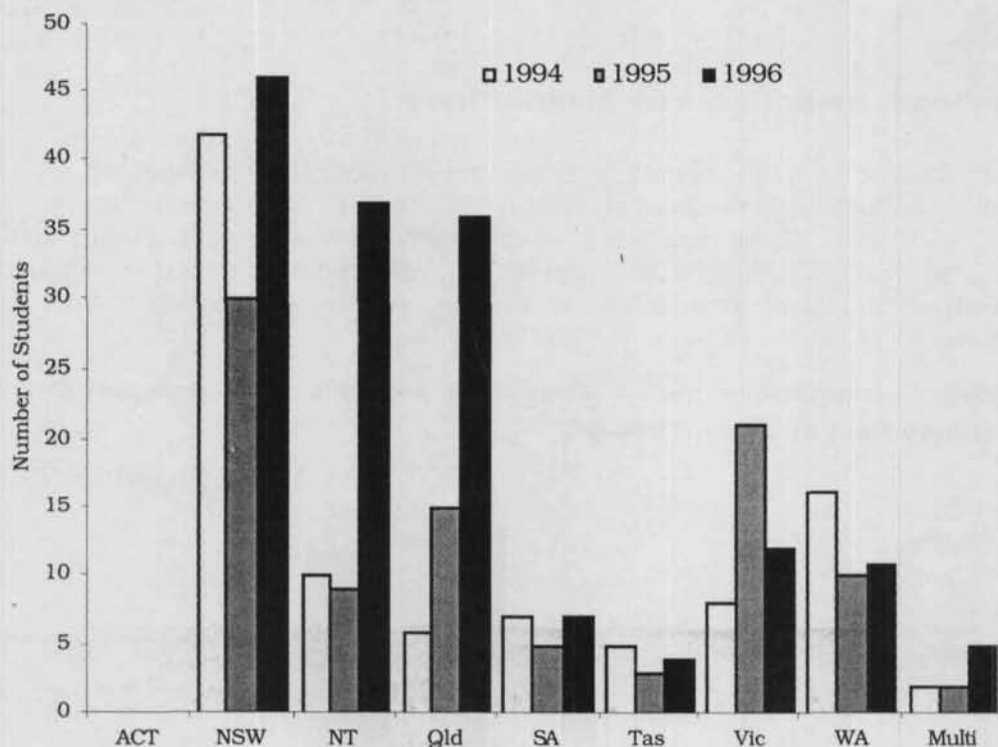


Figure 5 (and Appendix Table A5) shows the distribution of indigenous students for the years 1994–96 by major field of study; total completions during this period climbed by about 65 per cent (from 96 to 158). On closer examination, it can be seen that there was a marked decline in health support completions in 1995 (from 40 to 28) but a powerful rebound (to 71) in 1996. In addition, nearly half (45 per cent) of all completions in 1996 were in the health support field of study; typically, these completions are at lower qualification levels. Another 42 per cent of completions in 1996 were in health sciences and technologies (most of these were in nursing).

**Figure 6. Indigenous higher education award course completions in health by State/Territory, 1994–96**



Note: Multi refers to the Australian Catholic University, an Australia-wide institution.

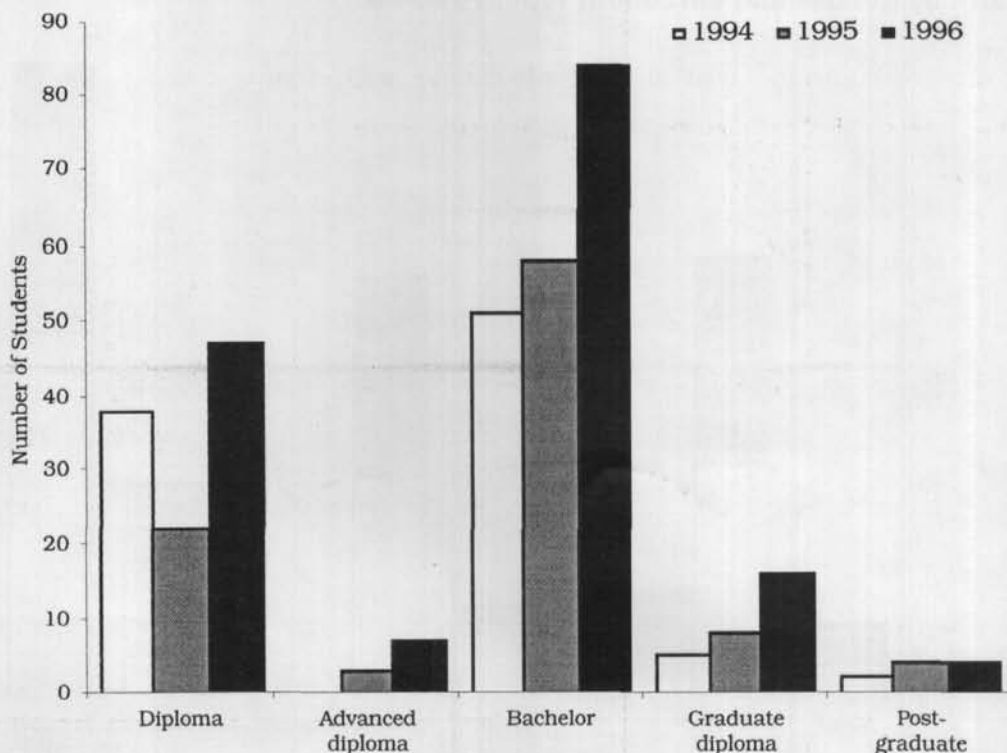
There were no completions in dentistry over the course of three years, but there has been an increase in completions in medical science/medicine between 1994 and 1996. Medicine completions doubled during this period (rising from three to six students) while medical science completions increased from one to three students. Medical science completions did not rise between 1995 and 1996. A closer examination of the increase in health science and technologies



completions shows the greatest increase was in nursing, basic field (from 29 to 43) but there was modest growth in the nursing, post basic field as well (from 14 to 20). As a proportion of higher education completions, indigenous Australians increased their representation in the health field of study between 1994 and 1996 from 12 per cent to nearly 17 per cent. In comparison, all Australian completions in health changed little as a proportion of all completions during this same period, remaining at about 14 per cent.

Figure 6 (and Appendix Table A6) shows the distribution of indigenous student completions in the health field of study between 1994 and 1996. Growth has been dramatic in some cases. The Northern Territory numbers increased nearly four-fold (from ten to 37) and Queensland six-fold (from six to 36) during this period, while completions declined in Western Australia from 16 to 11. Victorian completions dropped by nearly half (21 to 12) during this same period. Most of the course completions in 1996 (over 75 per cent) were in New South Wales, the Northern Territory and Queensland; there were no indigenous health course completions in the Australian Capital Territory.

**Figure 7. Indigenous higher education award course completions in health by level, 1994-96**



The number of indigenous completions by level for the period 1994-96 is shown in Figure 7 (and Appendix Table A7). The majority of completions were at the bachelor's level in each of the three years. With the exception of a drop in diploma completions in 1995, there were large increases in completions between 1994 and 1996. These were distributed across all levels. Proportionally, there has been a gradual movement of completions to higher levels of qualifications during this period, with a decrease in the number of diplomas and an increase in graduate diplomas.

When compared to all Australian students completing health courses in 1996, indigenous students were over 30 times more likely to complete lower level (pre-bachelor) courses of study. In 1996, the proportion of indigenous health completions at the level of diploma and advanced diploma stood at 34 per cent; the comparable figure for all Australians is 1 per cent. Only about one out of ten indigenous students completed graduate diplomas or postgraduate degrees in health courses in 1996. In comparison, one out of four non-indigenous students completed these higher level courses. In 1996, the proportion of indigenous health completions at the postgraduate degree level was 13 per cent; in contrast, 2.5 per cent of all Australians completed courses at that level.

**Figure 8. Indigenous higher education award course completions in health by gender and enrolment type, 1994-96**

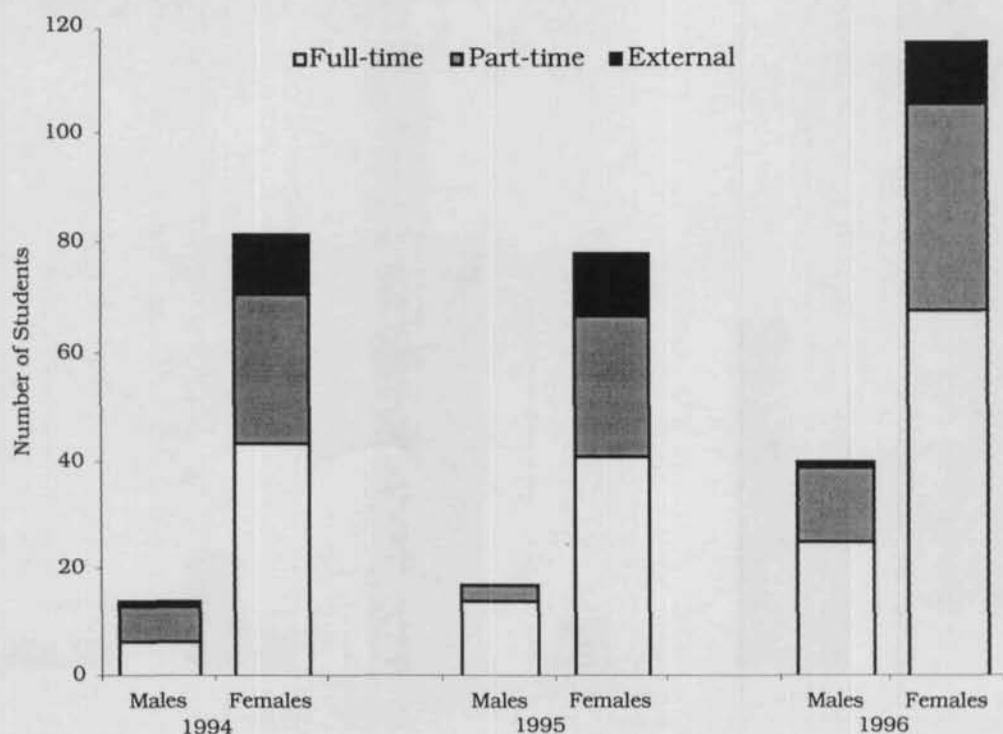


Figure 8 (and Appendix Table A8) combines data on the gender of students completing courses with data identifying enrolment type. It is clear from the data that indigenous health training is dominated by female students. In 1996, for example, 74 per cent of the completions were female. While males accounted for 15 per cent of completions in 1994, they comprised 26 per cent in 1996 (compared to 22 per cent for all Australians in 1996). Male participation has increased from 14 to 40 students between 1994 and 1996; female participation has increased as well from 82 to 117 during this same period.

On average, over the course of the period 1994–96, roughly one-third of all completions were part-time students. While the proportion of male and female student completions in the full-time and part-time enrolment type is roughly equal (about 59 per cent full-time and around 33 per cent part-time), female students were nearly four times more likely to be external students.

## **Implications for policy**

Workforce planning for the provision of indigenous health services is both a strategic and equity issue, and reaching an effective and appropriate level of indigenous participation in that provision continues to be a major challenge for policy planners. The aim of this research has been to provide a snapshot of recent patterns of indigenous participation in health training and to begin to identify some policy issues for consideration.

## **Education outcomes**

It is possible to sustain an argument, in terms of Aboriginal and Torres Strait Islander education policy, for a focus on outcomes in health sciences. For instance, in the context of human capital theory, it has been argued that the social returns on investment in higher education are relatively higher for indigenous than for non-indigenous Australians (Junankar and Liu 1996). Presumably, this would also be the case for specific domains of higher educational achievement, such as the health sciences where indigenous students who choose to study do so to accrue 'cultural capital' (Schwab 1996). The significance of this, in this context, is not so much that cultural capital may be converted to cash in the dominant economy, but rather, that it provides the cultural competencies necessary for indigenous people to engage with systems of health care delivery and to move with comfort and confidence in such systems. Such competencies are also significant in that they lay a foundation for the development of skilled and competent indigenous leadership on health related issues in Aboriginal and Torres Strait Islander communities (Anderson 1994).

Current national approaches to indigenous health are focused on building more effective systems of health care delivery to indigenous Australians. This involves a particular focus on bolstering primary health care delivery capacity, especially indigenous-specific primary health care services such as Aboriginal

community controlled health services. Aboriginal health workers play a pivotal role in such delivery structures. The importance of this occupational group to indigenous health is underscored by the emphasis given them in the current indigenous health workforce strategy (Department of Health and Family Services (DHFS) 1997). Aboriginal health workers have a range of educational experiences in health care, from informal 'on the job' training to certificate and diploma level courses. Significant numbers also receive training in the vocational education and training sector (the subject of a forthcoming discussion paper). National health care approaches also extend more generally to strategies to build cultural and indigenous health competencies with mainstream health care structures. Increasingly, this approach is also being taken up in non-indigenous specific health workforce policy and strategy (General Practice Strategy Review Group 1998; Ministerial Review of General Practice Training 1998). Further, indigenous initiatives, such as the creation of the Council for Aboriginal and Torres Strait Islander Nurses and the Australian Indigenous Doctors Association, point to a growing awareness of the importance of these issues amongst some groups of indigenous Australians.

Within this community development framework, achieving sustained growth in indigenous participation in health sciences is essential to the production of an effective health workforce capable of meeting the health needs of Australia's indigenous communities.<sup>8</sup> Yet, we would also argue that focusing too intently on indigenous health training as an avenue purely for the development of an indigenous community health workforce is too narrow. Whether indigenous health sciences graduates return to work in indigenous health, or choose to work elsewhere, is a less important issue than are the development of competence and facility with the health care system and the provision of opportunities to develop indigenous health policy leaders. Indeed there is some evidence from overseas to suggest that a significant proportion of indigenous graduates will work in non-indigenous specific contexts (Taylor 1989).

### **Supply patterns**

The results of this study show that there are now proportionally fewer indigenous people commencing health study than other Australians. Of more concern, however, are changes in numbers of commencing indigenous students. Though the analysis only covers a three-year period and numbers are small, there is evidence that completions in higher education health studies have been rising while commencing student numbers have declined. This is despite the fact that levels of participation in indigenous higher education in general have been increasing. Clearly, there is a need to implement a system for routine performance monitoring of indigenous student participation in the higher education health sector.

It is important to note that this does not suggest an absence of effective programs (in fact, anecdotal evidence suggests the contrary). Rather, it probably reflects the failure to develop a strategic approach at a national level that ensures



local and regional program successes can be translated into sustained national growth in indigenous participation in health sciences training. If this is to be achieved it will require leadership within the Aboriginal higher education sector – given this is where the institutional and structural reforms need to be made, and in close collaboration with the Aboriginal health sector. The failure to develop an effective inter-sectoral relationship between departments such as DEETYA, DHFS and State and Territory governments was a significant factor that undermined both the development of a coherent national Aboriginal health worker education and training program as well as the implementation of the National Aboriginal Health Strategy (Aboriginal and Torres Strait Islander Commission 1994; Anderson 1997). There remains an urgent need to strategically address this structural problem at the national level.

A closer examination of the data also revealed that there are remarkably few indigenous students studying in some sub-fields relevant to specific indigenous health problems (e.g., nutrition, health counselling and podiatry). There is a need to promote the development of a national strategy involving a targeted recruiting program for studies in relevant sub-fields. Similarly, the research also indicated that the number of commencing students in nursing, a field traditionally of interest to indigenous students, is declining rapidly. While some of that decline may be attributed to students who choose to study in sub-fields of health other than nursing, some of it also represents an increasing diversification of courses of study outside the health field. Given the critical role played by nurses in health provision, particularly to remote indigenous communities, this pattern should be a cause for concern.

### **Levels of qualification, gender and full-time study**

The highest proportion of commencing students is in health support, a field of study which tends to yield a relatively lower level of qualification. This is part of a wider pattern identified in the research, wherein indigenous people are far more likely to complete low level courses and far less likely to complete high level ones. As has been suggested above, health providers, such as Aboriginal Health Workers are critical to the current system of indigenous health care delivery. However, the lack of depth in the current profile raises significant questions about existing capacity to develop and sustain a cadre of indigenous public health and health sciences leaders and policy makers.<sup>9</sup>

Indigenous health education students in the higher education sector are predominantly female. About 73 per cent of commencing students in 1997 were female. In comparison, 76 per cent of all Australian commencing students in health were female. This pattern mirrors an existing gender bias in the public health field in Australia, but has significance for indigenous health care provision where cultural constraints surrounding interaction between the sexes may affect the willingness of indigenous men to seek out health care. Attention to this issue is critical for particular aspects of current national strategy in indigenous health, such as sexual (Australian National Council on AIDS and Related Diseases.



Working Party on Indigenous Australians Sexual Health 1997; DHFS 1997). While the proportion of male students in health studies is increasing, the significant imbalance remains of concern.

A high proportion (75 per cent) of indigenous students in health sciences programs begin their studies as full-time students, but only 59 per cent of completing students are enrolled full-time (this is similar to the pattern for all Australians). It is not possible to link the cohorts of commencing and completing students portrayed in this analysis. This would require a finer level of detail than is available at the national level, and would need to track individual students over the course of their studies from commencement to completion. Nonetheless, one might speculate that many of the successful health completions represent students who already work in public health and are able to complete studies as part-time students. If this is true, then it is important that programs to promote and assist part-time study among such health workers continue.

## Notes

1. Some of the issues related to barriers in indigenous access to post-secondary education were discussed in Schwab (1996), Schwab (1997) and Schwab and Campbell (1997).
2. Commencement data for 1998 will not be available until the end of 1998.
3. DEETYA data collection for course completions lag behind by one year, i.e., completions for 1996 (the most recent data) were released at the end of 1997.
4. The six major fields of study are further divided into 25 minor fields:
  - Health, general
    - Health, general
  - Dentistry
    - Dentistry
    - Dental therapy
  - Health support activities
    - Health support activities, general
    - Health administration
    - Health counselling
    - Health surveying and environmental health
    - Health support activities, other
  - Health sciences and technologies
    - Health sciences and technologies, general
    - Nursing, basic
    - Nursing, post-basic
    - Medical radiography
    - Medical technology
    - Nutrition and dietetics
    - Optometry
    - Pharmacy
    - Podiatry
    - Health sciences and technologies, other
  - Medical science, medicine
    - Medical science
    - Medicine
  - Rehabilitation services
    - Rehabilitation services, general
    - Occupational therapy
    - Physiotherapy
    - Speech pathology/audiology
    - Rehabilitation services, other

The number of indigenous students involved in the health fields of study is relatively low, often with only one, two or no students enrolled for study in some of the minor fields. Consequently, for the purposes of this analysis, data are presented by major field of study with specific examples provided from particular minor fields of particular interest.

5. The various courses are clustered within these five levels as follows:
  - Higher degree:
    - Higher doctorate
    - Doctorate by research
    - Doctorate by coursework

- Masters by research
  - Masters by coursework
- Other postgraduate:
  - Postgraduate qualifying or preliminary (for masters, Ph.D. or higher doctorate)
  - Graduate diploma; postgraduate diploma
  - Graduate certificate
- Bachelor:
  - Bachelor's graduate entry
  - Bachelor's honours
  - Bachelor's pass
- Other undergraduate:
  - Advanced diploma (AQF terminology)/diploma (pre-AQF terminology)
  - Diploma (AQF terminology)/associate diploma (pre-AQF terminology)
  - Other award course
- Enabling, non-award and cross-institution:
  - Enabling course
  - Cross-institution program
  - Non-award course

As with the minor field of study data, the numbers of indigenous students who completed or are enrolled to study for some of the specific qualifications within each of these five levels are small. Consequently, for the purposes of this analysis, data are clustered according the five levels and specific more fine-grained examples within the levels are provided where useful.

6. All of these students were commencing students at Charles Sturt (14) and Sydney (41) Universities.
7. DEETYA data collection for course completions lag behind by one year, i.e., completions for 1996 (the most recent data) were released at the end of 1997.
8. We do not address the issue of achievable outcomes in this context. However, this is an issue that should be taken up by the current Aboriginal Health Workforce Modelling Project being implemented by the Office of Aboriginal and Torres Strait Islander Health Services.
9. Sibthorpe, Baas Becking and Hume (1998) show in their 1995 survey of community controlled and State health services that of 792 indigenous people in health related occupations, 49 per cent had diplomas or certificates but only 3 per cent had bachelor's degrees.

## Appendix

**Table A1. Indigenous higher education commencing students in health by field of study, 1995-97**

	Number of indigenous students			Percentage of indigenous students		
	1995	1996	1997	1995	1996	1997
Health: general	23	32	16	6.3	7.2	4.6
Dentistry	0	2	1	0.0	0.4	0.3
Health support activities	169	235	177	45.8	52.7	50.4
Health sciences/technologies	153	144	121	41.6	32.3	34.5
Medical science, medicine	8	14	24	2.2	3.1	6.8
Rehabilitation services	15	19	12	4.1	4.3	3.4
Total	368	446	351	100.0	100.0	100.0

**Table A2. Indigenous higher education commencing students in health by State and Territory, 1995-97**

	Number of indigenous students			Percentage of indigenous students		
	1995	1996	1997	1995	1996	1997
Australian Capital Territory	2	0	0	0.5	0.0	0.0
New South Wales	111	175	104	30.2	39.3	29.5
Northern Territory	61	86	67	16.6	19.3	19.1
Queensland	53	54	61	14.4	12.1	17.4
South Australia	10	9	21	2.7	2.0	6.0
Tasmania	14	8	2	3.8	1.8	0.6
Victoria	36	34	22	9.8	7.6	6.3
Western Australia	72	71	71	19.6	15.9	20.2
Multi (Aust. Catholic Uni.)	9	9	3	2.4	2.0	0.9
Total	368	446	351	100.0	100.0	100.0

**Table A3. Indigenous higher education commencing students in health by level, 1995-97**

	Number of indigenous students			Percentage of indigenous students		
	1995	1996	1997	1995	1996	1997
Non-award	15	13	7	4.1	2.9	2.0
Diploma	129	190	146	35.1	42.6	41.5
Advanced diploma	9	8	6	2.4	1.8	1.7
Bachelor of Arts	184	182	141	50.0	40.9	40.2
Graduate diploma	18	39	29	4.9	8.7	8.3
Post-graduate	13	14	22	3.5	3.1	6.3
Total	368	446	351	100.0	100.0	100.0

**Table A4. Indigenous higher education commencing students in health by gender and enrolment type, 1995-97**

	Number of indigenous students			Percentage of indigenous students		
	1995	1996	1997	1995	1996	1997
Males						
Full-time	49	88	79	62.8	67.1	83.1
Part-time	22	23	13	28.2	17.6	13.7
External	7	20	3	9.0	15.3	3.2
Total	78	131	95	100.0	100.0	100.0
Females						
Full-time	196	229	184	67.6	72.7	71.8
Part-time	73	56	45	25.2	17.8	17.6
External	21	30	27	7.2	9.5	10.6
Total	290	315	256	100.0	100.0	100.0

**Table A5. Indigenous higher education award course completions in health by field of study, 1994-96**

	Number of indigenous students			Percentage of indigenous students		
	1994	1995	1996	1994	1995	1996
Health: general	0	0	4	0.0	0.0	3.0
Dentistry	0	0	0	0.0	0.0	0.0
Health support activities	40	28	71	42.0	29.0	45.0
Health sciences/technologies	47	53	67	49.0	56.0	42.0
Medical science, medicine	4	9	9	4.0	9.0	6.0
Rehabilitation services	5	5	7	5.0	5.0	4.0
Total	96	95	158	100.0	100.0	100.0

**Table A6. Indigenous higher education award course completions in health by field of study, 1994-96**

	Number of indigenous students			Percentage of indigenous students		
	1994	1995	1996	1994	1995	1996
Australian Capital Territory	0	0	0	0.0	0.0	0.0
New South Wales	42	30	46	43.7	31.5	29.1
Northern Territory	10	9	37	10.4	9.5	23.4
Queensland	6	15	36	6.3	15.8	22.8
South Australia	7	5	7	7.3	5.3	4.4
Tasmania	5	3	4	5.2	3.2	2.5
Victoria	8	21	12	8.3	22.1	7.6
Western Australia	16	10	11	16.7	10.5	7.0
Multi (Aust. Catholic Uni.)	2	2	5	2.1	2.1	3.2
Total	96	95	158	100.0	100.0	100.0



**Table A7. Indigenous higher education award course completions in health by level, 1994-96**

	Number of indigenous students			Percentage of indigenous students		
	1994	1995	1996	1994	1995	1996
Diploma	38	22	47	39.6	23.1	29.8
Advanced diploma	0	3	7	0.0	3.2	4.4
Bachelor	51	58	84	53.1	61.1	53.2
Graduate diploma	5	8	16	5.2	8.4	10.1
Post-graduate	2	4	4	2.1	4.2	2.5
Total	96	95	158	100.0	100.0	100.0

**Table A8. Indigenous higher education award course completions in health by gender and enrolment type, 1994-96**

	Number of indigenous students			Percentage of indigenous students		
	1994	1995	1996	1994	1995	1996
Males						
Full-time	7	14	25	50.0	82.4	62.5
Part-time	6	3	14	42.9	17.6	35.0
External	1	0	1	7.1	0.0	2.5
Total	14	17	40	100.0	100.0	100.0
Females						
Full-time	43	41	68	52.4	52.6	58.1
Part-time	28	26	38	34.2	33.3	32.5
External	11	11	11	13.4	14.1	9.4
Total	82	78	117	100.0	100.0	100.0

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