Building Public Health Workforce Capacity in Australia

Case studies of Academic Public Health Education and
Workforce Preparation

anaphi

**Australian Network of Academic
Public Health Institutions**

Preface

This monograph examines three contemporary issues dealing with the nexus between education, workforce and policy. The design of each of the three case studies is informed by available literature as well as examples and vignettes. This approach is designed to provide both structure to each of the case studies but also enables some of the issues that are not directly found in the literature to be explored in a more innovative examination of the surrounding issues dealt with in each case study.

The three case studies are structured around the following issues:

• Aboriginal public health and education: Has it made a difference in practice?
• Public health education: Policy and research training contributing to translational research.
• Preventative health and workforce development.

Each of the case studies addresses an issue of contemporary public health; some of these issues have been identified in the literature, such as workforce requirements, while others have had relatively scant attention in the literature, as is the case with translational research. The case study on Aboriginal public health and education explores the experiences of health workers in the Victorian Aboriginal Community Controlled Health Organisation, Public Health and Research Unit (PHRU) and examines their perceptions of the link between education and practice in their context.

The monograph challenges the reader to consider a range of factors that impact on the policy, education and practice nexus. It explores these issues from a range of perspectives and draws some conclusions about the role of academic public health institutions in furthering the important role of public health in advancing the nation's health.

Writing Teams

Chapter 1   Background and methods

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Chapter 2   Aboriginal public health and education: Has it made a difference in practice?

Dr Bronwyn Fredericks, Senior Research Fellow, Faculty of Health, QUT; Rebecca Edwards (formerly Watson), Victorian Aboriginal Community Controlled Health Organisation (VACCHO).

Chapter 3   Public health education: Policy and research training contributing to translational research.

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Chapter 4   Preventative health and workforce development

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Acknowledgements

Contents

Abbreviations used in this report

Aboriginal Community Controlled Health Organisations (ACCHOs)

Australian Health Ministers Advisory Council (AHMAC)

Cooperative Research Centre for Aboriginal and Torres Strait Islander Health (CRCAH)

Health in All Policies (HiAP)Public Health and Research Unit (PHRU)

Victorian Aboriginal Community Controlled Health Organisation (VACCHO)

Victorian Advisory Committee on Koori Health (VACKH)

List of Tables and Figures

Tables

Figures

Chapter 1 Background and methods
MaryLou Fleming

1.1   Introduction

The importance of public health and health promotion has gained some greater prominence at Federal, State and Territory Government levels. In the past two years we have witnessed a major investment in the National Health and Hospitals Reform Commission, the National Preventative Health Strategy and the proposal to establish an independent National Health Promotion and Prevention Agency, and the most recent National Health Reform Plan that articulates structural reforms to Australia's health care system. These initiatives may pave the way for an increasing national focus on promotion and prevention and an increase in the current 2.2 per cent of recurrent health expenditure for public health (AIHW, 2010).

Australians generally have good health. Our health is improving in many areas and our mortality and morbidity data compare well with other countries. However, there are serious areas of ongoing concern. Despite some improvements in Aboriginal and Torres Strait Islander health, the overall gap between Indigenous and non-Indigenous mortality rates appears to be widening (AIHW, 2010). The 'Closing the Gap' strategy aims to reduce Indigenous disadvantage in life expectancy, child mortality, access to early childhood education, educational achievement and employment outcomes (Commonwealth of Australia, 2010). In the specific area of health, 'Closing the Gap: Tackling Chronic Disease' aims to address key risk factors for chronic disease in the Indigenous community such as smoking, as well as improve chronic disease management and follow up, and increase the capacity of the primary care workforce to deliver effective care to Indigenous Australians with chronic diseases (DoHA, 2009).

Given this health landscape, it is important to have a public health workforce that is equipped to tackle the diverse issues facing Australians. Public health tertiary education is therefore tasked with

developing a workforce that can both shape and respond to the emerging and continuing needs of the public's health.

This monograph, *Building Public Health Workforce Capacity in Australia: Case studies of Academic Public Health Education and Workforce Preparation,* is timely in that it addresses significant and challenging issues for public health academic institutions. The first case study examines the role of Aboriginal public health and education and discusses how these can contribute to improved health outcomes for the Victorian Aboriginal community. The second highlights contemporary initiatives and examines public health education in the context of policy and research training and its contribution to translational research. Finally, the third case study addresses the preparedness of the public health workforce for the prevention agenda and the need to build a workforce capable of delivering on preventative health targets**.**

Renewed interest in a prevention agenda in Australia makes these three case studies timely, relevant and important.

1.2 The contribution of the Public Health Education and Research Program (PHERP) and the Australian Network of Academic Public Health Institutions (ANAPHI)

Clearly, academic departments and schools of public health have a key role to play in education, training, research and leadership development, and hence, in population health capacity building. Indeed, the extent to which we are able to make additional improvements in the health of the Australian population depends, in large part, upon the quality and preparedness of the health workforce, which is, in turn, dependent upon the relevance and quality of its education and training (Gebbie, Rosenstock & Hernandez, 2003).

The Australian Government's Public Health Education and Research Program (PHERP), in conjunction with the academic public health institutions that have formed the Australian Network of Academic Public Health Institutions (ANAPHI), has been very important in

building and sustaining public health capacity in this region of the world since the program began in 1987. Now some 23 years later in 2010, we see the final year of Australian Government PHERP funding.

PHERP was established to strengthen capacity to educate and train Australia's public health workforce by assisting tertiary institutions to offer a range of high-quality postgraduate public health education programs, including research training, and to make a contribution to the policy making-process.

PHERP prioritised its focus to include:
• building on existing infrastructure and providing leverage for more extensive public health work
• strengthening the basis for high-level and consistent quality education and research programs
• fostering innovation
• supporting initiatives which focus on the needs of Indigenous Australians
• fostering co-operation and collaboration, including linkages to government and the public health workforce
• fostering co-operation and collaboration to improve health and the health workforce.

ANAPHI is the peak body, whose aim is to facilitate the sharing of information and networking between institutions. It represents the interests of the sector to governments and other stakeholders. ANAPH provides support for and strengthens education and research training in public health to meet the needs of the public health workforce, employers and students. The network was originally formed to promote collaboration among Australian academic institutions contributing to public health education and research and to develop partnerships with governments to better understand and respond to the national interest.

ANAPHI's brief has been able to:
• enhance the public profile and presence of the sector through partnerships with governments at all levels and

non-government organisations to strengthen public health action and responsiveness, to provide representation on key decision-making bodies; and to advocate for appropriate investments in education and research.

• improve the quality and accessibility of public health education and training in Australia.

• improve the quality and accessibility of public health research in Australia

• monitor the impact of public health research and education in Australia.

In 2005 ANAPHI produced a report titled *Building Capacity to Improve Public Health in Australia: Case Studies of Academic Engagement* (Oldenburg, Kelly, MacDougall et al., 2005)*.* The case studies included:

Case Study 1 Emerging infectious diseases

Case Study 2 Management and prevention of chronic diseases

Case Study 3 Aboriginal and Torres Strait Islander Health

Case Study 4 Moving public health action upstream

In 2010, ANAPHI has produced a second monograph with the title *Building Public Health Workforce Capacity in Australia: Case studies of Academic Public Health Education and Workforce Preparedness*. The purpose of this most recent monograph is to demonstrate, through three case studies, how Australia's academic public health institutions have contributed to improving health and public health capacity in Australia and to raise some challenges and opportunities for public health in the future. In each case study, particular emphasis is given to recent efforts, approaches and methods in relation to:

• building and training the workforce relevant to public health

• knowledge generation and transfer

• informing and influencing policy.

These case studies are not intended to represent a comprehensive range of issues facing the development of a public health workforce into the future. They do, however, represent contemporary and important aspects of the practice of public health and they do have an impact on public health workforce development and public health outcomes.

The case studies cover three contemporary public health challenges:

Case Study 1   Aboriginal public health and education: Has it made a difference in practice?

This case study explores the activities and roles of staff within the Public Health and Research Unit (PHRU) at the Victorian Aboriginal Community Controlled Health Organisation (VACCHO). It focuses on their experiences with education institutions, their work in public health and their thoughts on gaps and where improvements can be made in public health, research and education. What will be demonstrated is the diversity of education qualifications and experience. What will also be reflected is how people work within public health on a daily basis to enact change for equity in health and contribute to the improvement of future health outcomes for the Victorian Aboriginal community.

Case Study 2   Public health education: Policy and research training contributing to translational research.

This study highlights the three main focal points of the dynamic process of translational research: the role of research, policy, and education; by using three vignettes that have used translational research approaches or aimed to educate students to undertake or understand translational research. The examples presented in this case study illustrate the need to advance an educational platform that will equip tomorrow's researchers, practitioners, and policy makers to competently apply a translational research framework.

Case Study 3   Preventative health and workforce
                development.

This study reviews the preparedness of the public
health workforce for the prevention agenda. With
regard to building a workforce to deliver on preventative
health targets, it discusses the entrance to public
heath via undergraduate pathways, the perspectives of
the primary care workforce on delivering preventative
health, and the perspectives of public health employers
on workforce training needs and deficits.

The case studies presented in this monograph consider the
important role of academic public health institutions in the
development of knowledge, skills and expertise for the public
health workforce of the future.

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Chapter 2 Aboriginal public health and education: Has it made a difference in practice?

Bronwyn Fredericks and Rebecca Edwards

2.1 Introduction and background

From the commencement of colonisation until the 1980s, public health relating to Aboriginal and Torres Strait Islander people was not necessarily in the best interests of Aboriginal and Torres Strait Islander people, but rather in the interests of the non-Aboriginal population. During this period many individuals and groups including health professionals, governments, politicians, special interest groups and corporate organisations played a role where the focus was more generally around the subject of reproduction and issues of prostitution, exploitation, abuse and venereal diseases (Kidd, 1997). At this time Aboriginal and Torres Strait Islander people became increasingly concerned about their rights and declining health and wellbeing. They actively campaigned for better health and in the 1970s they began establishing Aboriginal community controlled health organisations (ACCHOs), also known as Aboriginal Medical Services (AMS)(Foley, 1982; Nathan, 1979). These services are designed to be run by Aboriginal people, for Aboriginal people, in accordance with community needs and Aboriginal notions of health (Foley, 1982).

Since the late 1980s there has been a shift in the broader public health agenda (see Baum, 1998) along with a shift in public health approaches in relation to Aboriginal and Torres Strait Islander people (NHMRC, 2003). This has been coupled with increasing calls to develop appropriate tertiary curriculum and to educate, train, and employ more Aboriginal and Torres Strait Islander and non-Aboriginal people in public health (Anderson et al., 2004; Genat, 2007; PHERP, 2008a, 2008b). Aboriginal and Torres Strait Islander people have been engaged in public health in ways in which they are in a position to influence the public health agenda (Anderson 2004; 2008; Anderson et al., 2004; NATSIHC, 2003). This has either been through

being trained as health professionals, working within the health workforce or by using the representative structures established through the Aboriginal community controlled health organisation sector. There have been numerous projects, programs and strategies that have sought to develop the Aboriginal and Torres Strait Islander public health workforce (AHMAC, 2002; Oldenburg et al., 2005; SCATSIH, 2002).

In recent times the Aboriginal community-controlled health sector has joined forces with other peak bodies and governments to find solutions and strategies to improve the health outcomes of Aboriginal and Torres Strait Islander peoples (NACCHO & Oxfam, 2007). This case study chapter will not address these broader activities. Instead it will explore the activities and roles of staff within the Public Health and Research Unit (PHRU) at the Victorian Aboriginal Community Controlled Health Organisation (VACCHO). It will focus on their experiences with education institutions, their work in public health and their thoughts on gaps and where improvements can be made in public health, research and education. What will be demonstrated is the diversity of education qualifications and experience. What will also be reflected is how people work within public health on a daily basis to enact change for equity in health and contribute to the improvement of future health outcomes of the Victorian Aboriginal community.

2.2 The Victorian Aboriginal Community Controlled Health Organisation (VACCHO)

The Victorian Aboriginal Community Controlled Health Organisation (VACCHO) was established in 1996 and today represents 24 Aboriginal Community Controlled Health Organisations (ACCHOs) in Victoria (VACCHO, 2006). Each member is an Aboriginal community-controlled organisation with most being multifunctional services with health as a central part of their responsibility. Some are full comprehensive primary health-care services and additionally offer a range of visiting specialist services.

Aboriginal community control refers to Aboriginal people being in control and participating in decision-making structures, administrative procedures and modes of service delivery. Moreover, 'Aboriginal Community control in health is about people owning it, having a say about their own health and having the opportunity to provide feedback...' (VACCHO & CRCAH 2007, p. 1) and about 'self-determination, reconciliation and providing culturally appropriate services. But it is also more than that; it is about cultural history, cultural identity and having a "place" to identify with' (Aboriginal ACCHO Executive quoted in VACCHO & CRCAH, 2007, p. 2). Each of the 24 member organisations is independent and is represented at VACCHO by a nominated spokesperson from their local community.

VACCHO represents the ACCHO sector at the community, state and national levels and offers one unified voice when speaking with governments. Its role is to build membership capacity and to advocate on issues on behalf of its membership. VACCHO's vision is that 'Aboriginal people will have a high quality of health and wellbeing, thus enabling individuals and communities to reach their full potential' (VACCHO, 2009, p. 10). Health in this case is 'not simply the physical wellbeing but refers to the social, emotional and cultural wellbeing of the whole community. Aboriginal people have a whole-of-life view of incorporating the cyclical concept of life, death and the relationship with the land' (VACCHO, 2009, p. 10).

VACCHO is not a service provider but a peak body organisation. The Board provides the overall strategic direction for the organisation, such as policy direction, program development and representation. Aboriginal community members through their local ACCHO and then through VACCHO are engaged in defining and managing their own organisation. VACCHO in its day-to-day work is informed by the philosophy of Aboriginal community control and the motto 'by community for community'. VACCHO has a role in initiating and strengthening networks, increasing workforce development opportunities and demonstrating leadership on specific health issues. VACCHO additionally represents the Victorian ACCHOs at

national meetings of the ACCHO sector and to departments of the Australian Government. Advocacy by VACCHO is 'carried out with a range of private, community and government agencies, at state and national levels, on all issues related to Aboriginal health' (VACCHO & CRCAH 2007, p. v). Organisations similar to VACCHO exist in each state and territory and are affiliates of the national peak body for the sector called the National Community Controlled Health Organisation (NACCHO).

Within VACCHO, units and teams work collectively to provide essential support to its member services: these are the Public Health and Research Unit, the Workforce Issues Unit, the Education and Training Unit, the Policy Unit, the Health Programs Unit and the Business and Administration Unit. Each unit has a suite of staff who work on different projects and activities and contribute to VACCHO as a whole.

2.3   The Public Health and Research Unit (PHRU)

The development of the VACCHO Public Health and Research Unit (PHRU) commenced in 2007, to improve support for members across the spectrum of public health, health promotion and research and also to provide brokerage between stakeholders and the Aboriginal community in each of these areas. Prior to the establishment of the PHRU, public health work was carried out by the Policy Unit on an as-available basis, with one person developing public health programs. VACCHO then participated in the Office for Aboriginal and Torres Strait Islander Health's (OATSIH) Public Health Medical Officer Program (PHMO). The PHMO program enabled VACCHO to expand its engagement in public health and research, and offer more effective support to its member services and, through them, improve health for Aboriginal people in Victoria. VACCHO was then able to gain considerable leverage from the PHMO position to obtain further funding to develop a comprehensive public health agenda. The agenda is the subject of very active discussion amongst the VACCHO membership through project and research work and sector meetings.

The PHRU currently has eight staff employed across a variety of programs and projects:

- senior manager (also deputy CEO)
- team leader (health promotion)
- two project coordinators
- one senior project officer
- one project officer
- one public health medical officer (PHMO)
- one visiting research fellow.

Each of these staff have varying skills and educational backgrounds, some formal qualifications or a combination of work experience and qualifications. Staff in the PHRU provides support for and advocate for VACCHO member services (ACCHOs) through projects and programs.

2.31 Program leadership

- Provided the Secretariat for the Victorian Advisory Committee on Koori Health (VACKH) and develop the Victorian Aboriginal Health plan (VACKH, 2009).
- Led the Department of Human of Human Services Aboriginal Health Promotion and Chronic Care Program in Victoria (Department of Health Victoria, 2010a).
- Leading the Victorian Strengthening Primary Health Care initiative in Victorian communities, funded by the Health Department (Department of Health Victoria, 2010b).
- Made representation to the Parliamentary Inquiry into Obesity and Overweight.

2.32 Capacity building and research

- Offered a workshop and report on key directions for the control of sexually transmissible infections and infections with blood-borne viruses.
- Offered a workshop on antenatal care for Aboriginal women.

- Offered lectures and learning sessions to Master of Public Health students at Deakin University and Monash University.
- Offered learning sessions to more than 1500 high school students and high school teachers.
- Delivered a health promotion short course (Dreher, Fredericks, Mahoney, & Merliakov, 2009).
- Undertaking research with services into ways to reduce smoking among pregnant women in Victoria (van der Sterren, 2010).
- Convened a Research Advisory Committee of internal and external parties with an interest in public health research to:
  - develope funding proposals for specific public health projects and research priorities, as an ongoing exercise
  - negotiate with chief investigators on a range of projects that are auspiced by VACCHO or that involve VACCHO and/or its member services.

2.33 Publications influencing policy
- Written a chapter on Aboriginal health policy (Fredericks, Adams, & Edwards, 2010).
- Undertaking an annual review of the state of Aboriginal health in Victoria (Hall, 2009).
- Undertaken research into the social determinants of health which resulted in a publication that will direct on-going research activities (Watson, Adams, Fredericks, & Mahoney, 2010).

PHRU staff have completed some major pieces of work since the Unit was established and they continue to work on activities in their collective endeavour to address the broader public health agenda. It is on their experiences that this chapter will now focus.

2.4 PHRU staff's experiences and reflections
This case study aimed to ask staff within the Public Health and Research Unit (PHRU) in the Victorian Aboriginal Community Controlled Health Organisation (VACCHO) about their work and their education experiences. It sought to gain an understanding from staff

engaged in public health and research with Aboriginal people as to how public health education and training might be improved to better meet the needs of such a workforce.

An ethics application was submitted to the Queensland University of Technology (QUT) Human Research Ethics Committee prior to data being collected. Demographic information was collected and face-to-face semi-structured open-ended interviews with staff members took place. Such a process allows interviewees to provide 'rich and quotable material', and 'enable[s] them to give their opinions in full on more complex topics' (Creswell, 1998, p. 231). Moreover, this method also recognises that the interviewers might be immersed in the day-to-day lives of the members of the research group (Creswell, 1998; Minichiello, Aronia, Timewell, & Alexander, 1995).

The open-ended interview schedule was developed, based on the practices of Denzin and Lincoln (1994) and Reinharz (1992). The purpose of open-ended interviews in relation to this project was to allow respondents to articulate in their own words their understandings of their qualifications and experiences in working in public health. A question sheet was developed as a guide and to ensure that all questions were addressed at some point within the interview. All participants were given time to read the question sheet prior to the interview and also during the interview. All interviews were taped and the content has been used in this case study chapter. While the pool of participants in this case study is defined by the size of the team, there is a spread of Aboriginal and non-Aboriginal people, backgrounds, education qualifications, ages and situations. Although this may not be reflective of other State and Territory affiliates it is the work team reality of the PHRU within VACCHO.

2.41   Who was interviewed?

This section provides a profile of the staff of the Public Health and Research Unit (PHRU) to present a picture of the team. This information was gained through team member interview responses.

Andy is a 22-year-old male. He identifies with both Aboriginal and white Australian cultures. He has worked in the area of drugs and alcohol and mental health and sport. Andy completed 12 months of university studies towards a business degree while he was living in the USA for three years. He has no previous experience in working in public health but has experience working cross-culturally.

Julie is a 36-year-old non-Aboriginal woman. She has worked in Australia, the United Kingdom and Papua New Guinea. Julie's qualifications include a Bachelor of Medicine, FRACGP and a Master of Public Health. She has a range of work experience including clinical public health experience and cross-cultural health experience.

Lorne is a non-Aboriginal male who is 53 years old. He has numerous qualifications in business, management and in education and training. Lorne has worked in management, training and development. He has experience supporting research functions and applying research findings in service development. Lorne has worked in cross-cultural environments for many years.

Grace is a 29-year-old Aboriginal woman. She has a Bachelor of Social Science degree and has experience in working with young people and research. Grace is currently enrolled in a Master of Public Health program and is working in a project management and research role. Grace has worked with the PHRU for 10 months and previously worked in a range of cross-cultural environments.

Alice is a non-Aboriginal woman who is 28 years old. She holds a Bachelor of Nursing (Indigenous Australian Health) and has nearly completed a Master of Public Health (specialising in health promotion). Alice has worked as a nurse in hospitals and Aboriginal medical services and in public health in several organisations. She has worked in a range of settings with Aboriginal people.

Mary is a 34-year-old non-Aboriginal woman. She has a Bachelor of Applied Science (Health Science) and has 15 years experience working in academic public health, health promotion, policy and research and administration and management. At the time

of interview Mary had worked with the PHRU for 12 months. This is the first time she has been part of an Aboriginal work environment.

Charlotte is a 46-year-old Aboriginal woman. She holds numerous undergraduate and postgraduate qualifications in education and health including a PhD. Charlotte works on two discrete projects within the PHRU. She has worked with Aboriginal and Torres Strait Islander people and community organisations in health and human services for nearly 30 years.

2.5   The role of education and training

This section surveys the thoughts and ideas which emerged as themes throughout the interviews with PHRU staff. The themes include whether or not staff use their qualifications in the work, use of previous experience; combination of previous experiences and qualifications, the skills gained in working in the PHRU, and gaps in qualifications and how might these be addressed by education institutions.

2.51   How do they use their qualifications in their work?

Grace explained that her qualifications in social science helped her in her daily work. She said that social science was 'important in terms of understanding social determinants along with how people's upbringing has affected their choices which is reflective in their health'. Additionally her linguistics background helped her to write better and with 'listening to what people say and looking at the why they chose the words they do'. Grace draws on her linguistics training to make her writing accessible to community members and other people with whom she works with. While Andy has undertaken studies towards a business degree he has not completed as yet but says that he 'has been able to use a lot of the writing skills and reporting skills that you learn doing reports and papers at university level' and that he has 'definitely been able to transfer some of those skills over' to his work in public health. Charlotte, who has a number of qualifications, believes she uses hers in her work, providing the following example. 'In 2009 I had the opportunity to be involved in the Aboriginal Health Promotion Short Course. I drew on my health

knowledge that I got through experience and my studies and I additionally drew on my education qualifications in terms of teaching skills, and how people learn'. In terms of her main work with the PHRU, she states 'I draw on my writing, research and analysis skills that I wouldn't have got had I not undertaken qualifications because you sort of develop up those skills by doing the qualifications. I've also undertaken modules in research methods and therefore I am able to apply them within a work context and I wouldn't have that ability had I not done formal studies at university'.

Alice said that she used her qualifications to a 'certain extent'. She completed a four-year Bachelor of Nursing (Indigenous Australian Health) at the University of Sydney. The fourth year of this course, Alice explained, 'focused on Aboriginal health' and she undertook 'placements in AMSs'. Alice states that she 'basically wouldn't have survived at VACCHO if I didn't have any of the cultural training that was covered in the nursing degree and also the placements in terms of the practical components of working in Aboriginal communities'. She is currently undertaking a Master of Public Health and is using the public health and health promotion knowledge and skills she is gaining in this course within her current work with the VACCHO Aboriginal Health Promotion Short Course. Alice draws on her qualifications where needed and relevant. Julie said she used her qualifications in 'some things' and that she gets 'involved in things when my qualifications are relevant'.

When asked the question about whether Lorne used his qualifications in his work, he stated 'not specifically'. He did say that there were however 'links between the studies I have done and the work I do now'. On the other hand, Mary said that 'I try to use my qualifications on a daily basis'. She also said she uses her 'research qualifications and my background in health promotion in pushing to writing grant applications and publications and that sort of thing'. Mary commented that she did not think her qualifications were fully recognised and used.

What is evident from the interviews is that some team members drew on skills gained in their qualifications in terms of how they work within the PHRU. In describing how they used their qualifications

they did not focus on the qualification per se. For example, Charlotte is a registered teacher and yet is not working in the training and education unit, nor did she expect to teach. She saw it as an opportunity to use some of her skills for VACCHO when asked to present in the Aboriginal Health Promotion Short Course. Grace too could be working in media, language programs or in the area of social anthropology based on her linguistic training, but sees how she can use her education within a health context.

2.52   Do they use their previous work experience?

All seven people interviewed made statements that they used their past work experiences within their work with the PHRU. Between them they have a wide variety of work experience which combine to inform how they work within the team and the work they do. Sometimes this is even when the actual work is different. For example, Alice outlined that her previous work experiences were 'focused around service delivery and VACCHO doesn't do that'. She does say, however, that those experiences were in working with Aboriginal people and that she draws on these within the PHRU. In her direct service delivery work she explained that she was provided with formalised cultural mentors and that this does not happen within the PHRU context. Julie who also worked in clinical settings in the past (general practice, hospitals and other clinical environments) still drew on these experiences within VACCHO. While Lorne does not have the clinical service delivery experiences of Alice and Julie, he does draw on his previous work with service providers around service linkages and partnerships.

Two of the team members have had jobs and experiences which counter some of the understandings around young people and limited experience. For example, Andy has worked in a range of roles with Aboriginal organisations and communities including with an organisation that worked specifically with primary and secondary school kids. Of his experiences he says 'it is an advantage … it hasn't come from reading it in the textbook … it has come from just being an Aboriginal person and living in a remote community and seeing the disadvantage … they all stem from the social determinants

and there is plenty of reasons why we have such shocking statistics'. Grace too has had a few different jobs. She worked as a youth worker and believes that this gave her a practical understanding of 'how people's upbringing influences choices'. She said it also 'helped me get into community'. Her other job was working in the New South Wales Coroner's Office where she was required to do research and work with issues that were highly sensitive. These experiences assist her in the work she undertakes at the PHRU.

Two members of the team mention government as being connected or part of their previous work and how this assists them in their PHRU work. Mary states 'I push myself into spaces and places where I can use them (past work experiences) and where I can use them working on research projects and assisting management. … looking at different research processes, writing research proposals and utilising my policy experience… the ins and outs of working bureaucratically and across academic environments'. Charlotte who has worked for more than 30 years explains, 'I have worked in a State government health department, for Commonwealth health and in the ACCHO sector. I have worked in an ACCHO and in a peak body for ACCHOs. I was also chairperson of an ACCHO for nine years, CEO of an ACCHO and served on the board of an ACCHO peak body. I have been able to draw on all of these work and voluntary experiences in a work capacity'.

2.53   What have staff gained working at VACCHO?
What staff articulated as benefits from working in the PHRU was variable in terms of personal gains and work-based skills and knowledge gains. Some of the learning focused on the skills picked up from other people, while others talked about learning from the type of work they were engaged in. For example, Grace stated 'I have learnt to adapt to other peoples learning styles … ' and 'I have built on what I've already got or been putting theory into practice'. She said that while she had learnt about data collection at university, her work at PHRU enabled her to do it. One of the biggest things Grace said she had learned was 'action research and processes with that which is different to other research'.

Andy and Charlotte, who are both originally from other states, linked their learning to the Aboriginal context in which they were working. Andy said that he had learnt that 'not all Aboriginal people are the same. I grew up in Western Australia. I've come from a sort of different background and coming to VACCHO teaches you a lot about urbanisation of Aboriginal people and how other Aboriginal people work and do things, but it is still an Aboriginal way of doing things'. While Charlotte stated that 'when I come in to VACCHO it is clearly an Aboriginal space and I am free to be an Aboriginal woman. I am affirmed as an Aboriginal woman of a certain age and I am treated respectfully. What that gives me is an added confidence that I am part of an organisation where Aboriginal people are respected and affirmed and where we are free to focus on what we need to do as directed by the board and management for the Victorian Aboriginal community'. She explained that 'VACCHO has given me the opportunity to work in another context in another state. I have come to have an understanding about how Koori people live and work and manage as opposed to how Murri people live and work and manage and I am thankful for the experience'.

Andy also identified some key practical skills he has gained such as 'being able to put thoughts and ideas on paper and convey messages to relevant stakeholders, like applying for funding and knowing that there are protocols for doing different things. I have picked up more writing skills, liaising skills for working with people ... and now know when planning something you need to make sure the relevant people are aware of what you are doing'. Mary has also learned practical skills, such as 'sitting back and listening more', 'being more tolerant' and 'patient'. She also stated that since working at PHRU she has been gained a 'better understanding of community and how that works in the bigger picture' along with the importance of the 'voice of community'. Julie too gained increased understandings from working with the PHRU. For example, she stated that 'I gained a broader understanding of the health system and that there are different perspectives on how health is seen, not just from the PHRU work, but the contact with VACCHO and with other organisations that VACCHO works for'.

2.54   What are the gaps in their qualifications?

There were mixed responses to this question with a few people talking about actual gaps in their undergraduate degrees for the work they are doing, and others made statements about how VACCHO might assist in meeting these gaps. For example, Grace explained that she does not have a health background and is now undertaking a Master of Public Health majoring in health promotion. She was thankful that she has been granted study leave provisions at VACCHO and that she is able to use her studies within her work environment. Alice identified that she needed training in the area of community development and, in particular, skills development in facilitating and negotiating with people and groups as this was a gap in her skills repertoire. Alice also indicated that she would like an Aboriginal person from the Victorian community to act as her cultural mentor. She had a cultural mentor when she worked in direct service delivery in New South Wales. Julie made some interesting statements about her Master of Public Health (MPH) when she explained that 'the MPH gave me a lot of info and then coming to VACCHO, yes it was good to know that… I probably could have done this role without having done the Masters but I probably have used all that knowledge'.

2.55   How workers think education institutions could improve their courses

There was much discussion in the interviews about how education and training institutions could improve their courses and research with Aboriginal people. Discussion centred on who should be involved, how and when the curriculum should be developed. Grace and Charlotte had strong ideas about who and how. Grace stated that 'courses should be developed and written by Aboriginal people. Definitely delivered by Aboriginal people from the community or with extensive experience in the community'. Grace articulated that 'Aboriginal people talk from the point of their experiences and the experiences of other Aboriginal people and that sometimes non-Aboriginal people tended to look at it from a theoretical perspective or from an outsider's perspective but people need

to understand that you need the insider's perspective to really hit home and challenge the beliefs and misunderstandings'. The main reason that Grace is doing her MPH at Wollongong University is that it has Aboriginal lecturers and a number of units in Aboriginal health. Alice pointed out the benefits of having Aboriginal lecturers in an undergraduate course. She added that 'a lot of time went into consulting with community, teaching and ensuring placements in AMSs'. While Julie thought it was a good idea to have Aboriginal people engaged in teaching, course development and working in public health, she wondered where all the Aboriginal people necessary for the public health sector would come from, given the multiple other employment sectors in cities.

A number of staff discussed the role of placements or internships as a means of developing practical knowledge and experience in Aboriginal public health. As discussed previously Alice said that placements were available in AMSs in her undergraduate studies and were also available through the MPH she was undertaking at James Cook University. The placements however 'depend on whether organisations have the capacity to take students', finished Alice.

The benefits of undertaking placements or internships was raised continuously by six of the seven people interviewed. The reasons for this were varied but linked. Lorne spoke of placements being useful to 'expose people to work in public health to see how it works'. He said 'they (students) could go out and then come back (to the university) and then they could put a framework around it and make sense of it'. Lorne also believed that placements provide an idea of the 'general nuances of that kind of work that you can't get in an institution'. He also stressed the importance of university in terms of the tasks that he completes as part of his work Lorne stated that 'there are structures and approaches to doing things, ways of articulating ideas and communicating that you can learn at university. I learnt how to do reports which I couldn't have learnt otherwise'. Andy too identified the things he learnt at university and that he could learn only at university, along with identifying learning that he could acquire only in working with the community. For

example, he explained the skills of engaging with Aboriginal people, undertaking site visits and liaising were hard to integrate into formal education only at the university. He concluded by saying that working 'at VACCHO you kind of need to have the drive to want to help the Aboriginal community and that's not something you can learn from an education institution'.

Mary was adamant that 'no academic institution can teach you how to deal with the day-to-day realities of dealing with government, community and people generally'. In speaking about her work and the work of the team and if that could be learnt in a course, she said that 'what we do is multi-faceted and you can't learn that in education environment. The only way to learn this is by getting out here doing the work'. From Mary's perspective 'the biggest thing that students can benefit from is experience, talking to people'. Several people also raised the issue of credit recognition for work in the field and/or placements. If this was so, then people who have worked in public health for substantial periods of time should also be able to gain university credit based on recognition of prior learning (RPL).

Concerns were expressed by some participants in relation to overall health and wellbeing of staff. Issues emerged around academic standing or recognition: some participants had teaching and lecturing experience, some staff in universities did not have an understanding of the day-to-day realities or an idea of the multifaceted nature of public health work with Aboriginal peoples. What was expressed was generally a credibility issue. As explained by Charlotte, 'some teaching staff don't have that lived reality of working in the field and I can see that because I've been around NGOs for a long time and been active in communities. If I can see that, so can others. For me then I have an issue when someone comes and wants to tell me what to do when I know they have never worked in the field or have very limited experience'. Andy said, based on his experiences, lecturers and professors he had contact with 'did not understand the role of community and importance of community'. There were also examples given of where university personnel only contacted people 'when they wanted something' and 'not to see if they could give something

or share their skills'. Charlotte found this particularly disappointing saying that 'if they were all so concerned about Aboriginal health and the disparities, then more university-based people would be speaking up, would come forth to help and be working in Aboriginal health'. She asked the question 'if equity is an explicit aim of the new public health as argued by Fran Baum (1998: 37) then why are some people working in public health and not doing or incorporating Aboriginal health within their work? Are they really doing public health?'

Charlotte has taught within a number of health sciences courses and offered guest lectures in three different MPH programs in Victoria. She has also been in and around health faculties since 2005 either as a postgraduate student or lecturer. She discussed the need for university curriculums to be embedded with Aboriginal content and courses not just having one Aboriginal-focused unit. This was important but it should not be a stand-alone unit without any further content on Aboriginal issues. Staff of the PHRU collectively expressed the need for cultural competence training in all health courses within universities as a means to address the needs of Aboriginal peoples and the needs of others within a global context. Andy and Grace both asserted that 'Aboriginal health is everyone's responsibility'.

2.6   Conclusion

What this case study chapter demonstrates is that there has been a push for an expanded Aboriginal and Torres Strait Islander public health workforce, including more employment within the sector, and this has resulted in a multifaceted and multiskilled workforce in the Public Health Research Unit (PHRU) of VACCHO. With the team members' eclectic mix of qualifications, skills and experiences as a work unit they have been responsible for numerous achievements within a short time. The work they have carried out has assisted VACCHO in its ability to support members and to advocate on behalf of ACCHOs and for better health outcomes for Aboriginal people in Victoria. Through the work carried out, VACCHO has been able to influence the Aboriginal public health and research agenda. In its leadership VACCHO has demonstrated time and time again that an

Aboriginal community-controlled health organisation can undertake work in both public health and comprehensive primary health care. That is, work across the tiers within the health care sector.

In order for VACCHO to continue to strengthen its work in public health and research, VACCHO, like other organisations and agencies, needs to continue to assess its staffing needs and be able to access suitable staff when required. Overall, the consensus from the interviews was that a combination of work experience and qualifications is seen to be essential to working within Aboriginal public health. It is imperative that education institutions provide prospective graduates with the ability to apply the theoretical knowledge gained in the classroom through practical and sustainable training during their studies. This is also supported in the *National Indigenous Public Health Curriculum Framework* (PHERP 2008a). There are a number of ways to undertake this type of practical and sustainable training and some of these have been explored through the interviews. Cultural understanding, cultural safety and cultural competency training was identified as being essential for working within the sector. While a number of people saw that this kind of training could be provided by an employer rather than the university, this does not excuse education institutions from not making it their responsibility in educating the health workforce. Aboriginal health is everyone's responsibility. What the interviews demonstrate is how vital it is to advance the competencies contained within the *National Indigenous Public Health Curriculum Framework* (PHERP 2008a), the need to employ more Indigenous people in health faculties within education institutions and for the institutions to be better engaged with organisations such as VACCHO. This is part of making Aboriginal health everyone's business.

This case study has sought to share the experiences of PHRU staff with a broader audience to contribute to the overall efforts in public health research and education and research. It has explored the work carried out by the PHRU team to date, their qualifications and their thoughts on gaps within those, and where improvements can be made in public health research and education. What has

been demonstrated is the diversity of education qualifications and experience. What drives most of the staff is their desire to bring about change and to work with the Aboriginal community in addressing their health issues from the broader public health perspective within an Aboriginal community controlled environment.

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Chapter 3 Public health education: Policy and research training contributing to translational research

MaryLou Fleming, Elizabeth Parker, Colin MacDougall, Kristy McLean, Peter Howat

3.1 Introduction

In recent years there has been increased international attention given to translating public health research into practice (and/through policy). The term translational research however, has been defined and classified in various, often inconsistent, ways in the health research literature. Consistency in the use of terms and classifications related to translational research will lead to increased understanding of the translational research process and more effective efforts to move science into practice (Spoth et al., 2008).

In the health context, translational research provides a process that goes beyond the concept of evidence-based practice. While an evidence-based practice model ensures that practice is informed by research knowledge, approaches and outcomes tend to be dominated by the needs and philosophies of research. In other words, as Brown Urban and Trochim (2009, p. 540) state, 'it tends to be formed primarily from a researcher, not practitioner perspective and prioritises knowledge generation over practical problems, and precision and control over generalisability and diffusion'. In contrast, translational research proposes a system of research that is both bidirectional and dynamic in nature. Thus, the needs of workers in applied settings are reflected in research agendas, while research advances in turn influence policy and practice decisions.

This case study highlights the three main focal points of the dynamic process of translational research—the role of research, policy, and education—by using three vignettes of work that has used translational research approaches or aimed to educate students to undertake or understand translational research, and it discusses

future challenges in this area. These case studies illustrate the need to advance an educational platform that will equip tomorrow's researchers, practitioners, and policy makers to competently apply a translational research framework.

3.11   What is translational research?
The National Institutes of Health have defined two types of translational research.

Type 1 has been termed 'bench to bedside' and applies to discoveries generated by basic science research through to the development and preliminary testing of preventive and treatment interventions (for example, services, programs, and products). Thus, Type 1 is the traditional pathway of academically based discovery and clinical trials (Khanna, Nesbitt, Roghann, & Tacket, 2009). Type 2, on the other hand, is aimed at enhancing the adoption, implementation and sustainability of evidence-based or scientifically validated interventions by service systems (for example, health care settings, schools). Type 2 is the application and dissemination (i.e. translation) of Type 1 discoveries into community practice and health policy by clinicians, community-based groups, and policy makers (Khanna et al., 2009).

Type 2 translational research has been identified as essential for realising the potential of evidence-based preventive interventions to achieve greater impact in public health (Spoth et al., 2008). Mrazek and Haggerty (1994, as cited in Spoth et al., 2008) outlined five phases of Type 2 translational research, which can be applied to preventive intervention research across its life cycle. As seen in Table 1, these include (1) epidemiology (identification of the problem or disorder and review of information to determine its extent); (2) etiology (identification of risk and protective factors for the problem or disorder as potential targets for preventive intervention), (3) intervention design, pilot testing, plus efficacy trials, (4) effectiveness trials, and (5) dissemination trials. Importantly, translation is an integral part of each of these phases of research. Thus, translational research entails feedback looping from later-stage research to

that in the more formative stages, insuring that research outcomes continually feed off informed questioning and decision making. In a similar way, to fully realise the benefits of translational research, educators, researchers and policy makers should be involved in a dynamic feedback cycle, with each adding to the work and scope of the others.

Table 3.1: The Translational Research Continuum in relation to Public Health Intervention Development

1. Epidemiological studies	2. Etiology	3. Intervention development	4. Effectiveness trials	5. Dissemination trials
Identification of the problem, and a review of its scope etc	Identification of risk and protective factors. Formative research	Pilot studies Efficacy trials	Evaluation	Research to support dissemination and adoption

NB Adapted from Spoth et al. (2008).

Dissemination studies examine factors that affect the successful propagation of effective preventive interventions. Rogers (1995) has described five stages in the diffusion of innovations: Gaining knowledge about the intervention; being persuaded to use the intervention; deciding to use the intervention; implementing it in a reasonably rigorous fashion; and confirming the decision, including integrating it into one's routine (Society for Prevention Research, 2004, p. 1). Researchers (for example, Owen, Glanz, Sallis, & Kelder, 2006), recommend that to improve the public's health, we need not only the systematic dissemination of well-researched interventions, but real-world dissemination and diffusion studies to help us learn about their exportability and effectiveness in less-controlled conditions. Glasgow, Lichtenstein, and Marcus (2003) argued that the effectiveness of a health intervention is related largely to who is implementing it, as discussed in the section on Policy later in this chapter.

3.12   Australian context

In Australia, the Nutbeam Review (2008) found that there is no overarching Australian public health research strategy to ensure Australian health priorities are considered through all types of research. Further, it found that the impact of public health research is limited by funding systems and academic incentives which encourage descriptive (for example, examine and analyse biological, environmental, social and behavioural influences on population health) research rather than intervention research (for example, transfer of this knowledge into policy and practice). Furthermore, current systems provide inadequate support for policy and practice-focused research, and the translation of research into policy and practice. This has resulted in less research dedicated to the transfer of this knowledge into policy and practice, particularly through the development and testing of interventions to improve public health (Nutbeam, 2008).

The review identified the importance of finding ways of ensuring that evidence forms part of an inherently fluid political decision-making process. This is both a responsibility of those who generate evidence and advocate its use, as well as those who use it. For those who generate evidence (researchers) and whose who wish to see it used (health practitioners and advocates), the challenge is to provide timely access to information, and to employ improved techniques for communicating and managing the replication of procedures and results. For public servants who use evidence in policy making, there is the challenge to develop skills in the critical appraisal of evidence, and to judge how to achieve the best 'fit' between available evidence, current political priorities and practical actions to achieve the desired outcomes (Nutbeam, 2004, p. 139). Finally for educators, there is the onus to produce graduates who are equally equipped to conduct research as well as transpose research findings into their own practice, or advocate for its utility for public policy.

3.13 Challenges to translational research in the public health context

The goal of evidence-based practice can be an elusive one because of the challenge of both producing evidence and transposing it into practice. Moreover, for health researchers it is equally appropriate to focus on how evidence can inform policy (Moodie, 2009; Smith & Bird, 2004). To meet the challenges of dissemination and diffusion, it is recommended that researchers and service providers not only increase their own knowledge and skills, but also develop partnerships with experts in business, in policy change, and in advocacy (Nutbeam, 2008; Owen et al., 2006). Moreover, educators need to be mindful of equipping students with the skills to both develop and interpret the research agendas of the future.

There are many factors, however, that limit the ability of research evidence to influence practice (Blamey & Mutrie, 2004). Factors identified include difficulties in conducting systematic reviews, desegregating knowledge from complex interventions, and model fidelity. In addition the authors identified several factors that limit the ability of practice to inform the evidence base. These include a lack of an evaluation culture, ethical and programmatic difficulties in designing evaluations, selection of appropriate outcome measures, poor design and implementation of current interventions, and finally, that policy making is based on more than evidence. Likewise, practitioners have many things to take account of when setting up programs and sustaining them. They have limited time to search and uncover evidence on what does and does not work. Therefore, they may not be aware of the best sources of information or have the means to interpret findings and discern what is and is not effective in different contexts (Blamey & Mutrie, 2004).

Issues related to the quality, accessibility, and comprehension of research findings may be attributed to a limitation in current public health education. Despite the pivotal role educational institutions play in the development of both the research and practice skills vital to the workforce, they have received limited attention in the literature. The education sector has the potential to integrate feedback from

both current research findings as well as contemporary health policy in the teaching of their public health students. One illustration of this approach in practice comes from the UK where the significance of these three elements has been realised. Through the curriculum, the current generation of sport and exercise science students are exposed to a focus on exercise interventions that target individuals or groups and, furthermore, relate this evidence to public policy (Smith & Bird, 2004).

In general, health research to date has done a commendable job of informing practice. However, we are faced with the challenge of conducting research that can also inform and respond to policy. To do this effectively, policy makers, researchers and educators need to work together. The following examples highlight the role of these three groups. They illustrate how to enhance our knowledge of type 2 translational research, and facilitate exchanges which will support positive relationships and outcomes in the health sector. The first section looks at the translation of interventions designed to look at social determinants into policy in South Australia. The second looks at the work of the Public Health Evidence and Knowledge Translation Research Group, as part of VicHealth's research initiatives. Finally the third section provides a focus on the perceptions of graduates related to the utility of their public health study, and considers the role of education in the process of translational research training.

3.2   Policy

Translational research has been characterised in this chapter as being bidirectional, dynamic and dependent on who is doing it. In the aftermath of the work of the World Health Organisation's Commission on the Social Determinants of Health, academic and policy work is turning to the ways in which evidence on social determinants and equity can be translated into policies. While the Nutbeam Review (2008) found no overarching Australian public health research strategy to ensure Australian health priorities are considered through all types of research, there are some encouraging examples being developed. Two of these are discussed below. The following two

vignettes exemplify salient features of translational research as the agendas in academia, grant organisations and policy contexts converge to grapple with:

- Formal acknowledgement of the importance of research translation and the need to study and fund translation as an area in its own right, rather than being added to the end of existing work project by project.
- The policy environment of such organisations as VicHealth with an explicit concern for equity and translation into practice, within a longer than usual term planning and funding cycle.
- Long-term trust and relationships between researchers, policy makers and practitioners.
- Avoiding locating the responsibility for translation with individual researchers or research groups in favour of making the translational choice the easy choice.

3.21 Vignette 1: *Health in All Policies* (HiAP) in South Australia

In South Australia, *Health in all Policies* (HiAP) is emerging to translate research into broad policy interventions designed to act on the social determinants of health and wellbeing using an approach that originated in Finland. HiAP is defined as an innovative policy strategy that responds to the critical role that health plays in the economies and social life of twenty-first century societies. It introduces better health (improved population health outcomes) and closing the health gap as a shared goal across all parts of government, and addresses complex health challenges through an integrated policy response across boundaries. By incorporating a concern with health impacts into the policy development process of all sectors and agencies it allows government to address the key determinants of health in a more systematic manner as well as taking into account the benefit of improved population health for the goals of other sectors. Health in All Policies is committed to the achievement of sustainability and the health and wellbeing of both

present and future generations. (see www.health.sa.gov.au/PEHS/ PDF-files/07-hiap-definition-principles.pdf)

The idea originated during the first visit to Adelaide in March 2007 of the 'Thinker in Residence', Professor Ilona Kickbusch, who recommended the convening of a cross-government Health in All Policies (HiAP) Conference held on 21 November 2007 in Adelaide, with the support of the South Australian Department of Health and Department of Premier and Cabinet. The conference program focused on increasing understanding of the key interactions and synergies between health, the economy and the achievement of South Australia's Strategic Plan targets.

Critical to understanding HiAP is the fact that South Australia has a strategic plan that has been used to justify and drive the whole-of-government initiatives. (To view the plan see www.stateplan.sa. gov.au. The web page www.health.sa.gov.au/PEHS/health-in-all-policies.htm has presentations about how the plan informed the HiAP initiative). South Australia's Strategic Plan contains 98 targets that cover the economy, environment, communities, wellbeing, education and innovation. Health in All Policies provides a health lens to South Australia's Strategic Plan targets to ask how better health can support the achievement of the target and how does this target impact on health? Obesity, for example, is approached by building on the existing partnerships between the Department of Health to encourage fruit and vegetable consumption, support active transport, develop a school canteen program, conduct a Healthy Parks Healthy People program and encourage Be Active workplaces. In addition, urban planning and transport planning combine to place new housing developments close to public transport.

The role of international examples and knowledge brokers such as Professor Ilona Kickbusch was also very important. Ilona Kickbusch (see www.ilonakickbusch.com/health-in-all-policies/index.html) was an architect of the Ottawa Charter for Health Promotion and has longstanding links to Flinders University and the Noarlunga Healthy Cities project in South Australia (http://healthand society.flinders.edu. au/Ottawa.htm). Her status as the Adelaide 'Thinker in Residence'

(see www.thinkers.sa.gov.au/home.html) helped place the HiAP initiative on the government's agenda. (This is elaborated upon in Kickbusch, McCann & Sherbon (2008).

Longstanding links between research, evaluation, policy and practice development in South Australia set the conditions for the acceptance of an HiAP approach. These links are exemplified by more than two decades of the South Australian Health funded research unit, the South Australian Community Health Research Unit (SACHRU) now based at Flinders University (see http://som.flinders.edu.au/FUSA/SACHRU/default.htm). The development of the HiAP approach was argued by SACHRU and the Southgate Institute for Health, Society and Equity at Flinders University which has been established through the successful Australian Research Council Federation Fellowship of Professor Fran Baum at Flinders University and is also supported by the South Australian Department of Health, the South Australian Social Inclusion Unit and the Premier's Science and Research Fund (see http://flinders.edu.au/medicine/sites/southgate/). Professor Kickbusch gave the 2010 Southgate Oration and is a member of the International Advisory Board, along with the Chief Executive of South Australia Health, Dr Tony Sherbon. These high-level links are complemented by long-term professional relationships between academics and public servants and civil society organisations, making it easier to develop the trust and risk taking required for an HiAP approach.

3.3   Research

3.31   Vignette 2: Translational research in Victoria

The Victorian Health Promotion Foundation, best known as VicHealth, works in partnership with organisations, communities and individuals to make health a central part of our daily lives. Sitting within a state and federal system of health promotion and disease prevention, the Foundation's particular focus is on developing new knowledge and raising awareness of the best practice in health promotion (see www.vichealth.vic.gov.au/en/About-VicHealth/About-Us.aspx#missionAndValues).

One of the activities of VicHealth has been to establish centres of research and practice that have been strategic catalysts in new developments in public health research, health policy and health promotion interventions. A prime goal of VicHealth centres is to translate public health research knowledge to health promotion policy and practice. Centres carry out research that fills an identified gap in current research and practice activity and contributes to national and state health policy objectives.

VicHealth currently supports, at varying levels, four centres of excellence in research and practice. One of these is the McCaughey Centre: VicHealth Centre for the Promotion of Mental Health and Community Wellbeing in the Melbourne School of Population Health, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne. Within that centre, is the Public Health Evidence and Knowledge Translation Research Group (see Waters et al., 2008)

The centre also builds translational aspects into its research: for example Fun 'n healthy in Moreland! is a cluster randomised controlled trial of a child health promotion and obesity prevention intervention with 23 primary schools in a culturally diverse, inner-urban area of Melbourne, Australia. It is a partnership study between Moreland Community Health Service and the University of Melbourne. The intervention strategies are driven and customised by the schools to ensure relevance and sustainability, informed by an exchange of information about the evidence base in child health promotion and obesity prevention. Schools are thus supported in the implementation of a range of whole-of-school initiatives designed to address healthy eating, increased physical activity and self-esteem targeting school policies, physical and social environment, and programs. Fun 'n healthy in Moreland! adopted a partnership approach to build health-related activities into the day-to-day functioning of schools. While the results were effective, wider implementation depends on resources because partnerships take time and two-way learning. Such partnerships can flourish only in the long term if there is core funding built in and high-level policy support. (www.mccaugheycentre.unimelb.edu.au/research/current/intergenerational_health/funnhealthy).

3.4 The role of tertiary education in facilitating translation

3.41 Vignette 3: Education to enable translation of research training into practice

To date, the literature relating to the role of education in the translation cycle has been limited. However, if we are to fully appreciate the need to make translational research a priority, then educators need to reflect this focus in their curriculum. There is a national policy direction for and investment to encourage clinical health professionals and their organisations to attend to the evidence and adopt the strategies of health promotion (Wise, 2008). An evidence-based public health curriculum aims to encourage students at an early stage in their education to broadly frame options, critically analyse data, and understand the uncertainties that remain (Riegelman & Garr, 2008). These skills are vitally important for both the conduction and translation (both in the form of practice behaviour and policy input) of research.

In recent years there has been increasing interest in the interface between all tertiary education programs and the workforce (Houghton, Braunack-Mayer, & Hiller, 2002). Houghton and colleagues surveyed graduates who had majored in public health between the years 1992–99 at Adelaide University. Participants were asked information on their career paths after graduation, and also to rate the usefullness of 15 skills and knowledge areas to their current employment. In addition they were asked to indicate how their undergraduate public health education equipped them in these areas. Fifty-nine% of the participants in the sample were working in the public health workforce. These individuals reported generic skills (for example, verbal communication) to be most useful to their job, with specific content areas rated lower. Interestingly however, 42% indicated the degree was too generalist to provide necessary employment skills, instead suggesting that a more practically oriented course would be valuable.

In terms of workforce learning, Dreisinger, Leet, Baker, Gillespie, Haas, and Brownson (2008) looked at the effectiveness of a short

course designed to improve the skills of public health focused, health department workers. Using an online survey they reviewed a number of aspects of the course experience after completion. These specifically looked at three areas: participant's use of course information, including barriers; job description and prevalence of evidenced-based public health in participant's workplace settings; and possible improvements to the course. The course was perceived as being helpful by 90% of the respondents; however 64% said that their biggest barrier to using the evidence-based course content was time constraints in their job.

Smith and Bird (2004) believe that those who shape and organise the curriculum are now challenged to include learning outcomes that embrace interventions aimed at both political action and policy information. In the clinical setting, the promotion of translational research requires educating and training clinicians and investigators who will participate and promote translational research. To that end, recruiting, mentoring, training and retraining clinical and translational researchers is a challenging task (Rajab, Villamaria, & Rohack, 2009). The purpose of this case was to review graduate students' perceptions of their public health university education related to their current field of work.

It is illustrative to examine national data that link public health graduation destination information and the impact of this on students' practice and professional directions. The material presented below is an analysis of the graduate destination surveys for 2008 and 2009 and provides an examination of the impact of educational programs and the world of practice.

3.42 Study Design

Participants. Data were taken from 3454 public health graduates as collected by responses to the Graduate Destination Survey in 2008 (46.5%) and 2009 (53.5%). Responses were collected from a range of health-related areas, including public health (25.3%), occupational health and safety (19.9%), environmental health (5.6%), Indigenous health (1.8%), health promotion (10.5%), community health (4.5%),

epidemiology (6.2%), and public health not elsewhere classified (26.2%). These classifications are potentially problematic and thus interpretations are intended as a description
of the available national data. Participants had completed various levels of tertiary education. The largest percentage had completed bachelor (21.1%) and masters course work (26.0%) degrees, with graduate certificate, diploma, masters research, and doctorate studies making up the remainder. Participants were currently employed in full-time work (62.2%), full-time study (9.6%), part-time work not seeking full-time (12.6%), part-time work seeking full-time (3.6%), not working but seeking full-time (3.6%), not working but seeking part-time (0.6%). Employed graduates listed their main occupation to be held in a variety of work places including industry and commerce (19.9%), public health (19.8%), higher education (6.8%), and not-for-profit organisations (5.2%). Interestingly, government positions at local (4.0%), state (3.9%), and federal (1.7%) levels were not highly represented.

Procedure. Data were collected from 2008 and 2009 Graduate Destination Survey responses. This survey collects nation-wide information about graduate activities post-completion of their tertiary qualification. Responses were filtered to include only individuals who had listed their education field codes as public health and public health specialty areas. Furthermore, responses relating to graduates' perceptions of how useful their degree was to their current job were collected for analysis. Responses were measured on a 1–5 Likert-type scale where 1 = formal requirement, 2 = important, 3 = somewhat important, 4 = not important, and 5 = don't know.

Data Analysis. Logistic regression analysis was performed with formal requirement, important, and somewhat important all coded as 1 (important) and not important coded at 0. Those who had responded 'don't know' where filtered out of the sample.

3.43 Results
Only responses from graduates who indicated that they were currently employed full-time, part-time, or in full-time study were included in the analysis.

Importance of qualification. The majority of graduates indicated that overall their completed qualification was important to their job (963, 31.2%). Seventeen% of the sample (525) did not rate their qualification as important to their job.

A logistical regression was used to predict graduates' perceptions of the importance of their qualification from their major field of education, level of qualification, and the type of duties (for example, research) they performed in their current job. The qualification of those who had listed the major field of education studied as occupational health and safety (OR=0.63, 95% CI (0.45–0.87)) and epidemiology (OR=0.61, 95% CI (0.38–0.98)) were rated by respondents as significantly less important to their current job that than those categorised as public health not elsewhere classified. Those who had completed a qualification in postgraduate research (OR=0.48, 95% CI (0.28–0.85)) rated the importance of this qualification less than those who had done postgraduate coursework. The importance of a bachelor degree was approaching significance (p = .057) suggesting it was considered more important than a post-graduate coursework degree. Both individuals working in non-health related areas (OR=3.22, 95% CI (1.49–6.96)) and those in allied health and medical professions (OR=2.76, 95% CI (1.2–5.98)) rated their qualifications as significantly more important to their current job than those working in policy.

Importance of field of education. Again, the majority of respondents (1251, 40.6%) indicated that their field of education was important in their current job, with less (568, 18.4%) indicating that it was a formal requirement.

A logistical regression was used to predict graduates' perceptions of the importance of their field of education from their major field of education, level of qualification, and the type of duties they performed in their current job. The major field of education studied for those in occupational health and safety (OR=0.60, 95% CI (0.42–0.86)) and epidemiology (OR=0.56, 95% CI (0.32–0.97)) were rated significantly less important than those categorised as public health not elsewhere classified. Those who had completed

a qualification in postgraduate research (OR=0.55, 95% CI (0.30–0.99)) rated the importance of their field of education significantly less than those who had done postgraduate coursework, while those who had completed a bachelor degree (OR=1.68, 95% CI (1.24–2.26)) rated their field of education as more important for their current job than those who had completed a postgraduate coursework degree. Interestingly, individuals working in non-health related areas (OR=3.28, 95% CI (1.45–7.42)) rated the importance of their field of education to their current job as significantly greater than those working in policy.

Importance of other skills and knowledge. The importance of other skills and knowledge obtained during the course studied was mostly reported to be important (1467, 47.6%) or somewhat important (674, 21.9%), with only 9.8% of respondents (301) indicating that it was not important.

A logistical regression was used to predict graduates' perceptions of the importance of the other skills and knowledge gained from their degree from their major field of education, level of qualification, and the type of duties they performed in their current job. Individuals whose major field of education was environmental health (OR=0.33, 95% CI (0.1–0.65)), health promotion (OR=0.61, 95% CI (0.40- 0.92)), and epidemiology (OR=0.55, 95% CI (0.31–0.99)) rated the skills and knowledge gained from their course as significantly less important than those categorised as public health not elsewhere classified. Those who had completed a qualification in postgraduate research (OR=0.52, 95% CI (0.27- 0.99)) rated the skills and knowledge acquired during their course as less important to their current job than those who had done postgraduate coursework, while those who had completed a bachelor degree (OR=1.42, 95% CI (1.03–1.95)) rated the skills and knowledge acquired during their course as more important to their current job than those who had completed a postgraduate coursework degree. Individuals working in non-health related areas (OR=4.12, 95% CI (1.46–11.64)) rated the skills and knowledge acquired during their course as significantly more important to their current job than individuals currently working in policy.

3.43 Discussion

From the data analysed, those working in policy and practice areas (for example, health promotion officer) had more frequently completed graduate certificate/graduate diploma qualifications than a Master of Public Health. Interestingly those working in research areas had most frequently completed postgraduate coursework qualifications; however, of all professions they had the highest percentage of postgraduate research qualifications. The highest percentage of postgraduate coursework qualification holders worked in the allied health/medical professions. This result is probably skewed by the number of postgraduate medical graduates. However, there are still a large percentage of graduates holding bachelor degrees who make the transition into the public health workforce. This data provides a descriptive account of public health graduates and highlights the varied nature of the cohort. How well equipped and supported these individuals are however is not captured by the broad brush of the Graduate Desination Survey. Further attention to the preparedness of graduates for practice is discussed in Chapter 4. The degree to which public health education programs facilitate the translational research process through their training of the workforce should be part of the new research agenda.

Figure 3.1) examines the cycle of the translational research process. In theory this process should be easy to translate into education and then into practice. However, this is not the case, because health practitioners enter a diverse workforce environment with organisational cultures and norms that have been long established, they work with other health workers who have been in the workforce sometimes for many years, and they often work with limited resources and opportunities.

3.5   Future of public health education

University courses offering public health education have expanded during the past 10 years, especially in the undergraduate area (Fleming, Parker, Gould, & Service, 2009). There is a breadth of opportunities within Australia to gain a public health education at the undergraduate and post-graduate level.
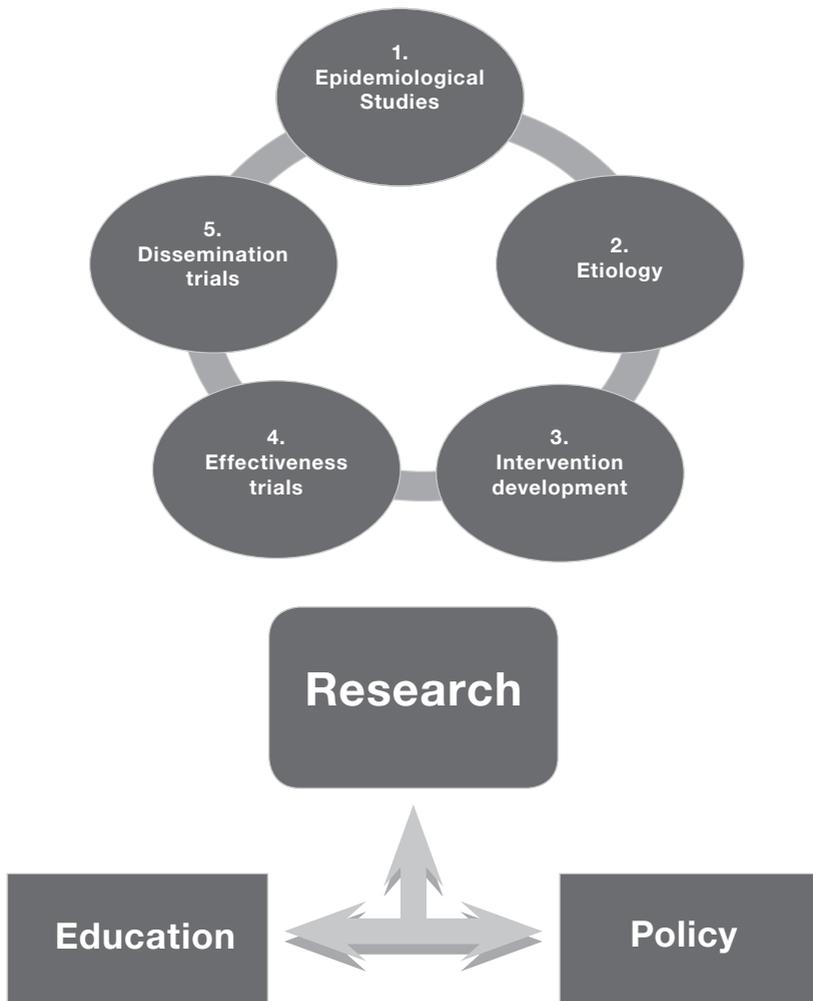
Figure 3.1 The translational research cycle

In 2009, The Australian Network of Academic Public Health Institutions(ANAPHI) developed the Foundation Competency Standards for Master of Public Health graduates in Australia (www.anaphi.org.au/PDFs/Competencies/ANAPHI_MPH%20 competencies.pdf). Funding for this project was administered by the Department of Health and Ageing. Numerous public health experts from academic institutions, community and public organisations contributed to this development, initially scoped through a national consultation process with universities. The document is intended to be used as a guide to academic teaching programs regarding a set of baseline standards for MPH curriculum development. The public health practice competencies include health monitoring and surveillance, disease prevention and control, health protection, health promotion and health policy, planning and management. The standards contain the underpinning knowledge required as well as elements of competence with examples of their application. The Foundation Competency Standards can be modified for structuring undergraduate public health curricula.

However, while there is breadth of educational opportunity and frameworks for curriculum development, it is important that the curricula be creative, inventive, and open to interdisciplinary research. Such an approach will inform the development and practice of the next generation of public health workers and researchers in translating research into practice to meet the current and future challenges of Indigenous health, climate change, chronic diseases, infectious diseases, international health, refugee and migrant health, and demographic changes of an ageing population, growth and design of cities and population movements.

3.6   Conclusions

In conclusion, there is a lack of research on the question of the extent to which research is translated into practice, how this might occur and whether public health students are adequately trained in the undergraduate and postgraduate courses to achieve this. As discussed in Vignettes 1 and 2, there are clearly examples of where

this happens and organisations for which the translation of research into practice is core business. In Vignette 3 it was interesting to note among the findings that specific fields of education (for example, epidemiology) rated as less important the relationship between a course of study and practice, postgraduate research was rated as less important than coursework and bachelor degrees were rated as more important to future employment than postgraduate coursework degrees. For graduates who worked in health policy they reported seemingly no relationship to course of study at all. However, caution needs to be applied in the interpretation of these findings as there is no way of knowing if graduates are working in health-specific policy areas or in more general employment.

At the completion of their studies, public health graduates are employed in a range of fields and settings. It is difficult to design courses which cater for such diverse needs. The evidence from the literature and the vignettes presented in this chapter clearly identifies that where researchers, academic teachers and practitioners can work together to educate students about the importance of using research in practice the experience is valuable for all concerned. The challenge is to make this happen more frequently.

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Chapter 4 Preventative health and workforce development

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4.1   Background

In Australia the burden of chronic disease touches everyone as primary, acute and aged care facilities struggle to provide essential services and procedures in a timely manner; primary care clientele are asked to wait for several days to see their GP, patients queue for emergency services and staffing shortages are felt across all settings (Department of Health and Ageing, 2009). However, despite the gloom, the majority of chronic diseases are avoidable and current trends are reversible.

Partnerships and collaboration with key stakeholders have played a major role in developing a framework for a coordinated approach to ameliorate the burden of chronic disease. The National Health Priority Action Council, the National Public Health Partnership, the Australian Department of Health and Ageing, the National Health and Medicine Research Council have all brought to the table their strategies for primary and secondary prevention of chronic disease over the past decade. To date major achievements have been made in reducing mortality related to cardiovascular disease, some cancers and HIV/AIDS but it is agreed that a greater focus and investment in primary prevention is the key (Gross, Leeder, & Lewis, 2003).

In response to this coordinated approach, the National Preventative Health Task Force has been established to formulate and drive initiation of the prevention agenda. However, there are concerns that the workforce, recognised as a major contributor to health system performance at the primary care level (Beaglehole & Dal Poz, 2003; Buchan, 2004; Kennedy & Moore, 2001), may not be fully equipped to deliver on strategies in accord with the preventative health agenda (Lilley & Stewart, 2009).

Strategies to address the major determinants of health will require engagement and commitment of both the public health and primary care workforce. The applicability of public health academic programs and graduate competencies has been discussed by public health employers and academic institutions since public health programs have become available. Given that the primary care workforce will play a significant role in the delivery of prevention strategies, it will be critical that the primary care workforce is engaged and equipped to take on additional roles in prevention. Further, prior to the emergence of a renewed focus on prevention, employers perceived gaps in public health education and workforce needs (Hale, Bennett, Marshall, Robinson, & Cicuttini, 2009a). Taken together, a sustained effort to build upon current public health knowledge and skills will be required to ensure that each workforce is competent and committed to their role.

4.11 Aim

This case study addresses the preparedness of the public health workforce for the prevention agenda. The building of a workforce capable of delivering on preventative health targets is the context for the following discussions:

- entrance to public heath via undergraduate pathways
- the perspectives of the primary care workforce on delivering preventative health
- the perspectives of public health employers on workforce training needs and deficits.

4.2 Pathways to public health education for prospective students

Traditionally, students in public health entered the field following training in medicine, nursing or allied health. However, with changes in government policy, recognition of social and cultural influences on health, and the need for intersectoral change *(Declaration of Alma-Ata International Conference on Primary Health Care,* 1978; WHO, 1986), people with non-clinical or non-traditional public health backgrounds have been provided with improved access to public

health education. To respond to the Kerr White paper (White, 1986), which identified significant needs in public health education and training, the Australian Department of Health and Ageing established the Public Health, Education and Research Program (PHERP). With the aim to increase public health workforce capacity and to foster leadership, PHERP has supported public health education institutions in the development and delivery of postgraduate public health programs, including the Master of Public Health, applied epidemiology programs, and a biostatistics collaboration (Biostatistics Collaboration of Australia) (Department of Health and Ageing, 2005).

With the support of PHERP, university consortia and individual universities responded to public health workforce needs by providing postgraduate opportunities to domestic and international students in the form of graduate certificates, graduate diplomas, master and doctoral programs. More recently, universities across the globe have perceived a market for providing undergraduate courses in public health. In the US, public health has been incorporated into liberal arts curricula in response to the recommendation of the Institute of Medicine in 2003, with the aim to develop interest and formalise the training of the public health workforce (Gebbie, Rosenstock, & Hernandez, 2003). Currently there are at least 40 undergraduate programs in the US (Fleming, Parker, Gould, & Service, 2009), while there are at least 19 Australian universities providing public health-related bachelor programs to date.

Undergraduate programs in Australia currently offer a broad range of options from degrees in health science, where students can choose to major in public health-related options such as health promotion, occupational health, nutrition or environmental health, to courses which have an explicit public health focus. Currently, there are 10 bachelor programs in Australia that have a strong focus on public health (BPubHealth), health promotion (BPH(Health Promotion)) or preventative health (BPreventativeHealth). Several public health institutions also provide double degrees, (for example, BHealth Promotion and BPubHealth). Other programs offer generalist

health science training in the first year with the remaining two years allocated to specialised study in health promotion or another health science field. Alternatively, students might complete a required number of health promotion units to complete a major in health promotion within a generalist health science degree ((for example, BHSc (Health Promotion)).

The vocational sector also provides an alternative with diploma courses offered in population health, occupational health and safety and environmental studies. Opportunities to enter public health from this sector however, appear limited, given that TAFE offers a single diploma program in public health (Diploma of Population Health offered by one provider in each of Victoria and New South Wales). However, there are numerous opportunities provided by this sector for students interested in health worker roles, including Aboriginal health, or community services.

Given that health professional entry pathways to public health practice are well established via postgraduate options, course providers are now cognisant of the potential overlap in content between undergraduate and postgraduate coursework programs (Bennett et al., 2010; Fleming et al., 2009). The co-existence of both undergraduate and postgraduate programs raises some questions. Are graduates from bachelor programs adequately prepared for the public health workforce or are these programs providing graduates with a 'liberal arts' education? Further, what is the future of the MPH if the content overlaps substantially with undergraduate programs (Bennett et al., 2010). While the onus will be on course developers to provide postgraduate opportunities appropriate for all students, those with and without public health qualifications and experience, it could be just as tricky for students navigating postgraduate options. Indeed, with the many entry paths now available into public health, there is a diverse array of qualifications, knowledge and skills on offer for public health employers and prospective students to consider. Pathways to honours and research degrees are of paramount importance to increase research capacity and build the academic workforce.

4.21 What is public health to the prospective student?

A survey of 330 postgraduate MPH students indicated that postgraduate students, from both health and non-health professional backgrounds, undertake studies in public health because they are interested in public health and/or are seeking employment in the field (Hale, Bennett, Marshall, Robinson, & Cicuttini, 2009b). However, while we know that school leavers, together with undergraduates with limited working experience, or undergraduates from other disciplines with an interest in health, are attracted to undergraduate public health courses (Fleming et al., 2009), there is little information on how they acquire their interest in public health. While not a prerequisite, students can enter public health bachelor degrees having completed health studies during their matriculation studies, for example, Victorian students can undertake Health and Human Development as a subject in Year 12 bringing with them interests in a range of health issues such as nutrition and physical activity. But the anecdotal evidence suggests that, regardless of their background and previous school experience, undergraduate students aim 'to help people become healthier'. Harnessing this interest and active engagement with undergraduates through innovative public health and health promotion curricula will hold graduates in good stead for a rewarding career in a health system where prevention is given a high priority on the national health agenda.

Despite students' good intentions on embarking on a career in health, there is no doubt that undergraduates on arrival at university have a limited understanding of public health and health promotion. Public health academics argue that this is due to the dominance of the medical model (Bennett et al., 2010). Therefore, if we aim to recruit school leavers into public health education programs, public health needs to emerge from the shadows to become more visible to school leavers, their peers and their community. To do so, partnerships between universities and public health professionals need to advocate and market public health as a distinct discipline, even though public health policies and actions permeate multiple sectors. Public health units are now incorporated into health

professional undergraduate degrees, but there is now a clearer argument for inclusion of public health content into a broader range of degrees such as urban planning, early childhood and education (Bennett et al., 2010)

The growing national agenda in preventative health offers public health institutions the opportunity to enhance the profile and impact of their programs in public health and health promotion, and to expand both the health and academic workforces necessary to meet this prevention agenda.

4.3   Health professional perspectives on prevention

A greater awareness of the role of lifestyle in the aetiology and progression of chronic disease has encouraged health care professionals to take an active role in chronic disease management. Given the growing prevalence of preventable chronic disease and associated economic and social costs, however, a refocus on all levels of prevention has become critical. A serious commitment to prevention was overwhelmingly welcomed by health professionals and prevention advocates (National Preventative Health Task Force, 2009e). However, it conveniently places greater responsibilities on the current health workforce (National Preventative Health Task Force, 2009c), which is already heavily burdened. Despite existing training based on an historic and curative model, frontline health professionals are expected to respond to twenty-first century demands by applying evidence-based strategies, not just to manage, but also to prevent the onset of chronic disease. The evidence indicates that there are significant barriers to expanding the role of practitioners in prevention and the potential long-term effects of these barriers are serious. In a study comparing the quality of health care across five nations, 42 per cent of chronically ill Australians and 33 per cent of chronically ill Americans reported that they had not received advice on weight, nutrition, exercise, smoking or drinking from their doctor (Blendon, Schoen, DesRoches, Osborn, & Zapert, 2003). Clearly, barriers to incorporating effective preventative health approaches in primary care settings need to be addressed.

Change in any organisation is acknowledged as complex and a recent study identified three key factors which influence the incorporation of novel approaches into clinical practice: practice environment, prevailing opinions, and knowledge and attitudes (Grol & Grimshaw, 2003).

Practice environment. The typical barriers derived from the work environment studies relate to time constraints, financial disincentives and patient expectations. For instance, despite apparent need, GPs and nurses reported that they do not have time to address risk factors within consultations and usual care routines (Amoroso, Harris, & Powell Davies, 2007; Dettori, Elliot, & Horn, 2009; Douglas et al., 2006; King et al., 2007) and 20 per cent of practitioners reported that giving risk management advice and counselling, with specific regard to smoking cessation, was thankless, and that there was a lack of financial reimbursement (Dettori et al., 2009; Flocke, Crabtree, & Stange, 2007; van Gerwen, Franc, Rosman, Le Vaillant, & Pelletier-Fleury, 2009). Further, the fear of losing clients or damaging the doctor-patient relationship by addressing risk factor management issues with some patients was a concern for GPs (Amoroso et al., 2007; Dettori et al., 2009; King et al., 2007).

Prevailing opinions. Opinions relating to usual care routines or opinions of leaders and medical training can influence the practice of preventative health measures. For instance, GPs reported that following up cases of childhood obesity could be difficult because parents were not supportive or parents did not think their child's weight was a serious issue since they believed their child would grow out of their 'puppy fat' (King et al., 2007; van Gerwen et al., 2009).

Patient attitudes to smoking cessation such as a lack of motivation and concern and not wanting to listen to advice, were significant obstacles for GPs considering initiating and continuing with smoking cessation advice (Young & Ward, 2001). However, practitioners are often not knowledgeable with respect to the effectiveness of interventions and therefore do not utilise them (Dettori et al., 2009; Jacobsen, Rasmussen, Christensen, Enberg, & Lauritzen, 2005; Siversten, Woolfenden, Woodhead, & Lewis, 2008; Vogt, Hall, &

Marteau, 2007; Young & Ward, 2001). Indeed, several Australian reports indicate that best-practice guidelines and tools developed to detect childhood obesity and pre-diabetes (for example, using BMI percentile charts), are poorly utilised (Amoroso et al., 2007; Ampt et al., 2009; Dettori et al., 2009; Spurrier, Margarey, & Wong, 2006).

Knowledge and attitudes. Issues relating to competence and uncertainty underpin the reasons given for avoiding risk factor management. For example, in delivering preventative care programs (for example, smoking, nutrition, alcohol consumption and physical activity), GPs and nurses questioned their efficacy and would refer to dieticians and health counselors if those services were available (Amoroso et al., 2007; Ampt et al., 2009; Dettori et al., 2009; Fuller, Backett-Milburn, & Hopton, 2003; Laws et al., 2009; Laws et al., 2008; Story et al., 2002; van Gerwen et al., 2009; Young & Ward, 2001). Further, nurses and GPs did not think they had received specific training to address risk factors (Douglas et al., 2006; Fuller et al., 2003; Laws et al., 2009; Laws et al., 2008; Puffer & Rashidian, 2004; Young & Ward, 2001).

As the research evidence highlights, there are a number of significant obstacles which must be overcome before preventative health strategies are rolled out to primary care settings. This evidence also alludes to the need for systematic change, requiring engagement of primary care professionals, public health practitioners and further education.

4.31   Workforce development in primary care
It is clear that barriers provide many challenges, and there are no quick fixes. Unfortunately, the shifting of responsibilities from GP to practice nurse will only have panacea effects since practice nurses are faced with similar challenges (Laws et al., 2009; Laws et al., 2008). There is substantial research evidence to indicate that current approaches relying on the dissemination of best practice guidelines to provide primary and secondary prevention are ineffective unless coupled with educational interventions delivered by experts or trained facilitators (Amoroso et al., 2007; Baker et al., 2010; Dettori

et al., 2009; Grol & Grimshaw, 2003). This evidence suggests that the professional development and support needs of primary care practitioners, both GPs and nurses, need to be further established and provided for if the federal government's national preventative health program is to deliver on its promise.

On the basis of existing barriers and systematic review evidence which supports the effectiveness of educational interventions, the following workforce development initiatives to promote the incorporation of prevention in primary care are proposed:

- improve incentives for GPs, practice and community health nurses to further develop skills in health education and counselling, increasing their capacity to change behaviours

- provide incentives for practices to incorporate evidenced-based organisational changes that better promote and support delivery of preventative measures

- provide incentives for GPs and practice nurses to undertake courses in change management with the aim to drive organisational change (for example, lengthen consultation times)

- educate GPs and nurses in relation to evidence supporting the utilisation of clinical guidelines to promote use of evidence-based practice

- continue to improve integration of prevention and behavioural change training into undergraduate and postgraduate medical and nursing training programs

- promote interprofessional practice in clinical settings through a greater emphasis on interprofessional education in pre- and post-practice education in disciplines such as medicine, nursing, social work, occupational therapy, psychology, health promotion, dietetics, and exercise physiology.

4.4 Employers' perspectives on workforce needs

Despite PHERP initiatives and the availability of undergraduate and postgraduate public health programs across Australia, there is a constant and growing need for public health personnel who have the skills and knowledge sets to deliver on the contextual needs of

their employers. Public health personnel work in several sectors, government, non-government, research institutions, and healthcare. They have common capacity needs, but each sector provides its own specific challenges. Public health personnel can specialise in epidemiology, statistics, evaluation, policy, implementation, health promotion, environmental health, public research, surveillance, advocacy, risk management, infection control and emergency management. However, given that successful public health approaches require coordinated and collaborative action between sectors (for example, Australian tobacco control programs have involved research, economics, advocacy, policy change, health promotion, community mobilisation and social marketing) it is critical that public health personnel also have a broad and sound understanding of the range of public health competencies and action areas.

Notwithstanding Australia's impressive life expectancy, with rankings equal top for males and equal second for females, with Japan and France respectively (Australian Institute of Health and Welfare, 2008), the health status of the Australian community is at risk, given the emerging threats of extreme temperatures, bushfire, bioterrorism, pandemics (for example, SARS, Swine flu), and lifestyle-related epidemics. It is against this backdrop that anecdotal evidence suggesting gaps in workforce needs and public health education and training emerged from discussions with employers. Given that the perspectives of public health employers on workforce needs are essential to the development of public health education which is both relevant and appropriate and that public health workforce needs have not been reviewed since 2003 (Sydney Public Health Consortium, 2004), an assessment of current workforce needs was merited.

Public health education and training programs are now widely considered to be well placed to prepare graduates for the public health sector. However the Victorian Consortium for Public Health and its member universities thought it important to seek public health employers' views on gaps in public health education and training, and so funded and conducted a study using mixed methods (Hale et al., 2009a).

4.41 Background to the 2009 public health employer survey

Prior to the PHERP review (Department of Health and Ageing, 2005), two relevant Australian studies were conducted. In 2003, the Sydney Public Health Consortium was commissioned by PHERP to conduct a survey of employers to conduct a public health training needs assessment against postgraduate public health education and training offered at the time (Sydney Public Health Consortium, 2004). Gaps were identified in leadership, planning, critical thinking and analysis, epidemiological skills, project management and health service management.

In a study undertaken in the same year, the largest group of vacancies in public health were reported to be for program/project managers and officers, directors or managers of services, and health promotion/education personnel (Rotem, Dewdney, Mallock, & Jochelson, 2005). However, results were taken from a snapshot in time and shifts in demand for specific skills in public health may have changed in the past six years. Interestingly, a European study conducted around the same time established that employers preferred to see 'teamwork and communication' skills and generic competencies from their public health graduates over public health-specific competencies (Biesma et al., 2005). Similar findings were found by Rotem et al., (2005) with generic skills, such as communication, time management and report writing ranking above specific professional skills in position descriptions.

These findings revealed a growing expectation or need for public health graduates to be 'well rounded'. Given that employer concepts of what constitutes 'well rounded' may have shifted in relation to the health workforce in the interim, and that responses of academic institutions to needs and previous study findings may now be outdated, it was timely to revisit employers' training needs. The findings presented here are a synopsis of a descriptive and qualitative analysis of interviews with 42 (38 Victorian and 4 Commonwealth) public health employers or senior level staff (directors, managers and senior researchers) that took place in May–August 2009. Most employers (95 per cent) were from government, research or NGO

settings. The main foci of the findings presented and discussed here are the skill shortages and training and development needs.

4.42   Skills and knowledge areas central to work

To determine the skills and knowledge areas considered to be most utilised by public health organisations, employers were asked which skills and knowledge areas were most central to the work of the organisation or unit. Areas most utilised were information and knowledge management, evaluation, capacity building, epidemiology, policy development and analysis, health promotion and program development (see Figure 4.1). All generic skills were considered central to work. Other skills and knowledge areas considered to be highly utilised by at least 70 per cent of employers were infection control (government setting), biostatistics (research setting) and monitoring and surveillance (NGO setting).
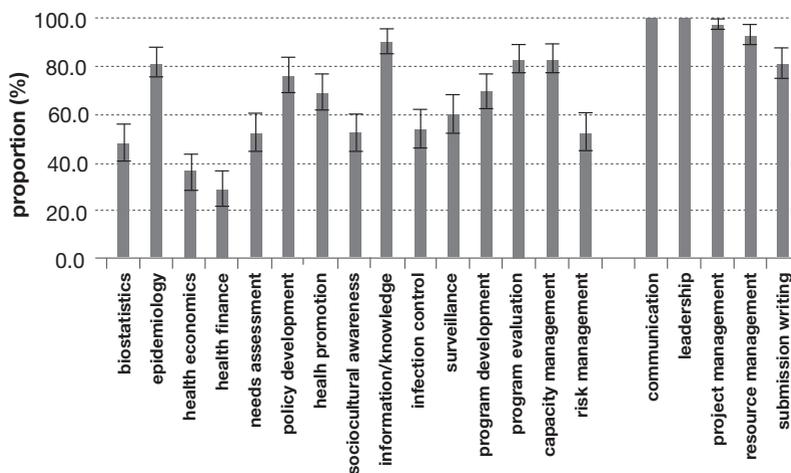

Figure 4.1   Skills and knowledge areas utilised or central to work (SE) across settings.

4.43 Perceived shortages in knowledge and skills areas

To assess perceptions of supply levels, employers were asked whether skills and knowledge central to work in their domain were in adequate or short supply. Crude reported supply levels were then adjusted for utilisation. As a result, knowledge and skills areas identified as in short supply were, in descending order: program evaluation, information and knowledge management, epidemiology, capacity building, submission writing, leadership and biostatistics (see Figure 4.2). Analysis by workplace type indicated that shortages varied between settings; for example, shortages in program evaluation were acute in the government setting compared to other settings, while NGOs were more aware of shortages in leadership skills (Hale et al., 2009a).
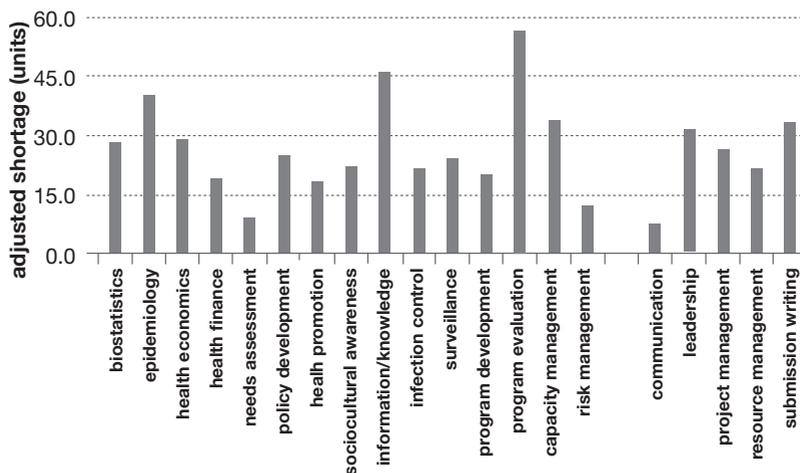

Figure 4.2 Knowledge and skills areas most reported to be in short supply across settings (adjusted for utilisation).

4.44   Employers' perspectives

Employers were asked open-ended questions relating to development needs they thought likely to emerge over the next five to 10 years. Employers tended to focus on skills related to research, policy, program management, implementation, evaluation, and multidisciplinary skills (Fig. 4.3) (Hale et al., 2009a). The major knowledge areas identified in need of development related to prevention, from both research and intervention perspectives. Employers also expressed the need to develop skills to engage communities and other fields (for example, urban planning, environment, transport) or a range of sectors, including government.
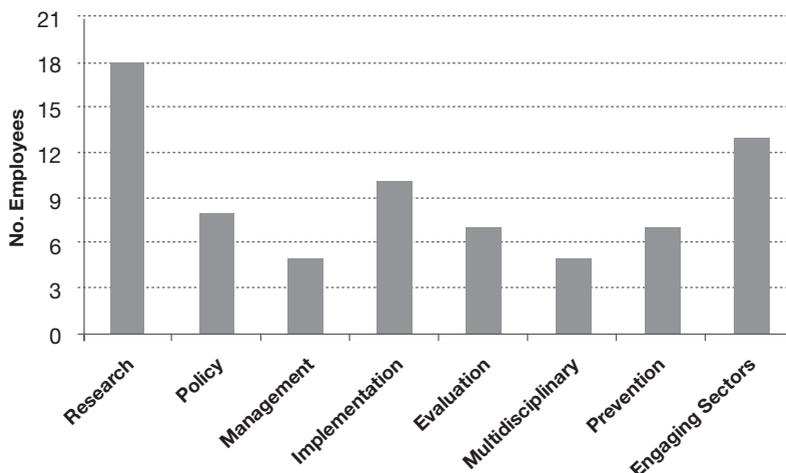

Figure 4.3   Areas in need of development over the next 5–10 years

4.45 Employee training needs

Employers were asked open-ended questions relating to immediate training needs of their workforce. Training needs were identified in research, policy (development, analysis and implementation), evaluation, leadership, writing and advocacy (Hale et al., 2009a). Areas where there were both training needs and supply

shortages that were commonly identified across settings were program evaluation, research methods (including biostatistics and epidemiology) and policy skills (Table 4.1).

Table 4.1 Training needs across settings

Government	Research	NGO
Policy	Research	Research
Evaluation	Evaluation	Evaluation
Leadership	Policy	Advocacy
Research	Writing skills	

4.46 Public health workforce needs and prevention

Given that the most recent survey of public health employers' needs prior to the 2009 survey was conducted in 2003, it was important to establish the current perspectives on capacity and training needs of public health employers representing public health in government, NGOs, research and healthcare settings. The study included perspectives from employers across all public health settings in Victoria and gathered employer opinions on all public health education and training currently available. However, before discussing some of these findings, it is worth noting some limitations of this study. While the agencies included were broadly representative of the breadth of public health employers, 90 per cent of employers were from Victorian settings, and 71 per cent of government employers were from regional settings. Further, data collection preceded the formation of the National Preventative Health Task Force, therefore employers were not commenting on workforce needs within the context of a heightened awareness of the prevention agenda, nor how this agenda may affect workforce training needs and deficits. However these findings do provide a useful baseline commentary on needs prior to the implementation of national preventative health programs and related changes to the workforce, and to workforce development and educational needs as described below.

4.47   Training needs and deficits in the public health workforce

To identify gaps in training and education in the public health workforce, participants were asked to comment on those areas most highly utilised, the supply status, and their views on current training and future development needs. Taken together, areas in need of the most attention were policy (particularly implementation), research (epidemiology, statistics and qualitative skills), evaluation and leadership. Compared with the results from the 2003 Sydney Public Health Consortium study, where training needs were identified in leadership, planning, critical analysis, epidemiology, project management and health service management (Sydney Public Health Consortium, 2004), it is apparent that gaps in management skills have diminished or are not deemed urgent, while other areas such as research, policy and evaluation require ongoing attention. It is possible that offering the health service management specialisation in MPH programs, and postgraduate courses in health service and health administration management made available in recent times, are now meeting needs in this area. Unlike recent international studies where demand for public health-specific and generic competencies were compared (Biesma et al., 2005), the findings from this study suggest that specific public health skills are in greater demand and in need of further training and development, over and above generic skills.

Health promotion skills are not perceived by employers to be in short supply or in need of further development, but as they are highly utilised by organisations already, and arguably will be increasingly so, there will be a continuing need to meet this demand. It is likely that health promotion positions will be created under the preventative health agenda, and this could cause a shift in expertise between sectors, particularly if financial incentives are offered. However, according to the National Preventative Task Force, expertise in health care work, social marketing, urban planning, policy development analysis and implementation, engaging with communities and sectors, primary care, research and evaluation will all be required to implement change and reduce chronic disease (National Preventative

Health Task Force, 2009a, 2009b, 2009d). Taken together, the National Preventative Task Force plans will place additional pressures on the supply of expertise in core public health areas. In this case, public health education institutions are well placed to continue to develop their public health education and training programs, to recruit students from a broad range of backgrounds, and ensure the relevance of their programs for current and future needs.

4.5   Conclusion

 The purpose of this chapter has been to determine whether the current health workforce is adequately prepared to deliver on the current prevention agenda. Empirical evidence has shown that this is not the case in many settings and the consequences of inadequate preventative measures for the population has the potential to result in serious preventable consequences. While primary care is the core setting for the preventative agenda, evidence demonstrates that there are workforce challenges related to organisational development, time, capacity and professional development. These serious workforce capacity issues should be considered by the National Preventative Health Agency for further investigation to identify the challenges and opportunities to inform preventative workforce development and address the growing capacity needs.

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Chapter 5 Conclusions and lessons for the future

MaryLou Fleming and Elizabeth Parker

This monograph presents contemporary case studies representing three issues challenging the further development of public health programs within Australian academic public health institutions. It does this through an innovative exploration of personal perspectives on the links between education and practice for Aboriginal public health, it explores the nexus between policy, research and translation into practice and it examines the relationship between the contemporary prevention agenda and workforce development.

Why are these issues important to public health? They are important because each one of the case studies presents challenges facing education and research training in Australian universities. The application of a range of public health strategies has never been more important. There are a number of emerging and re-emerging health issues that will continue to challenge public health agencies and the workforce: the re-emergence of infectious diseases, increases in mortality and morbidity associated with chronic conditions, continued high levels of Aboriginal and Torres Strait Islander mortality and morbidity and population ageing.

Sustainable environments and the question of appropriate increases in population levels in Australia impact not only on social and economic issues but also importantly on the health of the population. Meeting the diversity of health needs in Australia and the impact of a range of social, economic, political and environmental factors requires a public health workforce that is agile and flexible as well as possibly more specialised.

5.1   Lessons learnt

Aboriginal public health and education: Has it made a difference in practice?

Overall the consensus from staff interviews from the Public Health and Research Unit, VAACHO was that a combination of work

experience and qualifications is seen to be essential to working within Aboriginal public health. It is imperative that education institutions provide prospective graduates with the ability to apply the theoretical knowledge gained in the classroom through practical and sustainable training during their studies. Cultural understanding, cultural safety and cultural competency training was identified as being essential for working within the sector.

The PHERP Indigenous Public Health Capacity Development Project (Genat, 2008), finalised in 2008 after five years of consultation and sustained activity, is a framework and guide for university public health teaching that includes Indigenous health content within the Master of Public Health. Related teaching and learning resources and assessment strategies are included. The uptake of this framework across universities teaching undergraduate and postgraduate courses is warranted if we are to attend to 'Closing the Gap' as a national priority.

Public health education: Policy and research training contributing to translational research

This case study presented information on the *South Australian Health in all Policies* strategy that has emerged to translate research into broad policy interventions designed to act on the social determinants of health and wellbeing using an approach that originated in Finland. It also dealt with information about the activities of VicHealth where the establishment of centres of research and practice have been strategic catalysts in new developments in public health research, health policy and health promotion interventions. A prime goal of these VicHealth centres has been to translate public health research knowledge to health promotion policy and practice. Centres carry out research that fills an identified gap in current research and practice activity and contributes to national and state health policy objectives. The third element in the examination of translational research focused on a review of the limited literature relating to the role of education in the translation cycle. If we are to fully appreciate the need to make translational research a priority, then educators need to reflect this focus in their curriculum.

Of particular note were the data from graduates who identified that their work in health policy bore no relationship to their course of study. Caution needs to be applied as there is no way of knowing if graduates are working in health-specific policy areas or in more general health employment. So what is the role of academic institutions in preparing students as able practitioners with a fundamental appreciation of the role of translational research in practice?

Evidence from the Graduate Destination Survey suggests that where researchers, teachers and practitioners work together to impart the importance of research-based practice, the experience is valued by all. Curriculum designers of both undergraduate and postgraduate courses need to craft learning strategies and assessment that builds students' confidence in integrating not only technical research skills but also the translation of these skills. This approach to examining evidence and its translation into robust approaches to policy and practice will be essential if the research, policy, practice nexus is to be achieved. It may also require extending curricula to amalgamate interdisciplinary approaches to solve future public health challenges and policy imperatives.

Preventative Health and Workforce Development.

If the health workforce is expected to deliver on strategies to promote and enhance a prevention agenda then this shift in focus might place additional pressure on public health workforce needs. While universities are well equipped to shape public health programs which are appropriate for school leavers and health employees to cope with a prevention agenda, it is likely that public health employers will find it more difficult to acquire expertise in core public health areas from the available workforce, due to higher demand. As for the delivery of preventative measures by primary care professionals, the evidence suggests that they do not have the time, capacity or the training to take on a greater role in prevention. Additional support needs to be allocated to education programs and incentives to promote organisational change for primary care to effectively deliver on prevention.

Despite the overwhelming enthusiasm for the national preventative health agenda, prevention initiatives will require a broad range of strategies and a workforce equipped to drive change. Government, universities, public health institutions and divisions of general practice need to work together to align workforce development strategies with the prevention agenda.

5.2   Ideas for future action

The case studies in this report identified three areas of focus that have aspects of real importance to current and future public health education and training. It was not intended that these case studies would be comprehensive of all issues facing university education and training. The ideas for the future progression of public health presented below should be considered to be of interest to governments, universities with public health programs and other sectors involved in the policy, research and practice nexus:

• The Foundation Competency Standards for Master of Public Health Graduates in Australia (2009) and the National Indigenous Public Health Curriculum Framework (2008) should be implemented. These resources are invaluable and essential for curriculum designers. They build on processes over a number of years through national discussions and consensus.

• Continued attention to Aboriginal and Torres Strait Islander health in the curriculum and the skills of community development and capacity building are essential to continue to focus on building capacity in the workforce, both Aboriginal and Torres Strait Islander and non-Indigenous.

• The competency standards and framework documents should be developed to investigate policy deficits in curriculum and consider internships and practicums for public health students, particularly Master of Public Health students, to build policy capabilities among future public health leaders.

• International internship models and international educational exchange programs particularly in translational research and policy practice should be investigated.

- Integrated interdisciplinary policy agendas have implications for education because they require graduates to work inter-sectorally. Inter-professional curricula development and short courses should link practitioners with undergraduate and postgraduate students as work-integrated learning and 'transition-out' opportunities.

- Continuation of the ANAPHI teaching and learning forums. These annual forums gather educators from across Australia. Discussions on embedding competencies within curricula, sharing of innovative teaching strategies, and assessments ensure that public health teaching and learning has a focus. This is essential if we are to fulfil health workforce expectations of recruiting capable and knowledgeable public health practitioners.

- Researchers, educators and practitioners need to work together to formulate strategies and practices that support the translational of research into practice and that value this process.

5.3   Reference

Genat, B. (2008) National Indigenous Public Health Curriculum Framework, Onemda VicHealth Koori Health Unit, The University of Melbourne, Melbourne.

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