



***Improving the Transition into Health Careers for
Aboriginal and Torres Strait Islander school students :***

**A policy paper by the Australian Indigenous Doctors' Association (AIDA)
for the Department of Education Employment and Workplace Relations
(DEEWR)**

February 2010

Purpose

The purpose of this paper is to provide strategic direction to improve the transition of Aboriginal and Torres Strait Islander school students from high school into health careers, particularly medicine. It focuses on building the aspirations of primary and secondary school students to consider further educational opportunities within the medical and health care sector.

The paper articulates a strengths-based approach that builds on the identity, strong culture and potential of Aboriginal and Torres Strait Islander students and leverages off existing programs and research to identify possible pathways for the development and support of an increased Aboriginal and Torres Strait Islander health workforce.

Australian Indigenous Doctors' Association (AIDA)

AIDA is a not-for-profit, non-government organisation dedicated to the pursuit of leadership, partnership & scholarship in Aboriginal and Torres Strait Islander health, education and workforce. As at February 2010, there are approximately 140 Indigenous medical graduates and 137 Indigenous medical students in Australia.

AIDA is represented on over 30 government and non-government health, education and workforce committees, including the National Indigenous Health Equality Council (NIHEC), the Indigenous Health Equality (Close the Gap) Campaign Steering Committee and the Aboriginal and Torres Strait Islander Health Workforce Working Group.

AIDA works closely with a range of medical bodies to ensure that the medical education and training system is inclusive of Indigenous health content, is culturally appropriate and recruits, supports and graduates Aboriginal and Torres Strait Islander people into medicine and medical specialties. In particular, we work with Medical Deans Australia and New Zealand especially around support for Indigenous students through medical school and to advocate for Indigenous content in the medical curriculum. We work with Confederation of Postgraduate Medical Education Councils (CPMEC) around support for Indigenous doctors in post-graduate years one and two; and we work with the Committee of Presidents of Medical Colleges (CPMC) around increasing the number of Indigenous medical specialists.

AIDA has authored three seminal documents in relation to Indigenous education and workforce development:

- *Healthy Futures – Defining best practice in the recruitment and retention of Indigenous medical students – 2005;*
- *A Blueprint for Action – Pathways into the health workforce for Aboriginal and Torres Strait Islander people – 2008 (on behalf of the (then) National Aboriginal and Torres Strait Islander health Council); (herein referred to as the *Blueprint* document); and*
- *Journeys into Medicine – 2009.*



The link between education and health

AIDA believes that education and health are intimately connected:

Education improves health, while health improves learning potential. Education and health complement, enhance and support each other; together, they serve as the foundation for a better worldⁱ.

If we are to close the gap in health and educational outcomes for Indigenous Australians, the link between education and health must be articulated, recognised and addressed. We believe that the two sectors need to develop closer and stronger working relationships in order to effectively improve health and education outcomes for Aboriginal and Torres Strait Islander people.

The connection between health and education is well documented with many supporting the argument that socio-economic position (as a result of educational achievement) is an important determinant for health outcomes. Studies show the parallels between socio-economic position and the life expectancies and health outcomes can be strongly influenced by one's social standing.ⁱⁱ

As well as the general socio-economic health benefits of education for Indigenous Australians, there are specific educational benefits to be gained by addressing the barriers into health professions. This paper will address those specific career path issues.

Current Policy Context

COAG


The Australian Government, through the Council of Australian Governments (COAG) has committed to working with State and Territory Governments to lift Australia's productivity through an ambitious reform agenda in early childhood development, schooling and skills and workforce developmentⁱⁱⁱ.

The Rudd Government has placed Indigenous education at the centre of its policy agenda. Deputy Prime Minister, Minister for Education, Employment & Workplace Relations, and Minister for Social Inclusion, Ms Julia Gillard, MP acknowledged the urgency to improve Indigenous education in a speech in September 2009:

If Indigenous kids in this nation aren't getting a fair go that's our fault, the fault of the adults in this nation whose job it is to make sure they do - it's the fault of the governments, the bureaucrats, the local communities, the schools, the teachers and the parents who let these kids down. Today, at this Summit let's say to ourselves and each other that we won't succumb to the belief that it's too hard, that there is some inevitability about Indigenous kids being at the back of the class. We will reject the 'soft bigotry of low expectations'. We will set high expectations for the achievement of Indigenous children. We can do this, we will do this.^{iv}

Under the 2007 National Indigenous Reform Agreement (Closing the Gap) COAG agreed to the following targets:

- closing the life expectancy gap within a generation;
- halving the gap in mortality rates for Indigenous children under five within a decade;
- ensuring all Indigenous 4 year olds in remote communities have access to early childhood education within five years;

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- halving the gap for Indigenous students in reading, writing and numeracy within a decade;
 - halving the gap for Indigenous students in Year 12 attainment or equivalent attainment rates by 2020;
 - halving the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade.

A Blueprint for Action – Pathways into the health workforce for Aboriginal and Torres strait Islander people

The *Blueprint* document was launched by the Minister for Health and Ageing, Ms Nicola Roxon MP, in July 2008. It identifies key gaps and barriers in national health workforce policy and program directions, and particularly aims to promote collaboration and action among the health and education sector at every level (ie between all leadership, governments and institutional levels).

An Interdepartmental Committee (IDC) was set up to address the recommendations of the *Blueprint* document during late 2008/early 2009. Following the launch of the document, Minister Roxon wrote to Deputy Prime Minister, Ms Julia Gillard MP, the Minister for Families Housing, Community Services and Indigenous Affairs, Ms Jenny Macklin MP; and the Treasurer, Mr Wayne Swan MP seeking nominees for the IDC. The IDC also had representation from Departments of Prime Minister and Cabinet and Finance.

The IDC met a number of times during 2008 and in early 2009. However, although the IDC has not met since then, there has been ongoing inter-departmental discussion. In November 2008, the Council of Australian Governments (COAG) announced a range of National Partnership Agreements on Closing the Gap including funding to increase workforce capacity. COAG also announced a range of congruent education, training and employment measures. Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEEDYA) will seek support from the Australian Health Ministers' Conference and Community and Disability Services Ministers' Conference to strengthen connections between schools and health, welfare and community services at local and systemic levels. MCEEDYA is seeking submissions on the Indigenous Education Action Plan with submissions closing at the end of February 2010. This Plan is aimed at improving educational and training outcomes and post-school options, and provides important building blocks for Indigenous people looking at a career in health via either the vocational education and training (VET) or tertiary pathways.

Bradley Review

The 2008 Bradley Review into Higher Education "*Transforming Australia's Higher Education System*" acknowledges the importance of increasing educational attainment for Indigenous Australians.

The Review Report recognises that the most seriously under-represented groups are those from remote parts of Australia, Indigenous students, those from low socio-economic backgrounds and those from regional locations. It acknowledges the lower access, retention and success rates for Indigenous students in higher education, and that these issues must be addressed as a matter of priority.^v

The Review Panel envisages that opportunities for Indigenous people will increase as a result of several initiatives proposed in the Review report, including:

- setting access and other targets^{vi} :

Access rate	Proportion that the Indigenous population aged 15-64 years represents of the general population in this age group in the 2006 census
Success rate	At least 95% of rate of non-Indigenous students
Retention rate	At least 90% of the rate for non-Indigenous students
Completion rate	At least 90% of the rate for non-Indigenous students

- an outreach program which will play an important role in encouraging universities to make relevant community links and foster Indigenous aspirations to further study; and
- the proposed performance-based funding (set out in detail in the Review report) which includes Indigenous progress rates as an indicator, with institution-specific stretch targets to be negotiated will also help to drive increased Indigenous participation.^{vii}

Aboriginal and Torres Strait Islander Profile

Aboriginal and Torres Strait Islander people are widely dispersed across Australia: 32% live in major cities; 20% in inner regional areas; 23% in outer regional area; 9% in remote areas; and 18% in very remote areas^{viii}.

The Indigenous population in Australia is considerably younger than the non-Indigenous population with the median age being 20 years for Indigenous people and 37 years for the non-Indigenous population^x. A total of 40% of the Aboriginal and Torres Strait Islander population are aged under 15 years of age compared with 20% of the non-Indigenous population^x. The Aboriginal and Torres Strait Islander population is expected to grow – twice that of the non-Indigenous population^{xi}.

This differing demographic profile of large family structures, high birth rates, lower income levels and poorer health has considerable implications for the provision of education and school retention programs for Aboriginal and Torres Strait Islander people.

Health Status

The poor status of Aboriginal and Torres Strait Islander health and the 17-year life-expectancy gap is well documented. The burden of disease experienced by Indigenous Australians is estimated to be two and a half times greater than the burden of disease in the wider Australian population.

Aboriginal and Torres Strait Islander people experience higher death rates than non-Indigenous Australians across all age groups, from all major causes of death^{xii}. This - in a nation which in general, has one of the healthiest populations of any developed country and which has access to a world-class health system - is unacceptable.

A clinically qualified and culturally competent health workforce is essential for ensuring that Australia's health system has the capacity to effectively meet the needs of Aboriginal and Torres Strait Islander people, close the life expectancy gap and improve health outcomes. An Indigenous health workforce, including an Indigenous medical workforce, is vital if Australia is to make a difference to Indigenous health.

Indigenous Medical Workforce

There are currently 140 Indigenous doctors and around 137 Indigenous medical students^{xiii}. While these figures are encouraging, they are not enough to service the need in order to close the gap in Indigenous health outcomes.

In its 2004 Indigenous Health Report Card *“Healing Hands: Aboriginal and Torres Strait Islander Workforce Requirements”*^{xiv} the AMA found that to increase the proportion of Aboriginal and Torres Strait Islander people working as health professionals to non-Indigenous levels, 928 doctors need to be trained.

According to the Australian Institute of Health and Welfare (AIHW) in 2001 there were 90 Aboriginal and Torres Strait Islander doctors. This indicates that Indigenous doctors account for 0.19 per cent of all medical practitioners^{xv}, despite 2.4 per cent of the Australian population being Indigenous. In 2006 the number of Indigenous doctors rose slightly to 106. This rise in the number of Indigenous medical practitioners in 2006 coincides with increases in the number of non-Indigenous medical practitioners as a result the proportion of Indigenous doctors remained unchanged from 2001 figures (Table 1). From 2008 to 2009 the numbers of Indigenous medical practitioners increased from 129 to 140^{xvi}.

Table 1. Medical Practitioners by Indigenous status and per cent 2001 and 2006^{xvii}

	2001		2006	
	Number	Per cent	Number	Per cent
Medical Practitioners				
Indigenous	90	0.19	106	0.19
Non-Indigenous*	48,029	99.81	55,037	99.81
Total	48,119	100	55,143	100

*Includes missing ('not stated') responses.

From 2008 to 2009 the number of Indigenous medical students also increased from 127 to 137. Like figures on Indigenous medical practitioners, the rise in the number of Indigenous medical students coincides with higher rates of enrolment among non-Indigenous medical students. This overall trend has resulted in a 0.2 per cent **decrease** in the proportion of Aboriginal and Torres Strait Islander medical students from 1.1 per cent to 0.9 per cent from 2003 to 2009 (Table 2).

Table 2. Students enrolled in medicine in Australia by Indigenous status 2003, 2006 and 2009^{xviii}

	2003		2006		2009	
	Number	Per cent	Number	Per cent	Number	Per cent
Medical Students						
Indigenous	102	1.1	107	1.0	140	0.9
Non-Indigenous	9,131	98.9	10,850	99.0	14,381	99.1
Total	9,233	100	10,957	100	14,521	100

The Medical Education and Training Continuum

←	School Kids -	Medical School	Post Graduate Years 1 & 2	Registrar	Specialist	→
	School children	Undergraduate study at University Medical School	Compulsory years of training in a teaching hospital	Training to be a specialist	Obtained fellowship from specialist college eg Royal College of Physicians etc.	

This continuum illustrates the milestones on the pathway from school to medical specialties. Support is required continuously. Many Aboriginal and Torres Strait Islander people face barriers along the continuum, including lack of knowledge of the options available, lack of access and contact with key people, and isolation from colleagues. A focus on transitions could assist in making the pathway smoother and more efficient.

Why Indigenous Doctors?

Indigenous doctors are essential if we are to close the gap in life expectancy for Indigenous Australians.

Indigenous doctors play a vital part in the health workforce.

- Indigenous doctors have very often experienced the health system in the same way that their patients have and therefore have a profound understanding and trust with their patients. Indigenous patients are therefore more inclined to access the health system if they feel supported and included and see themselves a part of the system – not apart from it;
- Indigenous doctors bring a holistic approach to health - particularly through their shared spiritual, cultural, emotional and physical understanding of health - that is, that health is not only about fixing physical ailments but about restoration, regaining balance and being able to thrive;
- Indigenous doctors can advocate for change within the health system in order to make it more accessible for Indigenous Australians.
- Indigenous doctors are leaders, role models and mentors. The power of seeing one of our own succeed, lead and inspire, cannot be underestimated. Many of our doctors were inspired by our original graduates.

Indigenous Education

It is well known that early school leaving is associated with poor employment and income in later life. In 2006, Indigenous people who had completed school to year 9 only, or below, were less likely to be employed than those who attained a year 12 certificate

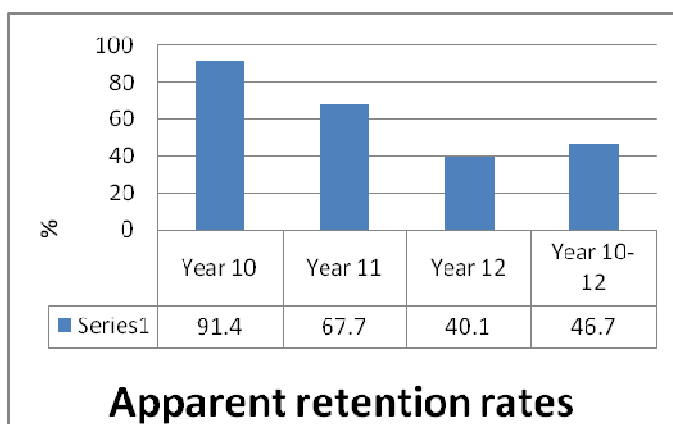
While education outcomes of Aboriginal and Torres Strait Islander people have improved in the areas of enrolment, school participation and retention, the retention rates from Year 10 – Year 12 is an area requiring focus.

Despite some gains, Aboriginal and Torres Strait Islander students continue to 'drop out' at or before Year 10 and far too few remain at school to complete Year 11 and Year 12, or its vocational equivalent.

The Queensland School Curriculum Council (2002) identified a number of barriers affecting Aboriginal and Torres Strait Islander student participation and engagement in education including:

- Isolation, alienation and marginalisation
- Language and cultural barriers
- Health and wellbeing
- Socioeconomic circumstances and access to resources and public services
- Racism and prejudice and
- Employment opportunities^{xix}

Source: National Report to Parliament on Indigenous Education and Training 2006



There is evidence also to suggest that the causes of early school leaving include:

- Poor literacy and numeracy skills
- Lack of Student engagement in learning
- Poverty
- The quality of teaching staff^{xx}

Indigenous educationist, Dr Chris Sarra identifies a number of strategies that education systems need to get right in order to get the right kind of engagement from Aboriginal communities, including:

- acknowledge, embrace and develop a positive sense of Aboriginal identity in schools;
- acknowledge and embrace Aboriginal leadership in schools and school communities;
- have high expectations, leadership, to ensure high expectations in classrooms, with high expectations teacher-student relationships.

Dr Sarra emphasizes that it's not a matter of focusing on one or some of these strategies, but it's necessary to engage in all strategies simultaneously.^{xxi}

Proficiency Levels

Indigenous students are achieving well below the national averages in proficiency levels. Students who consider health-related courses (including medicine), often have not been encouraged or supported to take pre-requisite secondary mathematics and science courses.^{xxii}

In the PISA (Program for International Student Assessment) 2006, Indigenous students were substantially over-represented in the lowest proficiency levels and substantially under-represented in the highest proficiency levels in mathematical, scientific and reading literacy levels.^{xxiii}

The difference between Indigenous and non-Indigenous students in PISA mathematics and reading literacy is equivalent to more than two years of formal schooling.^{xxiv}

	Indigenous %	Non Indigenous %
Mathematical Literacy		
Did not achieve Level 1	17	4
Did not achieve Level 2	39	12
Achieved at Level 5%	2	16
Science literacy		
Did not achieve Level 1	17	3
Did not achieve Level 2*	40	12
Achieved highest proficiency – Level 5+	3	15
Reading literacy		
Did not achieve Level 2	38	12
Did not achieve Level 3	66	33
Achieved highest proficiency – Level 5+	3	11

*Level 2 has been defined as a baseline proficiency level at which students begin to demonstrate the scientific competencies that will enable them to actively participate in life situations related to science and technology.

The *Blueprint* document made the following recommendation:

All governments to participate in a national evaluation of Aboriginal and Torres Strait Islander mathematics, science, literacy and numeracy programs across the education spectrum. Governments to improve funding for the development of a national culturally respectful strategy aimed at improving mathematics, science and literacy.^{xxv}

Increasing the number of Aboriginal and Torres Strait Islander secondary students undertaking maths and science prerequisites, as well as pre-entry courses for tertiary health-related courses, is a high priority and needs to be delivered in a culturally appropriate manner and resourced accordingly.



Increasing Aboriginal and Torres Strait Islander engagement in education

Gains in educational outcomes achieved by Aboriginal and Torres Strait Islander students over recent decades are largely attributed to Indigenous specific intervention programs (including strategies, pilot projects and trials) that supplement mainstream effort to meet the specific learning needs of students.^{xxvi}

Research and good practice principles identify five domains as critical to engaging Aboriginal and Torres Strait Islander children and young people in learning:

- early childhood education;
- school and community educational partnerships;
- school leadership;
- quality teaching; and
- pathways to training, employment and further education.

The success factors that underpin good transitions are being increasingly well researched and documented:

- An intensive individualised approach, including the development of individual pathways plans, skills portfolio documents and exit plans;
- Transition support processes from students' first year of secondary schooling;
- Support and information from professionally trained counsellors, mentors and brokers;
- A systematic and comprehensive approach to provision of assistance
- A process of follow-up as students move through school and post-school destinations; and
- The need for effective local partnerships at a number of levels including schools, key agencies, business, communities and community organisations and their involvement in local support networks^{xxvii}

The *Blueprint* document acknowledges that successful pathways to employment in the health workforce for Aboriginal and Torres Strait Islander people begin with:

- Good healthcare for Aboriginal and Torres Strait Islander children
- Appropriate early education opportunities
- Equitable access to primary school
- Appropriate school attendance
- Culturally appropriate literacy and numeracy support
- Culturally safe learning environments
- Positive role models and
- Effective secondary school retention strategies^{xxviii}.

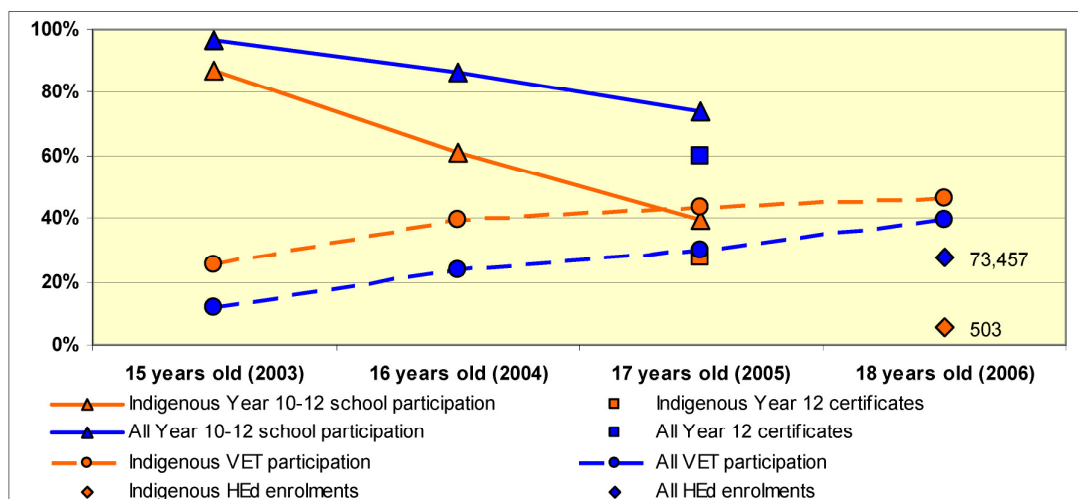
There are common and recurring themes identified within the research that directly contribute to positive outcomes for Aboriginal and Torres Strait Islander students whether at primary or secondary school. There are also clear roles for schools, universities and other educational institutions to play in achieving these outcomes.

Vocational Education and Training

In addition to pathways from school to higher education, the vocational education and training (VET) sector can offer significant opportunities for pathways into medicine and health sciences. VET sector opportunities are often located much closer to home for Aboriginal and Torres Strait Islander people, at the same time allowing people to increase

skills and qualifications incrementally. Many of our doctors have entered medicine after careers in the VET sector. A number of our doctors' pathways are featured in the AIDA *Journeys* publication.

Aboriginal and Torres Strait Islander students experience high participation rates in the VET sector.^{xxxix} By age 17 there are more Indigenous students in VET than school and at age 18, only around 5% of Indigenous people commence a higher education course. This compares with far fewer non-Indigenous students participating in VET, and at the age of 18, 25% of all Australians commence higher education courses.^{xxx}



Source: DEEWR Paper provided to IHEAC, Feb 08^{xxxix}

The *Blueprint* document recommended that COAG review, develop and strengthen transitions between VET, university and the workplace.^{xxxii}

It is vitally important that there be strong articulation from Certificate level, to diploma level into degree level qualifications for Aboriginal and Torres Strait Islander people.


A Way Forward

International Experience

North America: The National Native American Youth Initiative (NNAYI)

The National Native American Youth Initiative (NNAYI) program came to AIDA's notice during a study tour to North America in 2009. This initiative is an intense academic enrichment and reinforcement program designed to better prepare American Indian and Alaskan Native (AI/AN) high school students to remain in the academic pipeline and pursue a career in the health professions and/or biomedical research^{xxxiii}.

NNAYI is designed to prepare 60 AI/AN high school students for admission to college and professional school, and to encourage them to pursue a career in the areas of health science and biomedical research. NNAYI's curriculum is presented in a series of lectures, interactive workshops and field trips. Students learn about various health professions, college and medical school admission process, financial aid opportunities and health care issues affecting AI/AN communities. Students can network with AI/AN health professionals and learn about mentoring and shadowing opportunities with AI/AN physicians^{xxxiv}.



An evaluation of the initiative found that from 1998-2006, 465 American Indian/ Alaskan Native (AI/AN) high school students attended the nine-day enrichment program in Washington DC. A large proportion of the program participants pursued higher education after graduating from high school (96%) and most pursued majors in health related fields - 42 of 64 specified fields of study (65%) reported majors clearly related to medical/health professions. These included biology, speech language, pathology, public health, medicine and athletic training. The 22 who reported majors not clearly related to health included majors in psychology, sociology, education, business, engineering and liberal arts.

Students reported that the NNAYI program encouraged or motivated them to go to college or a professional school. The program served to reinforce their existing motivation and further encouraging them to pursue college and gave them more confidence to actually do so.

Nearly half stated they were presently working in a health profession or in biomedical research with the remaining majority of NNAYI participants still pursuing a college/university education.

The results suggest that the NNAYI was successful in encouraging many participants to pursue higher education and major in a field related to health/medicine. The high rates of college education for the AI/AN youth population, combined with self reports of the encouraging effects of the program suggest that the program had a significantly positive effect in motivating participants to pursue college.

Canada: University Summer Science School

Studies have shown that enrichment programs coordinated out of medical schools targeting at risk youth can make a difference. The *Northern Ontario School of Medicine* is a week-long early intervention program for Aboriginal youth in order to increase school completion and pursue health care careers from an early age. ^{xxxv}

The emphasis of the program was to create a connection between meaningful health care interventions and the basic sciences. The program found that participants were consistently very satisfied and were particularly pleased to have Aboriginal medical students spending the entire week with them. The participants reported in both the written form and in the final report that they were all thinking more now of possible careers in medicine related fields.

Canada: Institute for Aboriginal Health – University of British Columbia

The *Institute of Aboriginal Health* manages an annual one-week Summer Science program for Aboriginal students in grades 8-12 to expose students to a variety of science and health service careers through workshops hosted by the University of British Columbia staff and students.

There are two sessions as part of the program. One session is targeted at grades 8-9. The second session is for grade 10-12s.

The goals of the program are to:

- Inform students of health and science careers
- Provide information on post-secondary pre-requisites, course planning and admissions
- Address students' apprehension about attending a college or university
- Offer a holistic educational experience
- Improve student's science skills

- Provide aboriginal role models in health and science careers.

The program was rated highly and was evaluated by students and instructors. Students were consistently very satisfied and were particularly pleased and reported uniformly that they were thinking more now of possible careers in medicine related fields.^{xxxvi}

Details of the Summer Science program for 2010 can be viewed at:
<http://www.iah.ubc.ca/community/summerscience2.php>

The Australian Experience

Queensland Institute of Medical Research (QIMR)

The Queensland Institute of Medical Research (QIMR) conducts an annual Spotlighting Careers in Indigenous Health and Science Program seeks at encouraging Indigenous high school students (years 10 and 11) from remote and rural areas of QLD to become more interested in science and health, and in the long term, to pursue a career in science, research and/or health^{xxxvii}.

The project is conducted over 4-5 days in Brisbane and aims to:

- Encourage students to pursue a career in health or science
- Undertake research in the field of Indigenous health
- Provide 'hands on' work experience in a science laboratory
- Promote an understanding of Indigenous cultures

As part of the program, students undertake:


- Hands-on experience in QIMR laboratories
- Visits to local universities to gather information about different health and science courses, requirements for entry and support programs for those who study at university
- Visits to hospital sites and community health centres
- Seminars about Indigenous health
- Workshops with CSIRO
- Cultural activities including visiting the Science Centre at Southbank

In the past, students have come from Atherton, Bamaga, Cairns, Cooktown, Gladstone, Glenmore, Gordonvale, Hughenden, Mabel Park, Mareeba, Mossman, Moura, North Rockhampton, Tannum Sands, Thursday Island, Woodridge, and Woree.

Since 2002, QIMR have hosted 69 students and 12 teachers and have found that students are more open to considering health careers including midwifery, paediatrics and veterinary sciences after participating in the program^{xxxviii}.

Aboriginal Summer School for Excellence in Technology and Science (ASSETS) 21 Program

ASSETS 21 is a national residential summer school designed to promote excellence in technology and science among young Aboriginal and Torres Strait Islander people. The intended outcome of ASSETS 21 is increased and more sustained involvement by Aboriginal and Torres Strait Islander students in secondary and tertiary courses in science and technology and, ultimately, improved access to careers in related industries and professions^{xxxix}.



Each year, up to 30 Aboriginal and Torres Strait Islander students of high potential from urban, remote and regional centres around the country spend 10 days experiencing a rich curriculum of science, mathematics and technology delivered by leading teachers and academics.

Since the 1990s the program has helped some of Australia's brightest young Aboriginal and Torres Strait Islander minds to succeed at high school and University and enter science and technology careers. Through the involvement of Aboriginal and Torres Strait Islander role models, the program also supports participants' culture and identity and promotes self-esteem.

More than 200 young Aboriginal and Torres Strait Islander have graduated, with many now working in leadership positions within science and the wider community. The impact of the ASSETS 21 Program has been described as *'so important, as it recognises students' abilities, gives them great techniques, advice and support for furthering their learning and provides encouragement towards completing an education and doing your best'*.^{xi}

The ASSETS 21 Program is collaboration between the National Centre for Science, ICT and Mathematics Education for Rural and Regional Australia (SiMERR), the Australian Science and Mathematics School (ASMS), Flinders University and the University of South Australia.


University Programs

A number of universities across Australia provide residential programs to Aboriginal and Torres Strait Islander students, including:

- The Centre of Aboriginal Medical and Dental Health (CAMDH) in partnership with at School of Indigenous Studies, University of Western Australia, provides a summer pre-medical and pre-dental program. The program targets prospective medicine and dentistry students who may be considering a medical or dental degree, and is aimed at student Year 8 to Year 12. The program's objectives are to expose students to various aspects of the university environment, including hands-on activities, meeting tertiary student role models, and making decisions about their future education with the guidance of staff at the Centre. It runs for one month before commencement of the academic year.^{xi}
- The University of New South Wales (UNSW) Winter School which is a week-long residential program for medicine and other faculties and provides secondary students with opportunities to learn about options for university study in a range of health careers.
- The UNSW Pre-Med Program started in 1998 and has had 114 applicants from around Australia. For the project 27 were interviewed, of whom 24 were Aboriginal and three were Torres Strait Islander.
- The Koori Health Careers Residential Workshops were organised by Charles Sturt University's Ngungilanna Aboriginal Education Unit in partnership with the former Greater Murray Area Health Service. Between 2002 - 2004, 144 year 9-12 Aboriginal and Torres Strait Islander students attended from rural and remote NSW schools.

3.0 Coordinating a Strategic Approach

Research within Australia has identified the importance and the benefits of universities reaching out to Aboriginal and Torres Strait Islander young people while they are still at school.^{xiii} It is also recognised that the way forward can be achieved through increasing the scope for recruitment through a network of school-based programs that takes kids out of the system into a more nurturing environment^{xiii}.



Common and recurring themes identified within the research that directly contribute to positive outcomes for Aboriginal and Torres Strait Islander students either at primary or secondary school, include:

- Financial support and access to study support programs
- Access to mentors, professionals and positive role models
- Culturally safe learning environments
- Supportive partnerships between Aboriginal and Torres Strait Islander communities, organisations and universities^{xliv}
- Monitoring and ongoing follow-up networking with and between student through school and post-schooling destinations

The Australian and State and Territory governments through COAG have made clear their commitments to increase Aboriginal and Torres Strait Islander education and workforce development. Within the Australian context, there are currently no initiatives which focus on the support, development and retention of Indigenous students to become health professionals.

There is a strong need for an integrated approach across Aboriginal and Torres Strait Islander health agencies and with universities. There are a number of good practice models currently undertaken by universities and other institutions which can be leveraged off and learned from to focus specifically on developing stronger pathways into health sector careers.

Three complementary approaches are considered fundamental to a strong and successful way forward:


- ❖ Health-careers specific development programs to identify, monitor and support Aboriginal and Torres Strait Islander students through school, into tertiary studies to increase the Aboriginal and Torres Strait Islander workforce.
- ❖ Improved collaboration between universities and schools to raise the awareness, confidence and perceptions of Aboriginal and Torres Strait Islander students with regard to the relevance and attainability of careers in the health sector.
- ❖ A national initiative for Aboriginal and Torres Strait Islander senior high school students to experience first-hand Indigenous health leaders and organisations, raise awareness of national agendas, agencies, policies and programs and participate in a network of future Indigenous health leaders.

Specifically, the above could be achieved through the establishment of:

(a) National Aboriginal and Torres Strait Islander Health Careers Development Program

The establishment of a National Aboriginal and Torres Strait Islander Health Careers Development Program will aim to provide Aboriginal and Torres Strait Islander primary and senior secondary students with a one-week intensive residential program that inspires and develops knowledge and skills in health and health-related careers.

The program should be conducted in Canberra. This would enable students to have access to national institutions such as the Australian Parliament, the Museum of Australian Democracy, the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), The Australian National University and University of Canberra, health and education departments; peak national Indigenous health bodies, and other national advocacy groups to improve their knowledge of the health system; and hands-on health



and science workshops through universities, and national attractions such as Questacon – the National Science and Technology, and CSIRO Discovery Centre.

The program would be led by a collaborative partnership, with key leadership roles for Indigenous professional organisations in collaboration with non-Indigenous institutions and leaders.

(b) University Pathways Program

A strategic and coordinated national approach is required in order to attract Aboriginal and Torres Strait Islander students to universities and provide the necessary support for better retention and graduation into health careers.

There is sufficient research and good practice to demonstrate the critical success factors in recruiting Aboriginal and Torres Strait Islander students to universities. A network of committed universities needs to be established in relation to recruitment of Aboriginal and Torres Strait Islander students who show interest in health fields.

A number of universities and other institutions have existing programs in place. Through improved collaboration, universities could offer a joined up program for Indigenous school students to de-mystify university, provide early information and knowledge about careers in health as well as link potential tertiary students into a network of mentors and supporters.


Institutions must necessarily work with schools, families and communities to develop initiatives that are tailor made for the communities in which they operate. Institutional leadership must be committed to such initiatives for the long term and provide appropriate resources for sustainability. Indigenous academic and professional leaders will play a key role in such a program.

Peak Indigenous health professional organisations such as the Australian Indigenous Doctors Association, Congress of Aboriginal and Torres Strait Islander Nurses, Australian Indigenous Psychologists Association, Indigenous Dentists Association of Australian, Indigenous Allied health Australia will play a key role in the success of such an initiative.

Recommendations

The following recommendations are presented in order to increase the retention, support and progress of Aboriginal and Torres Strait Islander students into health careers:

1. That work be undertaken to develop a national culturally respectful and appropriate strategy aimed at improving mathematics, science and literacy for Indigenous students (as recommended in the Blueprint document^{xiv});
2. Develop and implement a National Aboriginal and Torres Strait Islander Health Careers Development Program;
3. Develop and implement a Universities Pathways program.

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- ⁱ Improving Maternal Health Through Education; Safe Motherhood Is a Necessity, Rita Luthra www.who.int/entity/pmnch/topics/mdqs/2008unchronicle_rluthra.pdf accessed February 2010
- ⁱⁱ World Health Organisation (2003) *Social Determinants of Health: The Solid Facts*, Second Edition Ed. Richard Wilkinson and Michael Marmot, p 10
- ⁱⁱⁱ *Quality Education: the case for an Education Revolution in Our Schools*, 27 August 2008
- ^{iv} The Hon Julia Gillard MP, Deputy Prime Minister, Minister for Education, Minister for Employment and Workplace Relations and Minister for Social Inclusion 28 September, 2009 - Speech - Indigenous Leadership in Education Institute: Stronger Smarter Summit - Brisbane
- ^v Review of Australian Higher Education: Final Report, Professor Denise Bradley, 2008, p 32
- ^{vi} Ibid, p xxvii
- ^{vii} Ibid, p 159
- ^{viii} MCEETYA 2006. *Australian Directions in Indigenous Education 2005-2008*. MCEETYA: Victoria.
- ^{ix} Australian Bureau of Statistics and Australian Institute of Health and Welfare: Health and Welfare of Australia's Aboriginal and Torres Strait Islander peoples; 4704.0; 2008, p 4
- ^x Ibid.
- ^{xi} Ibid.
- ^{xii} Ibid, p 5
- ^{xiii} This data is valid as at September 2009. Source: Medical Deans Australia and New Zealand, 2009.
- ^{xiv} 2004 AMA Indigenous Health Report Card – "Healing Hands: Aboriginal and Torres Strait Islander Workforce Requirements", <http://www.ama.com.au/node/3186> (accessed February 2010)
- ^{xv} Australian Bureau of Statistics and Australian Institute of Health and Welfare, 2003. The Health and Welfare of Australia's Aboriginal and Torres Strait Islander People. ABS Cat no. 4704.0, AIHW Catalogue no. IHW11
- ^{xvi} Data on the total numbers of medical practitioners comes from the census, thus a 2009 comparison is currently unavailable
- ^{xvii} Australian Institute of Health and Welfare 2009. Aboriginal and Torres Strait Islander health labour force statistics and data quality assessment. Cat. No. IHW 27. Canberra
- ^{xviii} Department of Education, Employment and Workplace Relations, 2003 and 2006; Medical Deans Australia and New Zealand 2009.
- ^{xix} *Healthy Futures: Defining best practice in the recruitment and retention of Indigenous medical students*. Australian Indigenous Doctors' Association, Canberra, 2005, p 6
- ^{xx} *Overcoming Indigenous Disadvantage Key Indicators Report 2009*, Steering Committee for the Review of Government Provision, Productivity Commission, Canberra p 6.16
- ^{xxi} ABC Radio – AM – "Misguided notions damaging Indigenous education outcomes: Sarra - AM - Monday, 26 May, 2008 08:27:00 Reporter: Barbara Miller <http://www.abc.net.au/am/content/2008/s2255240.htm>
- ^{xxii} *Blueprint for Action: Pathways into the health workforce for Aboriginal and Torres Strait Islander people*. National Aboriginal and Torres Strait Islander Health Council 2008 Canberra p 10
- ^{xxiii} National Report to Parliament on Indigenous Education and Training, 2006 – Department of Education, Employment and Workplace Relations, p 58
- ^{xxiv} *Quality Education: the case for an Education Revolution in Our Schools*, 27 August 2008, p 16
- ^{xxv} *Blueprint for Action: Pathways into the health workforce for Aboriginal and Torres Strait Islander people*. National Aboriginal and Torres Strait Islander Health Council 2008 Canberra, pxiii
- ^{xxvi} MCEETYA 2006. *Australian Directions in Indigenous Education 2005-2008*, p 11
- ^{xxvii} Ibid, p 27
- ^{xxviii} *Blueprint for Action: Pathways into the health workforce for Aboriginal and Torres Strait Islander people*. National Aboriginal and Torres Strait Islander Health Council 2008 Canberra, p 4
- ^{xxix} Ibid, p 27
- ^{xxx} Submission by the Indigenous Higher Education Council (IHEAC) to the Australian Higher Education Review, 2008, p 14 <http://www.deewr.gov.au/HigherEducation/Review/Documents/Submissions2008/173IHEAC.pdf> (accessed February 2010)
- ^{xxxi} Ibid
- ^{xxxii} *Blueprint for Action: Pathways into the health workforce for Aboriginal and Torres Strait Islander people*. National Aboriginal and Torres Strait Islander Health Council 2008 Canberra, p xiv
- ^{xxxiii} Knight, M, L. Myers & J. Sciacca. "Impact of the National Native American Youth Initiative on College Attendance & Careers in Health" published in *Critical Issues in Indian Health: Science and Solutions for the Health of Our People*.
- ^{xxxiv} 10th Annual National Native American Youth Initiative Counselor Application Packet 2007.
- ^{xxxv} Northern Ontario School of Medicine 2006. *Report of the Inaugural High School Summer Science Camp July 2006*. Ontario, Canada.

http://www.normed.ca/uploadedFiles/Education/Youth_Science_and_Technology_Outreach_Program/2006_07_InauguralHighSchoolSummerScienceCamp.pdf accessed February 2010

^{xxxvi} Ibid, see "Program Evaluation"

^{xxxvii} QIMR 2009. Spotlight on Indigenous Health at QIMR.

^{xxxviii} QIMR Media Release 1 September 2009 "Indigenous students research life in the lab".

^{xxxix} ASSETS 21 Information sheet

^{xl} Jema Williams, Participant, ASSETS 21 2008 Program

^{xli} <http://www.sparhc.uwa.edu.au/camdh> (accessed 15 February 2010)

^{xlii} UNSW. Barawul Yana: *Better Strategies for the recruitment, retention and support of Indigenous medical students in Australia*.

^{xliii} Lawson, K., R. Armstrong & M. Van Der Weyden 2007. 'Training Indigenous doctors for Australia: shooting for goal'. In *eMJA*; 186 (10): 547-550.

^{xliv} *Australian Directions in Indigenous Education 2005-2008*. MCEETYA 2006 Victoria.

^{xlv} *Blueprint for Action: Pathways into the health workforce for Aboriginal and Torres Strait Islander people*. National Aboriginal and Torres Strait Islander Health Council 2008 Canberra, p xiii