



Dean's Lecture

Faculty of Medicine, Dentistry & Health Sciences

# The Knowledge Economy and Aboriginal Health Development

**Professor Ian P. S. Anderson**

Director, Centre for Health and Society and *Onemda* VicHealth Koori Health Unit  
Melbourne School of Population Health  
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The University of Melbourne

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Research Director, Cooperative Research Centre for Aboriginal Health

Tuesday 13 May 2008



*Onemda*  
VicHealth Koori Health Unit



MELBOURNE  
SCHOOL OF  
POPULATION  
HEALTH



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Prime Minister Kevin Rudd recently pledged to close the Indigenous health gap by 2030. A fundamental step in the process of addressing health and social disadvantage is the production and exchange of knowledge. The university sector has a key role in developing Indigenous health knowledge as the basis for innovation, workforce development and evidence-based policy and practice. However, if this role is to be fulfilled, universities need to change their approach to the development of the health workforce, research and health information systems, and capacity exchange with Indigenous communities.

A strong advocate of Aboriginal-led health initiatives for Indigenous people, Ian Anderson has worked in Aboriginal health for 22 years as a health worker, educator and General Practitioner. In this presentation, he illustrates approaches to this challenge by drawing on examples of work being undertaken both at the University of Melbourne and elsewhere.



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VicHealth Koori Health Unit



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# Introduction

I would like to begin by acknowledging the people of the Kulin Nations, the traditional owners on which the University stands. The decision by the University of Melbourne to acknowledge the prior occupation of the country on occasions such as this is a necessary part of our role in the collective work of protecting human rights, social justice and recognition.

As many of you would be aware, the Prime Minister and Opposition Leader have both pledged to close the Indigenous health gap by 2030. It's a gap which sees an Indigenous person on average live for 17 years less than a non-Indigenous person (ABS & AIHW 2008). A gap which sees an Indigenous person bear a grossly disproportionate two and a half times the burden of disease compared to a non-Indigenous person (Vos *et al.* 2007). A gap which sees an Indigenous person bear five times the burden of diabetes; four and a half times the burden of cardiovascular disease; and more than four times the burden of intentional injuries such as suicide or harm from violence (Vos *et al.* 2007).

As stark as these figures seem, there has been some success. Indigenous infant and child mortality rates have fallen significantly and continue to do so (ABS & AIHW 2008; Freemantle *et al.* 2006). Between 1967 and 2004, Aboriginal life expectancy in the Northern Territory has risen by 8 to 14 years: from 52 to 60 years for men and from 54 to 68 years for women (Wilson *et al.* 2007). Death rates due to infectious disease have also fallen in the Northern Territory between 1977–2004 (Thomas *et al.* 2006).

However, not all the trends are as yet positive—for example, chronic diseases such as diabetes, ischaemic heart disease and smoking-related cancers are on the increase—and the challenge that remains is still considerable (Thomas *et al.* 2006).

If we are going to meet this challenge, universities will need to play a critical role. Closing the gap will not only mean that governments have to continue to invest in a health care infrastructure that will ensure Indigenous Australians have effective quality care on the basis of need. Closing the gap will also require strategies that align our health goals with the performance of other sectors of government—such as housing, education and employment.

Closing the gap will also require a new social contract that is broader than government—one which, in particular, opens access so that Indigenous Australia can participate fully in the Australian economy. Closing the gap also presents challenges to our own Indigenous community where we need to show leadership from within our family or clan groups to address some of those values and behaviours that undermine our personal and community wellbeing.

Within this big agenda, knowledge is a significant resource. In the past, our focus has been on health financing and infrastructure when building capacity to address the challenges in Indigenous health. We need to expand this horizon to include ideas, information and people resources. These are the critical elements of the knowledge economy.

My focus tonight is on the changes that universities must make if they are to cultivate the knowledge, contribute to problem-solving, and produce the workforce that underpins the innovation needed to close the Indigenous health gap. Universities will be responsible for training more Indigenous health professionals and for making sure that all students in the health sciences—Indigenous and non-Indigenous—have a solid grounding in Indigenous health needs.

But to do this, they will need to improve the way in which Indigenous students are recruited and supported, and to boost the quality of the learning experience for all students of Indigenous health. Universities will have to move away from the passive strategy of simply opening the gate to Indigenous students, to a more active approach that builds effective pathways for Aboriginal and Torres Strait Islander people into university.

If universities are to play a role in bridging the Indigenous health gap, they must refocus their research processes to generate knowledge and analyse problems in a way that is appropriate and relevant to those working in Aboriginal communities, health services and the policy sector. There will need to be greater emphasis on research that evaluates the impact of health interventions or policy reform—rather than research that just describes the problem.

Universities must also examine how they can be more effectively involved in the processes through which knowledge is disseminated or exchanged. In this context, universities should further develop a system of knowledge exchange that sees students take the knowledge developed through research and implement it in a real-world setting that will result in better health policies and practices for Indigenous Australians.

Universities can also play a more creative and facilitating role by building and extending their relationships with Indigenous communities, government stakeholders, professional groups and service providers. It is these relationships that provide the foundation for effective communication about ideas and knowledge—processes that are critical to innovation.

For if we are to engage more effectively we need new tools that underpin timely and effective communication strategies. For example, we cannot rely just on peer review publications to get our message out: we should be directly engaging Indigenous communities and Indigenous health stakeholders in the research process whenever and wherever possible.

As a key component of a knowledge network, universities have the potential to generate innovation across those various sectors that are critical to improving Aboriginal health and wellbeing. To this end, the challenge is for universities to reconfigure their operations, policies and activities in a way that maximises their role in supporting innovation in Indigenous health.

The Productivity Commission (2007:7) characterised innovation as the:

deliberative processes by firms, governments and others that add value to the economy or society by generating or recognising potentially beneficial knowledge and using such knowledge to improve products, services, processes or organisational forms...

Innovation can be distinguished from knowledge generation *per se*, since to comprise innovation, any knowledge must be productively incorporated into an entity's activities and outcomes, often using core resources and decision making processes.

Professor Alan Robson, Vice-Chancellor at the University of Western Australia and Chair of the Group of Eight, framed his approach to innovation by arguing that the role of universities in knowledge production is broader than just scientific research and discovery:

Universities contribute to building the stock of knowledge not only through discovery but also through problem-solving [which also draws upon the humanities and social sciences].

Research is often not breakthrough but a patient gathering of understanding through incremental processes, testing, improved measurement, better instrumentation and new applications of technology.

University research can thereby lead to small, almost unnoticeable, flows of useful new information that cumulatively can have a large impact.

The relentless pursuit of understanding builds know-how, skills, experience, and problem solving methods. These are the things that are of most use to business seeking innovation and public agencies seeking to solve community problems (Robson 2008:5).

I would further add to this that Indigenous communities are also sources of innovation and, as such, Indigenous Australians play a critical and active role in the production of knowledge. Innovation and its uptake in Aboriginal Australia must be founded on an approach that fosters Aboriginal leadership, supports the development of community capacity and engages with our intellectual world.

Closing the Indigenous health gap is a big challenge. It provides an opportunity to look critically at the kind of reforms we need. This will mean getting a better handle on the sorts of changes we need to pursue if we want universities to produce the knowledge that will lead to innovation in Aboriginal health and social development.

Tonight, I will focus on issues such as equity in relation to Indigenous students, the inclusion of Indigenous health in professional training, and new approaches to research in Indigenous health. To meet these challenges, and to have an impact on practice, we must effect change at the institutional level.

There is a further challenge, which I will turn to briefly at the end, that is about sector-wide change across all institutions. Here we need to critically examine the policy framework for both research and Indigenous education—in particular to ensure that there is a better alignment between the performance drivers that shape university practice and the objective of closing the Indigenous health gap.

## Universities and the Indigenous welfare project

To understand how we have come to this point, we need to reflect on what's happened in the past 30 or 40 years during the period in which Australia's universities opened their doors to Indigenous students. This has occurred in the context of complex historical change in the relationship between Indigenous Australians, Australian governments and institutions of the state.

The 1967 referendum and its deletion of race clauses is often used to mark the symbolic arrival of Aboriginal citizenship in Australia. In fact, the deletion of the race clauses had a more modest impact in that they removed the constitutional barriers which prevented the Commonwealth from legislating for Aboriginal people and from formally counting Aboriginal Australia on the census. However, the referendum did signal a broader social and political shift in Australia.

Progressive, slow and *ad hoc* reform of multiple pieces of Commonwealth and State legislations removed the restrictions on rights, the exclusions on voting, and the marginalisation of Indigenous Australians from access to welfare. In part, these changes were a response to a reconfiguration and revitalisation of the Aboriginal political movement. It also reflected a shift in social attitudes and, to an extent, the influence of global anti-colonial movements. Yet, while the gates to the welfare economy were opened, Aboriginal people continued to be marginalised from the broader economy.

## Indigenous health and the health workforce

Margaret Williams was the first Aboriginal graduate of this university in 1959 with a Diploma of Physical Education. It took three decades to build this success into a sustained cohort of Aboriginal and Torres Strait Islander students. The contrast with the international experience is stark.

Let's take medicine as an example. Dr Oronhyatekha was the first Mohawk doctor in Canada to graduate from medicine: he did so in 1866 from the University of Toronto (Nicks 1996:466). The first Māori doctor, and Minister for Health, was Sir Maui Wiremu Pomare graduating in 1899 from Chicago College. He was followed by Te Rangi Hiroa (Sir Peter Henry Buck), also an anthropologist, who was the first Māori doctor to graduate from a New Zealand University, Otago: he graduated in 1904 (Dow 1999:94, 123). The first Native American Woman MD was Susan La Flesche Picotte: she graduated top of her class from the Women's Medical College of Pennsylvania in 1889 (National Library of Medicine 1998).

But in Australia, it took until 1983 for an Indigenous Australian to graduate from medicine, when Associate Professor Helen Milroy graduated from the University of Western Australia.

In order to develop the platform for innovation in Indigenous health we need a quality, skilled workforce—and it is imperative that that health workforce is Indigenous. Indigenous Australians can play a critical role in the delivery of Indigenous health services by ensuring that they align their technical knowledge and skills with the best possible health care and health prevention. Indigenous health professionals will also choose to work in 'mainstream health' contexts where their presence can challenge the work practices and attitudes of their colleagues.

Enhancing the participation of Indigenous Australians in the health workforce is also critical if we are to promote Indigenous leadership in health education and research.

However, we cannot bear the entire responsibility for ensuring good health outcomes for Indigenous people. Our non-Indigenous colleagues also play a critical role, which is why I will return to consider some of the broader issues in teaching and learning in Indigenous health within the health professions.

## Indigenous Australians in the health workforce

Although Indigenous Australia today represents 1.9 per cent of the total population aged 15 years and over, in 2006 Aboriginal and Torres Strait Islanders constituted only 1 per cent of the health workforce (ABS & AIHW 2008:200). According to the 2006 census there were 100 Indigenous medical practitioners in Australia, including 40 medical specialists of some kind, representing only 0.2 per cent of the medical workforce (ABS & AIHW 2008:200; and see Table 1, p.5).

The Australian Indigenous Doctors' Association (AIDA) estimates that in 2008 there are 125 graduates—with another 125 in training (Mokak 2008). In 2006, the proportion of the total doctors to the total population was 0.27 per cent while the proportion of Indigenous doctors to the Indigenous population was 0.019 per cent.

The health occupations with the largest number of Indigenous workers were registered nurses (1107), Aboriginal and Torres Strait Islander health workers (965) and nursing support workers (442) (ABS & AIHW 2008:200). The health occupations with the highest proportion of Indigenous workers were Aboriginal and Torres Strait Islander health worker (96%), health promotion officer (11%) and environmental health worker (3%) (ABS & AIHW 2008:200).

In 2005, 166 Indigenous students completed health-related undergraduate courses, and 83 completed welfare-related courses, representing 1 per cent of all students completing undergraduate courses in these two fields (ABS & AIHW 2008:204; and see Table 2, p.5). Thirteen Indigenous students completed a degree in medical studies, 48 in nursing and 78 in public health (ABS & AIHW 2008). The number of Indigenous students who completed health-related courses was similar in 2003 and 2005 (168 and 166 respectively) (ABS & AIHW 2008).

A survey of the Indigenous medical workforce reported in the *Medical Journal of Australia* (Lawson *et al.* 2007:547; and see Table 3, p.6) identified about 113 graduates with 124 in training.

With respect to both graduations and current enrolments, it is clear that some medical schools—such as Newcastle University, the University of Western Australia, James Cook University and the University of New South Wales—have had a better track record relative to the rest.

There is a debate as to whether an Indigenous health workforce strategy should focus on those institutions with a proven record of success or whether all medical schools should be encouraged to do better. It could be argued that Indigenous students should select the university that will maximise their opportunities for personal success.



Dr Susan La Flesche Picotte  
1889

*Photo courtesy National Anthropological Archives, Smithsonian Institution, (4503), Washington DC, USA*



Dr Susan La Flesche Picotte  
circa 1910

*Photo courtesy Nebraska State Historical Society, Lincoln, NE, USA*



Dr Oronhyatekha  
circa 1865

*With permission of the Royal Ontario Museum © ROM, Toronto, ON, Canada*



Dr Oronhyatekha  
early 1900s

*Photo courtesy Woodland Cultural Centre, Brantford, ON, Canada*



Dr Margaret Williams  
1972

*Photo courtesy Centre of Indigenous Education, The University of Melbourne, Melbourne, Australia*



Dr Maui Wiremu Pomare  
1899

*Photo courtesy Alexander Turnbull Library, Wellington, New Zealand (ref. no. PUBL-0094-001)*



Sir Maui Wiremu Pomare  
1923

*Photo courtesy Alexander Turnbull Library, Wellington, New Zealand (Photographer: Stanley P. Andrew, S. P. Andrew Collection, ref. no. 1/1-019098-F)*



Te Rangi Hiroa  
(Sir Peter Henry Buck)  
1904

*Photo courtesy Alexander Turnbull Library, Wellington, New Zealand (ref. no. 1/2-037931-F)*



Te Rangi Hiroa  
(Sir Peter Henry Buck)  
1930s

*Photo courtesy Alexander Turnbull Library, Wellington, New Zealand (ref. no. 1/2--078259-F)*

**TABLE 1: Indigenous participation in selected health occupations, 2006**

Occupation	Indigenous (%)	Indigenous (no.)	All Persons (no.)
Medical Practitioner			
• General Practitioners	0.2	60	29,920
• Other (Specialist, Psychiatrist or Surgeon)	0.2	40	25,155
Midwifery and Nursing			
• Midwife	0.4	53	13,164
• Registered Nurse	0.5	1,107	172,575
Health Therapy Professionals			
• Dental Practitioner	0.2	16	9,065
• Dental Hygienist, Technician or Therapist	0.4	22	5,169
• Physiotherapist	0.4	54	12,286
Health and Welfare Support Workers			
• Aboriginal and Torres Strait Islander Health Worker	95.5	965	1,010
• Ambulance Officer Paramedic	1.7	153	9,098
• Enrolled or Mothercraft Nurse	1.1	215	19,397
• Nursing Support Worker	2.0	442	22,380
<b>Total Health Workforce</b>	<b>1.0</b>	<b>4,891</b>	<b>492,342</b>

Source: ABS &amp; AIHW 2008:201

**TABLE 2: Indigenous student completions in undergraduate health degrees, 2003 & 2005**

Occupation	Indigenous (%) 2003	Indigenous (no.) 2003	All Persons (no.) 2003	Indigenous (%) 2005	Indigenous (no.) 2005	All Persons (no.) 2005
Medical Studies	0.6	10	1,735	0.8	13	1,697
Nursing	0.8	61	7,497	0.6	48	7,565
Pharmacy	0.1	1	769	0.2	2	1,037
Public Health*	6.0	40	672	10.6	78	736
Dental Studies	0.7	2	306	0.6	2	343
<b>Total</b>	<b>1.0</b>	<b>168</b>	<b>16,269</b>	<b>1.0</b>	<b>166</b>	<b>17,395</b>

Source: ABS &amp; AIHW 2008:204

\* includes occupational health and safety, environmental health, Indigenous health, health promotion, community health, epidemiology and public health

Some students will do better if given the opportunity to study close to family and community. For others, an institution that is more distant may, in fact, provide the right academic programs for their needs.

An alternative approach could be to develop regional strategies in which universities collaborate on innovative recruitment and retention models that involve shared resources and developing student-centered entry pathways.

Here at the University of Melbourne we have implemented a number of strategies, particularly since 2004, when a Medicine, Dentistry and Health Sciences (MDHS) Faculty Aboriginal Liaison Officer was employed to develop a specific focus on recruitment and retention of Indigenous students into the health science (see Table 4 below for current enrolments).

This innovation—a collaboration with the University's Centre for Indigenous Education—has facilitated

the further development of a process for monitoring selection, the provision of tuition, the development of mentoring initiatives, a scholarship program, and a collaboration with one of the University's residential colleges, Trinity College, that provides a number of MDHS Faculty students with accommodation and collegial support.

Currently, there are no nationally agreed targets for the Indigenous medical workforce. In 2001, the Australian Medical Association's *Healing Hands Report* called for a target in which 2.4 per cent of all health professionals were Aboriginal or Torres Strait Islander by 2012 (AMA 2004). This would have required an extra 928 Indigenous doctors over the period 2001–2012. Using AIDA estimates of Indigenous doctors in 2008, we would currently have a shortfall of around 800. In 2005, the AIDA *Healthy Futures* report set a headline target for 350 enrolments by 2010 (Minniecon & Kong 2005).

**TABLE 3: Indigenous medical graduates and students in Australian medical schools, 2007**

University	Previous Graduates	Current Students
Adelaide	4	7
Australian National	0	0
Bond	0	0
Deakin	0	0
Flinders	4	2
Griffith	0	1
James Cook	6	19
Melbourne	3	5
Monash	1	3
Newcastle	51	25
New South Wales	12	15
Notre Dame	0	0
Queensland	8	8
Sydney	7	4
Tasmania	4	6
Western Australia	13	23

Source: Lawson *et al.* 2007:547

**TABLE 4: Indigenous students enrolled at the Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne, 2008**

Degree	No.
Bachelor of Medicine, Bachelor of Surgery (MBBS)	6
Nursing Science	1
Bachelor of Oral Health	1
Bachelor of Physiotherapy	2
PhD—Medicine, Dentistry and Health Sciences	9
Graduate Diploma in Psychology	1
Master of Nursing	3
Master of Public Health	4
Master of Social Work	4
<b>Total Indigenous Students</b>	<b>31</b>
<b>Total Students</b>	<b>5,982</b>

Source: Centre for Indigenous Education, The University of Melbourne

Achievable workforce targets should take into account high school retention rates, tertiary readiness, pathways and our population demographics. At the national regional level these could be a useful tool in monitoring the impact of policy.

Australia's approach to Aboriginal higher education that evolved from the 1970s onwards has focused on the removal of some entry level barriers to enrolment. This created Aboriginal enclaves that focused on student academic and welfare support, and in some instances on tertiary bridging programs. These were important strategies. However, despite some noteworthy local successes, we have failed more generally to produce sustained outcomes in sectors of higher education such as the health sciences.

My colleague from the Centre for the Study of Higher Education, Professor Richard James, noted in his Dean's Lecture at this University earlier in the year that there are significant problems more generally with our approach to equity in higher education. James' critique is based on a simple observation: that despite the development of a mass, globalised higher education environment, people from a higher socio-economic status are disproportionately represented in higher education in Australia, as is the case elsewhere in the world (James 2007:8). James (2007:6) observes that:

These imbalances have remained virtually unchanged... during the period of significant expansion in the number of domestic students in Australian higher education...

I believe James' analysis, while talking about all students from low socio-economic backgrounds, is particularly relevant to Indigenous students:

It is naive to think only in terms of removing barriers [to address the equity challenge], or even to think in terms of the population rhetoric of 'expanding choices'. The challenge is not only to remove or reduce barriers, where they exist, but also to *build* possibilities and choices: to raise aspiration, to raise perceptions of relevance, and to boost personal education achievement. Many young people do not even get to the point of confronting barriers or having 'choices'... (James 2007:11).

The problem for Indigenous students, as for many others from low socio-economic status backgrounds, stems far back into the education system. Again to quote James (2007:11):

The die has been cast for many students well before the point of transition to higher education at which universities have the most influence. Differential school completion rates are a significant factor in the differential rate of transfer to higher education, as are differential levels of school achievement.

Disparities between Indigenous and non-Indigenous school retention rates are gradually lessening, although significant challenges remain. In 1998 that difference in percentage points for retention to Year 12 was 40.6, while in 2007 Indigenous student retention to Year 12 was 42.9 per cent (ABS & AIHW 2008:16). As well as encouraging Indigenous students to complete school, we need to focus in particular on the relatively poorer outcomes in science and mathematics at the upper secondary level, as these subjects are crucial in determining access into the applied sciences, such as health.

The Programme for International Student Assessment (PISA) has demonstrated that Australian students have a high level of mathematics and science literacy (in 2003 average scores placed them among the top third of 41 countries). However, in 2003 PISA results for Indigenous students were consistently lower than for non-Indigenous students: Indigenous average mathematics score was 440 compared with 526, and the Indigenous average score for science was 434 compared with 527 (ABS 2006a).

The National Indigenous English Literacy and Numeracy Strategy was launched in 2000 to address these disparities (DEEWR 2000). However, we actually need to deal with the bridge between Indigenous education and health strategy, and particularly to close this critical gap. Universities need to shift their approach from passively waiting for Indigenous students to ask for entry, to constructing community relationships that can create real opportunities for Indigenous students. We need to reach back into the school system and help create environments in which Indigenous students can succeed.

We can encourage Indigenous students to aspire to careers in medicine and the health sciences. We can better link them with the university experience while they are still in school through initiatives such as science summer schools (or other programs to boost their science skills and knowledge), mentoring programs and targeted initiatives that build pathways between secondary school and university health science programs.

If we do more to help students at school we can create a situation in which our doors are not simply open to Indigenous students, but one in which Indigenous students are driving the demand for places—where they are knocking on the door to get into medical school.

## Indigenous health in the curricula

As I have stated earlier, a key factor in closing the Indigenous health gap is ensuring that all students—both Indigenous and non-Indigenous—have a solid grounding in Indigenous health needs.

In 2004 the Onemda VicHealth Koori Health Unit, here at the University of Melbourne, undertook a national audit of the inclusion of Indigenous content in medical education (Phillips 2004) on behalf of the Committee of Deans of Australian Medical Schools (CDAMS, now the Medical Deans Australia and New Zealand).

The national picture was varied: for the most part it did not seem that dissimilar to the curricula I encountered as a medical student in this institution in the 1980s, when there were only a few hours of Indigenous content dispersed across the curriculum.

We recorded that content as part of an evaluation undertaken by Rasmussen (see Table 5 below), in which we surveyed medical students and undertook focus group interviews to identify barriers and facilitators to their learning in Indigenous health. The factors we identified were clustered into broad themes that related to the structure of the curricula as well as to teaching and student factors.

Structural barriers to effective learning included medical curricula that did not effectively integrate learning in Indigenous health with learning about the social, historical and political factors that impact on health and health care more generally. Indigenous health content was also constructed as a marginal aspect of student learning, rather than being more fully integrated into the curricula. Poor coordination of teaching in Aboriginal health was also a barrier to effective learning, as was inappropriate pedagogy (such as an over-reliance on lectures as opposed to experience-based learning).

Student factors that impacted on learning included their own experience, such as a lack of positive encounters with Aboriginal people. Student emotional engagement with the subject—such as guilt or anxiety—and

stereotypes about Aboriginal people—such as where they lived, and how much money was spent on them—also affected students’ experience of learning about Indigenous health.

The ability of students to integrate learning on Aboriginal health into a broader social model of health was important. Finally, some students just did not see that studying Indigenous health was relevant.

Quality teaching and learning is important for both Indigenous and non-Indigenous students. As part of a broader strategy we need to have a health workforce that is adequately equipped to respond to Indigenous health needs.

Most students will not have a strong focus in their working life on Indigenous patients, but a significant minority will have a deeper engagement with Aboriginal health. So it’s important that learning in relation to Indigenous health also reinforces broader learning outcomes that are relevant to all doctors, no matter where or with whom they are practising. The creation of quality curricula in Indigenous health is a significant step in creating an inclusive learning environment that is both relevant to Indigenous students and supports their participation in the health workforce.

The national audit undertaken in 2004, with regard to the inclusion of Indigenous content in medical education, was then used by Onemda to inform the development of a national Indigenous health curriculum framework. This framework (Phillips 2004a) articulates learning objectives, key pedagogies and the institutional reforms needed to support these (see Table 6, p.9). It was endorsed by the Medical Deans Australia and New Zealand in August 2004, and is the only such nationally agreed curriculum of its kind.

The Australian Medical Council has adopted this curriculum and incorporated it within its set of standards in medical school accreditation that has been implemented from 2006.

**TABLE 5: Teaching Aboriginal health at The University of Melbourne, 1994–1996**

Year Level	Teaching in Aboriginal Health Content
First	1 lecture (1 hour) on epidemiology, focusing in part on Aboriginal health statistics
Third	1 lecture (1 hour) on historical and cultural influences on Aboriginal health Optional Advanced Study Unit undertaken by approximately 15 students per year
Fifth	1 tutorial (1 hour) exploring student attitudes to Aboriginal issues 1 lecture (4 hours) from a clinical perspective interweaving epidemiological, social and cultural factors in Aboriginal health

Source: Rasmussen 2001:25

**TABLE 6: CDAMS Indigenous Health Curriculum Framework – Outline of contents**

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**Guiding Principles and Rationale**

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**Suggested Subject Areas (which are aligned to learning domains and student attributes)**

1. History
2. Population Health
3. Models of Health Service Delivery
4. Culture, Self and Diversity
5. Indigenous Societies, Culture and Medicines
6. Working with Indigenous Peoples—Ethics, Protocols and Research
7. Clinical Presentation of Disease
8. Communication Skills

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**Pedagogical Principles**

- Educating medical students about the health of Aboriginal and Torres Strait Islanders is unique among teachings about the health of other Australians, and we can teach medicine in a way that enhances students’ understanding of Indigenous experiences and world-views.
- Indigenous health is an integral part of medical education.
- Teaching from a positive strengths-based model, rather than a deficit model, is more likely to encourage effective learning environments and attitudes.
- Planning vertical and horizontal integration is important.
- Indigenous staff are key curriculum developers and enhancers.
- The attitudes of all teaching, clinical and administrative staff count towards effective learning.
- In order to facilitate the most effective learning possible, partnerships with local Indigenous individuals, organisations and communities will need to be developed.
- It is important to teach Indigenous cultural safety/awareness separately to multicultural awareness.
- Students can be important curriculum enhancers if effectively supported and encouraged, but they should not be expected or relied upon to perform this function.
- Multi-disciplinary collaboration is likely to enhance learning outcomes.

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**Delivery and Assessment Guidelines**

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**Processes for Curriculum Development**

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**Resources and Capacity Needed for Success**

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Source: Phillips 2004a

Onemda is currently finalising the development of a critical reflection tool to help medical schools undertake continuous quality improvement in Indigenous health curricula and student support. The tool is in its final trial phase in the field, and should be completed by mid-2008.

We are also working with the Medical Deans Australia and New Zealand to establish a trans-Tasman professional network of medical educators in Indigenous health. This network—Leaders in Indigenous Medical Education or LIME Network—meets annually to oversee a work program that includes the development of communication strategies, teaching and learning resources and a biannual conference.

Universities can play a leading role in professional development initiatives such as this, by promoting cross-discipline and discipline-specific reform of teaching and learning in Indigenous health.

## Research, knowledge development and problem solving

The problematic relationship between research and Indigenous Australia is well documented. Aboriginal people have expressed anger and frustration at being exploited by researchers without experiencing any tangible benefits from the research process. There are also concerns about the ethics of the research process and the sense of communities being involved only in a marginal way (Humphery 2000, 2002).

It is not my intention to review this history here. However, I will focus on one key problem: the type of research that is undertaken. As Sanson-Fisher and others (2006) have observed in the *Medical Journal of Australia*, most of the research into Indigenous health in Australia is descriptive (see Table 7 below). It continually describes problems without proposing solutions or providing new knowledge about the situation.

This problem is not unique to Australia. Despite the increasing volume of research activity over the period of their study, there was no shift in the relative proportion

of descriptive versus intervention research. This trend is similar in Canada, New Zealand and the United States of America.

Sanson-Fisher's method does not unbundle the descriptive category to disentangle research that contributes to problem solving in Aboriginal health. Nevertheless, it does point to a problem in the distribution of our research effort.

We have ample data and research to demonstrate that tobacco smoking is a significant problem, with rates approximately double that of non-Indigenous Australia—for men, the figure in 2004–05 was 51 per cent compared with 24 per cent, and for women 49 per cent compared with 18 per cent (ABS 2006b). Theo Vos and his colleagues at the University of Queensland, in their comprehensive analysis of the Indigenous burden of disease and injury, calculated that tobacco smoking contributed 17 per cent to the health gap between Indigenous and non-Indigenous Australia (Vos *et al.* 2007).

However, in her systematic review of the evidence Ivers (2003) found only four studies, of which two were published in the medical literature, that evaluated those programs that were the most effective at stopping Indigenous people from smoking.

There has been a significant and multi-layered movement that has gained momentum over the past decade to reform Indigenous health research (Brands & Gooda 2006; Henry *et al.* 2002a, 2002b, 2002c; Henry *et al.* 2004). This reform agenda has been promoted through national strategies such as the National Strategic Framework for Aboriginal and Torres Strait Islander Health, signed off in 2003 by all Australian governments (AHMC 2004). In part it has been a response to the ongoing advocacy by the Indigenous health sector.

There are a number of components to this agenda (Brands & Gooda 2006), which includes all aspects of the research process, such as priority setting, research ethics, research collaborations and management, and knowledge transfer (see Table 8, p. 11). Particular emphasis has been placed on the development of Indigenous leadership, capacity and participation in the research process.

**TABLE 7: Indigenous health publications, 1987–2003**

Australia	Original Research			
	All	Measurement	Descriptive	Intervention
1987–88	19	2(11%)	17(89%)	0
1997–98	80	6(7%)	60(75%)	14(18%)
2001–03	101	9(9%)	79(78%)	13(13%)

Source: Sanson-Fisher *et al.* 2006

**TABLE 8: Cooperative Research Centre for Aboriginal Health’s Principles for an Indigenous Research Reform Agenda**

Involvement of Indigenous communities in the design, execution and evaluation of research.
Defining the coordinating role of Indigenous community-controlled organisations.
Consultation and negotiation defined in practice as ongoing and open to scrutiny.
Mechanisms for Indigenous control and transformation of research.
Mechanisms for ongoing surveillance of research projects.
Processes to determine research priorities and benefits.
Determination of ethical processes for the conduct of research in terms of consultation and negotiation.
Transformation of research practices from ‘investigator-driven’ to a re-assertion of control by Indigenous community-controlled organisations over the research project and an adoption of the needs-based approach to research.
Linkage between research and community development and social change.
The training of Indigenous researchers.
The adoption of effective mechanisms for the dissemination and transfer of research findings.
Ownership and control of research findings by Aboriginal communities.

Source: Cooperative Research Centre for Aboriginal Health 2006

In some quarters, there has been an increased focus on priority setting and a move away from a single reliance on the investigator-driven research agenda. There has been a move towards more collaborative practices backed up by institutions which enable more effective knowledge transfer, community engagement and capacity exchange.

This agenda has been very influential in the establishment of research institutions such as the Onemda VicHealth Koori Health Unit and also the Cooperative Research Centre for Aboriginal Health (CRAH), which involves the University of Melbourne as a core partner along with seven other universities and four industry partners.

Onemda (formerly VicHealth Koori Health Research and Community Development Unit) was established in June 1999 with core funding from the Victorian Health Promotion Foundation and the Commonwealth Department of Health and Ageing. We have a specific mandate to work in the south-east of Victoria, but have also developed a broader national and international footprint.

Onemda’s approach to developing our research and teaching work is framed by broader community development principles, which include:

- Affirming Aboriginal knowledge, values and processes.
- Focusing on Aboriginal community priorities.
- Focusing on Aboriginal community development and integrating its principles into research and teaching.
- Developing meaningful consultative processes with Aboriginal communities and people.
- Strengthening the skills, capacity and leadership of Aboriginal people.
- Collaborating to improve Aboriginal health.
- Striving to be ethical, innovative and rigorous, respecting social and cultural diversity.

Source: Onemda VicHealth Koori Health Unit, *Strategic Plan 2004–09*

To further our work we have carefully and deliberately developed a number of multi-layered partnerships with Aboriginal people, communities and agencies in Victoria, in Australia and internationally. This has involved the establishment of formal partnerships through Memoranda of Understanding with organisations such as Victoria's Koorie Heritage Trust Inc. and the Victorian Aboriginal Community Controlled Health Organisation.

Onemda has also developed working partnerships with policy structures such as the Office for Aboriginal and Torres Strait Islander Health, the Victorian Office for Children and the Department of Human Services.

We have been leading the development of professional networks—in collaboration with key partners such as the Medical Deans Australia and New Zealand, the Institute of Koorie Education at Deakin University, and the Leaders in Indigenous Medical Education—as well as the network of public health academics in Indigenous health.

Onemda has put particular emphasis on communicating through various informal processes—such as community reference groups, our workshop program called *We Don't Like Research*, and community newsletters.

We have also created international links through active participation in bodies such as the Pacific Region Indigenous Doctors Congress and the International Network for Indigenous Health Knowledge Development.

We have been actively involved in developing the research program for the Cooperative Research Centre for Aboriginal Health. The work of the CRCAH is a great example of how we can conduct research that produces a real outcome for Indigenous people, particularly its Facilitated Development Approach, which we like to describe as 'research walking backwards' (Brands & Gooda 2006:31).

Rather than beginning with a researchable idea, the CRCAH asks industry and communities to tell researchers the knowledge they need to develop better health services, to build capacity, and to generate policies that will enable improvements in Indigenous health. Researchers at the CRCAH then develop researchable projects that address these needs, and fill gaps in our existing knowledge thereby improving policy and practice.

It is a far more collaborative approach that begins by working with those Indigenous people who will ultimately be the end-users of the research. It defines their needs and sees them involved in the development of research protocols. By the time the research process is finalised, a strategy for knowledge transfer—for utilising the research in a real-world situation—is already in place.

## Creating a policy environment for success

The university that contributes to the national challenge to close the Indigenous health gap will be one that:

- Reaches out to Indigenous students and makes them aspire to a career in the health sciences, and builds pathways for them to pursue this.
- Creates a learning environment that integrates and coordinates quality learning on Indigenous issues into ALL health professional training.
- Focuses its research effort on solving problems and producing both new knowledge and solutions that foster innovation and enable health-improving change within communities, services and systems.

The university that can achieve these things will be fundamental in driving the innovation behind closing the Indigenous health gap.

But to achieve this we need changes to the policy environment in which universities operate. We need:

- Performance drivers within our research funding system that encourage collaboration with Indigenous communities and stakeholders in Indigenous health to build long-term research programs.
- To foster activities that build the relationship required for innovation and effective knowledge exchange.
- To reward universities for innovation in Indigenous student recruitment.
- To change the performance framework for Indigenous education to move universities beyond a passive recruitment strategy and encourage them to internally target under-performing areas such as the health sciences.

In many senses, 2030 seems like a long way away—but if we are going to close the Indigenous health gap we must act now.

There is a lot of bad news in Indigenous health but, as I have mentioned earlier, I also think there are many reasons for us to be optimistic.

Closing the Indigenous health gap provides an enormous challenge, but it also provides everyone working in Indigenous health—as practitioners, educators, researchers and policymakers—with an unprecedented opportunity to make genuine, long-term positive change.

If all of us in the university sector work together on this we can make a real difference to Australian society.

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