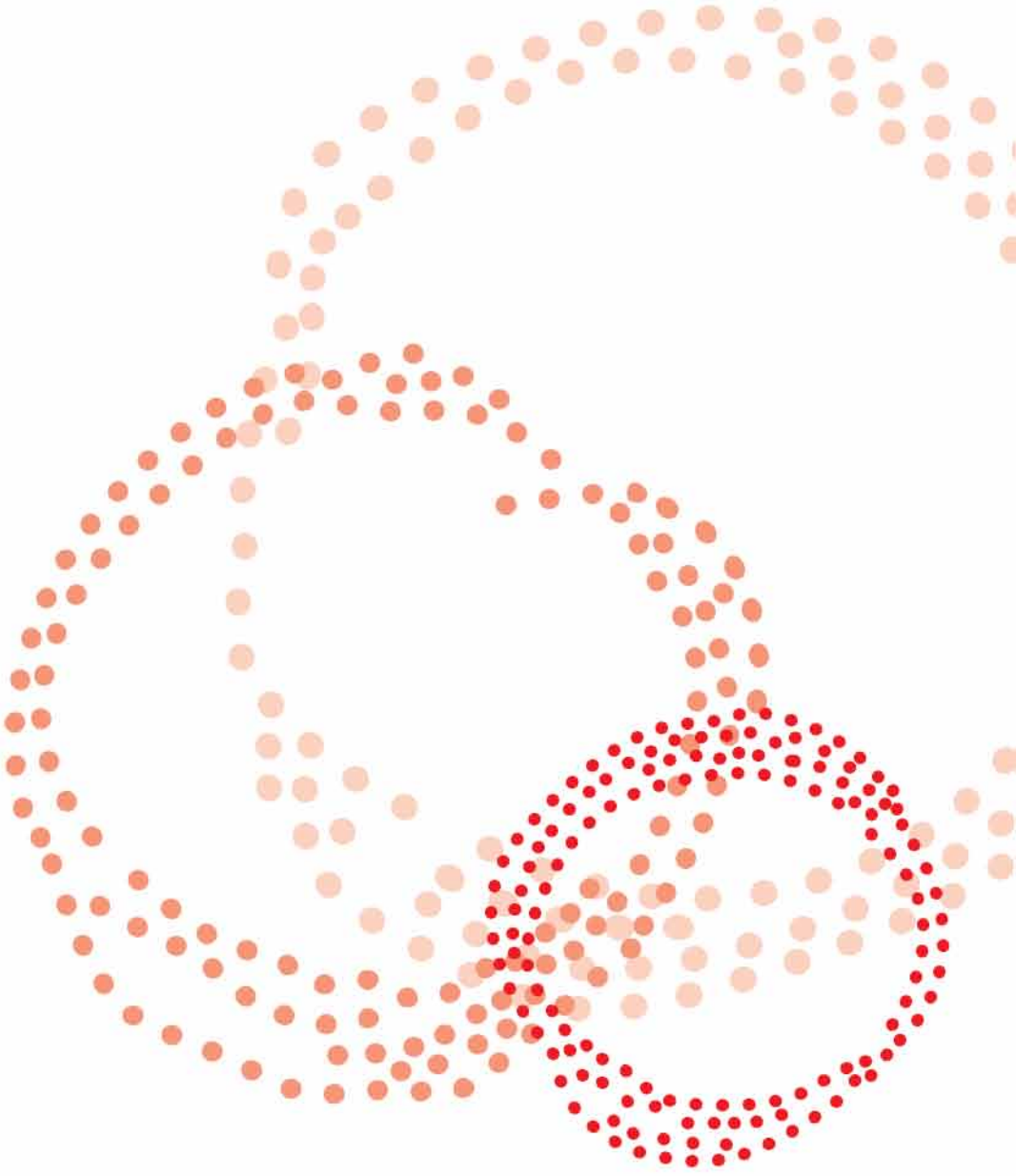
Foundation Competencies for Master of Public Health Graduates in Australia



Australian Network of Academic Public Health Institutions

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Australian Network of Academic Public Health Institutions (ANAPHI)

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Purpose

This document describes the baseline set of competencies expected of a graduate from a Master of Public Health (MPH) program in Australia. It is offered as a guide to academic teaching programs for MPH program curriculum development. It is envisaged the document will support academic teaching programs to build their own curricula, guide participation in shared curricula where programs lack specialist capacity, enable cross-referencing in curriculum review processes, be referenced in course handbooks and assist in course planning with students.

The competency framework describing foundation *practices* of MPH graduates enables flexibility in the delivery of the training and provides scope for the inclusion of specific *content* from each university teaching program. While some institutions are unable to deliver all the baseline MPH competencies within their public health schools, the document provides opportunities to create new, or strengthen existing institutional collaborations and consortium arrangements.

The competencies set out in this document draw upon an earlier compilation, the Competencies Standards for Public Health Practice (Human Capital Alliance 2007). Whereas the Competencies Standards for Public Health Practice provided a set of 'workplace practice competencies' that were expected of an MPH graduate after six months experience, this document sets out the minimum **baseline** set of competencies that can be expected of any MPH graduate upon graduation.

Importantly, this baseline set of competencies **does not** cover specialist competencies that most MPH graduates would acquire in a particular area of specialisation within their MPH program. However, for the sake of continuity with the preceding document, some non-core elements of competence are included and designated 'Examples of Specialist Elements'. Other than these, this document describes all the generic public health competencies expected of every Australian MPH graduate in each area of practice.

Underlying assumptions

Grant (1979) emphasized the crucial need to be explicit regarding the underpinning program assumptions of any competency based education program. The assumptions of this document include the following:

- the document sets out the *minimal baseline set* of competencies that can be expected of every MPH graduate that are achievable in a university-based teaching program;
- the competencies outlined in this document *pertain specifically to those at a Masters level*. As set out in the *Australian Qualifications Framework* (2007: p69), a graduate of a Masters Degree program is able to:
  - » provide appropriate evidence of advanced knowledge about a specialist body of theoretical and applied topics;
  - » demonstrate a high order of *skill in analysis, critical evaluation* and/or professional application through the planning and execution of project work or a piece of scholarship or research; and

  - » demonstrate creativity and flexibility in the application of knowledge and skills to new situations, to solve complex problems and to think rigorously and independently;
- the document is intended *to be used as a guide to academic teaching programs* regarding a set of baseline standards for MPH program curriculum development;
- the document assumes that the teaching of the competencies will be *informed by both current evidence and research* and the changing needs of industry in relation to the specific areas of practice;
- all Australian MPH graduates need to be *culturally attuned to* not only Aboriginal and Torres Strait Islander health issues, their history and specific challenges but also Indigenous agency in the development of successful population health strategies to improve Aboriginal and Torres Strait Islander health;
- an understanding of *ethics is fundamental* knowledge for MPH graduates;
- improvements in population health are created through dynamic partnerships with communities, industry, government, scientists, health professionals and other advocates for change.

An Australian MPH graduate should attain the practice goals in the six areas of public health practice outlined in the national competency framework below (see Appendix 1). These include '*evidence-based professional public health practice*', which underpins the other five practice areas: *monitoring and surveillance, disease prevention and control, environmental health, health protection, health promotion, health policy planning and management (health systems).*

Each of these six practice areas has a practice goal. Each goal is underpinned by 'units of competency'. Each unit of competency is defined by specific 'elements of competence'. The units of competency also include the specified underpinning knowledge accompanying the competency statements. The achievement of elements in all nineteen competency units are the minimum proposed attainment requirements for Australian MPH graduates.

If an MPH graduate wishes to specialise further in one or several of the practice areas, 'Examples of Specialist Elements' are offered to guide MPH curriculum developers. Other competencies can be added to this specialist list, depending on the strengths and interest of academics, and public health workforce needs.

Background

The Review of the Public Health Education and Research Program in 2005 recommended the development of,

> '*foundation competencies for "judgment safe public health practitioners" in epidemiology, biostatistics, health economics, intervention, relevant social sciences and Indigenous health; and on how they should be assessed and quality assured to the required standards considering the possibility of an external examination.*'
>
> (Durham & Plant 2005: 50)

In response, the *PHERP Quality Workshop* in September 2006 began the development of a set of competencies describing the practice of a public health practitioner as a basis of a set of standards for public health curriculum development drawing on previous work both in Australia and internationally. Within the workshop, participants questioned the use of 'disciplines' or 'domains' of public health and proposed building the competency based curriculum standards based upon key public health functions. Participants at the workshop advocated developing competencies that described key workplace performances of a competent public health practitioner,

> *'The focus needs to shift to what are the basic skills that MPH students must possess? We are still talking about what makes up an MPH course rather than focusing on building a workforce. Public health schools should be focusing on this in the future.'*

The Quality Workshop required further follow-up with the participation of leading public health academics to develop a consensus on the key public health functions and the key competencies within them. Human Capital Alliance, a human resources consulting organization developed and led an online Delphi Conference using the 'Delphi Method' (Linstone and Turoff 2002) with the aim of achieving these outcomes. Participants in the Delphi process were the original Quality Workshop participants and included public health academics, employers from public sector organizations and policymakers.

The emergent competencies were organized under the five core public health functions as defined by the former National Public Health Partnership (NPHP 2000):

- Health monitoring and surveillance;
- Disease prevention and control;
- Health promotion;
- Health protection;
- Health policy, planning and evaluation.

with two additional further key functions identified:

- Research methods;
- Professional public health practice.

On the basis of the results of the Delphi Process, Human Capital Alliance produced a draft of 'Competency Standards for Public Health Practice' (Human Capital Alliance 2007). The competencies were based around the five key public health functions identified as 'Areas of practice' with two underpinning competency groups.

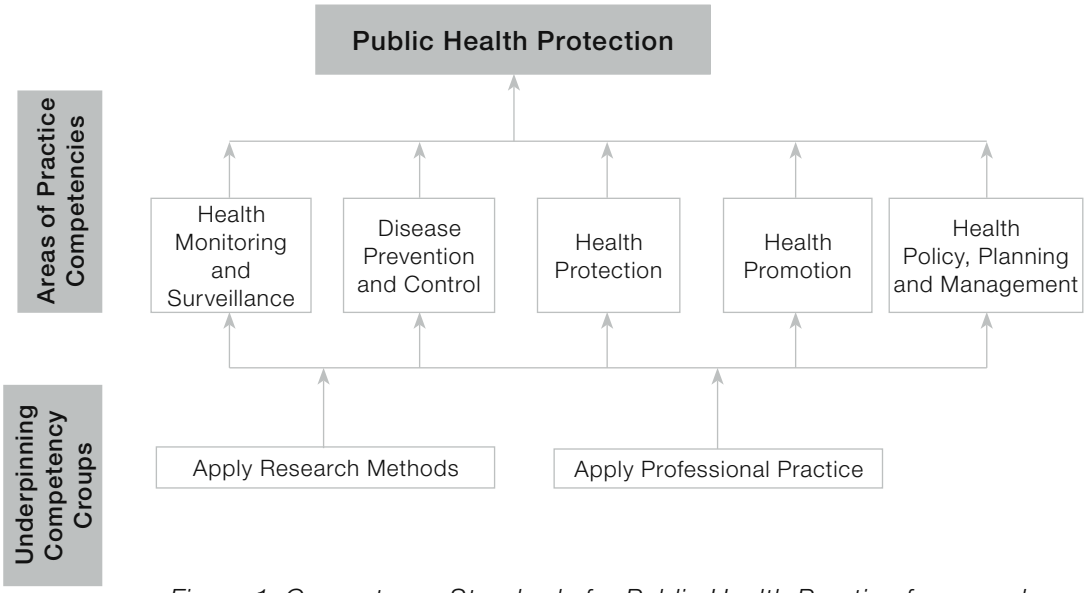

Figure 1: Competency Standards for Public Health Practice framework (Human Capital Alliance 2007)

The competencies were envisaged as 'Workplace Practice Competencies' that an MPH graduate might achieve after six months in the public health workforce, however because of the expertise and experience of the original workshop delegates and Delphi participants, in reality the resulting competency framework document described the broad range of competencies of a well-trained, and experienced public health workforce. In 2009 it was decided to further refine the competency framework.

A competency-based education framework for MPH programs

Within this document, a competency is understood to describe a holistic performance incorporating skills, underpinning knowledge and an integrated set of attitudes and values.

> *'The approach to competency here is to outline the 'complex combinations of attributes (knowledge, attitudes values and skills) . . . thus competence is conceived of as complex structuring of attributes needed for intelligent performance in specific situations . . . this approach has been called the 'integrated' or holistic approach to competence and it is the conception that has been adopted by the professions in Australia'*
>
> (Gonzci 1994: 28).

Furthermore, following Winter (1990), these competencies have been constructed around the notion of a particular professional role. The occupational role to which are ascribed the core public health functions, their competencies and characteristics is that of an ***ethical and judgment safe professional public health practitioner.***

As Wolf (1995) suggests, a set of competency standards is based on a functional analysis of the occupational role involving an examination of the key purposes of the area of professional practice and identifying key functions,

> *'The functional analysis enables the analyst to identify the key outcomes [or functions] – those related to the underlying purposes. Those key outcomes must then be turned into units and elements of competence, expressed in outcome terms.'*
>
> (ibid: 16).

Similarly, Grant defines a competency as a composite performance of a particular set of skills. Combined and inter-related these skills describe the capability for a composite performance by the learner that is greater than the sum of the individual skills (1979: 29). He identifies the need for a competency-based program to include a statement of goals, competencies and objectives to organise the program into manageable components. Goals encompass units of competence, which encompass elements of competence which encompass objectives or performance criteria/indices.

In this document, each 'Unit of competency' addresses the goal for each area of practice. Each 'Unit of competency' incorporates a range of 'Elements of Ccompetence', the underlying skill set, which with the underpinning knowledge, forms the composite performance described in the 'Unit of competency'.

MPH graduate competencies

Areas of Practice

- Health monitoring and surveillance
- Disease prevention and control
- Health protection
- Health promotion
- Health policy planning and management
- Evidence-based professional population health practice

Area of Practice: Monitoring and surveillance

Practice Goal: Assess, analyse and communicate population health information

Unit of competency	Elements of competence
1. Monitor and evaluate population health data or indicators	1.1. Describe common measures of indicators for population health 1.2. Calculate and interpret the epidemiologic measures of occurrence (prevalence, incidence of diseases, death); and association between exposure (including risk behaviour) and disease (e.g. risk ratios) and measures of public health impact (e.g. population attributable risk) 1.3. Generate and interpret descriptive statistics and appropriate graphics for summarising and displaying epidemiologic data 1.4. Generate and interpret simple inferential statistics 1.5. Interpret mixed method research findings relevant to a population's health including those generated through qualitative methods 1.6. Analyse and describe the health status of a population based on demographic and epidemiological information 1.7. Describe the determinants/causes of a significant population health problem 1.8. Analyse key health indicators for Aboriginal and Torres Strait Islander peoples* 1.9. Analyse key indicators of social determinants of health for Aboriginal and Torres Strait Islander peoples*
2. Analyse the quality of findings from a surveillance or screening program	2.1. Describe the features of different types of surveillance systems and screening programs designed to address specific population health problems 2.2. Interpret and communicate surveillance findings from an identified population **EXAMPLES OF SPECIALIST ELEMENTS** 2.3. Design a population-based surveillance system 2.4. Evaluate a population-based surveillance system 2.5. Assess the suitability of surveillance systems and/or screening programs designed to address an identified population health problem 2.6. Outline a communication strategy for surveillance findings to trigger required health system response/s

* See Appendix 2 for Indigenous competencies

Underpinning knowledge – Monitoring and surveillance	
• Demographic information/data sources • Epidemiological measures/data sources • Patterns of health, illness, injury and their determinants in populations • Basic descriptive and inferential statistics • Effective design and operation of screening programs • Evidence-based data collections	• Components of a surveillance system including their strengths and weaknesses • Social determinants of the health of specific populations based on demographic data regarding population structure; housing; education; employment; income and access to health care • Mixed methods research approaches

Area of Practice: Disease prevention and control

Practice Goal: Detect, prevent and control communicable and non-communicable diseases among human populations through systematic interventions such as screening, immunisation and contact tracing

Unit of competency	Elements of competence
3. Plan a disease prevention/ control strategy	3.1. Describe key elements of a population-based disease prevention strategy such as screening, immunisation and contact tracing 3.2. Design a key element of a comprehensive population disease prevention strategy (such as, a component of an immunisation, screening, contact tracing, surveillance, counselling or risk communication activity) 3.3. Assess the relative merits (e.g. considering suitability to target group, resource requirements, etc.) of alternative disease prevention measures (e.g. education, immunisation, incentives, legislation, policies, standards, screening) 3.4. Explain how legal frameworks, organisational structures and service delivery systems influence disease prevention and control **EXAMPLES OF SPECIALIST ELEMENTS** 3.5. Design a population-based disease prevention/control strategy 3.6. Evaluate a population-based disease prevention/control strategy 3.7. Develop a strategy to activate a health system response based on an understanding of the legal implications, organisational structures and service delivery systems used in disease prevention and control.
4. Formulate and implement a response to a public health emergency	4.1. Describe effective intervention strategies for public health emergencies 4.2. Outline key components of an effective emergency response to a specified disease 4.3. Describe examples of emergency response measures within the health and emergency services sectors 4.4. Identify local, national and international mechanisms (including legislative and regulatory frameworks) for responses to public health emergencies **EXAMPLES OF SPECIALIST ELEMENT** 4.5. Design and/or coordinate activities/elements of an appropriate emergency management plan to ensure constant readiness to respond (biological, chemical or radiation exposure incidents, natural disaster or terrorist attack) 4.6. Assess the relative merits (e.g. considering suitability to target group, resource requirements, etc.) of alternative emergency response measures (e.g. laws, regulations, compliance measures, policies and protocols)

Underpinning knowledge – Disease prevention and control

- International, Commonwealth and State and Territory legislative and regulatory structures for disease prevention and control
- Public health emergency plans and pandemic plans
- Host, agent and environment system interactions
- Structures of public health emergency response systems (including mechanisms for rapid response and surge capacity)
- The biological, molecular and genetic causes of disease and their distribution within populations
- Ethical, social and legal issues in disease prevention and control
- Specific biological, chemical and physical agents which increase the vulnerability of individuals or populations to a public health emergency.
- Relationship between health behaviours, human biology and disease prevention and control
- Multiple dimensions of disease prevention and control including behavioural, socioeconomic and environmental factors
- Role of public health advocacy in achieving disease prevention and control
- Evidence-based data collections

Area of Practice: Health protection

Practice Goal: Promote, develop and support physical interventions which ensure a safe and healthy environment

Unit of competency	Elements of competence
5. Describe environmental health safety standards and related management procedures	5.1. Outline key parameters for safety within key domains of environmental health 5.2. Describe key elements of evidence-based approaches to environmental risk management and hazard control including the role of existing health agencies, critical infrastructure, legislative and regulatory measures 5.3. Outline the impact of social, cultural, political and regulatory factors that influence responses to environmental health issues
6. Map and analyse the environmental determinants that contribute to disease in a given community or population	6.1. Identify and describe environmental determinants and risk factors in a given community or population 6.2. Specify environmental drivers of illness/injury in a given community or population 6.3. Identify vulnerable individuals/groups and describe specific environmental health risks in a given community or population 6.4. Outline key standards and apply appropriate assessment tools and methods to determine environmental factors that adversely affect health in a given community or population 6.5. Analyse key environmental risk factors in a given community or population 6.6. Develop a communication plan to alert appropriate service providers in health and other sectors to trigger appropriate responses in a given community or population **EXAMPLES OF SPECIALIST ELEMENTS** 6.7. Formulate a risk assessment plan to define and characterise the potential influence of environmental factors 6.8. Conduct and report on a risk assessment project to define and characterise the nature and potential influence of environmental factors 6.9. Conduct and report on an appropriate environmental health stakeholder analysis and consultation
7. Design an environmental health intervention in a given community or population	7.1. Identify the key goals, objectives and strategies of an environmental health intervention, including an evaluation strategy 7.2. Develop specific components and activities of an environmental health intervention 7.3. Identify the key professionals, community leaders and other relevant stakeholders to collaborate on the environmental health intervention 7.4. Incorporate statutory requirements into an environmental health intervention design

* See Appendix 2 for Indigenous competencies

Underpinning knowledge – Health protection	
• Environmental standards and use of data warehouses • Environmental monitoring standards – international, national and local • Evidence-based and other environmental health data, including toxicology and ecology • General mechanisms of toxicity in eliciting a toxic reaction • Risk assessment methods, risk management and communication approaches • Federal and state regulatory programs, guidelines and authorities that control environmental health issues	• Legislative and ethical issues relating to environmental health protection • Approaches to assessing, preventing and controlling environmental hazards that pose human health and safety risks • Climate change theory • Genetic, physiological and psycho-social factors, including poverty and low educational status, that affect susceptibility to adverse health outcomes following exposure to environmental hazards • Key environmental health agencies

Area of Practice: Health promotion

Practice Goal: Promote population and community health by both changing social, economic, cultural and physical environments through consultation, engagement and empowerment, and strengthening the skills and understanding of individuals to achieve and maintain their health

Unit of competency	Elements of competence
8. Prioritise population/ community health needs	8.1. Describe international/national/state/regional priority health problems relevant to specific populations/communities 8.2. Describe Aboriginal and Torres Strait Islander health in historical context and analyse the impact of colonial processes on health outcomes* 8.3. Conduct a stakeholder analysis (including analysis of power and control) and identify prospective partners with reference to the health needs of a specific population/community 8.4. Analyse, and present appropriately, information on the health of a specific population/community (eg. Causes/determinants of health, illness/injury) 8.5. Develop criteria to prioritise health problems for a specific population/community 8.6. Analyse and prioritise health problems for a specific population/ community using appropriate criteria **EXAMPLES OF SPECIALIST ELEMENT** 8.7. Engage community and other sectoral stakeholders in needs assessment and priority setting
9. Plan and evaluate evidence-based health promotion initiatives	9.1. Analyse and compare relevant theories and models to the application of health promotion strategies to address a health problem within a specific population/community 9.2. Critically appraise potential evidence-based health promotion initiatives to address effectively a health problem within a specific population/community 9.3. Critically evaluate an Aboriginal and Torres Strait Islander health promotion program* 9.4. Develop a health promotion plan, specifying target groups and including specific goals, objectives, strategies, broad budgetary implications and related evaluation criteria based on the best available evidence 9.5. Articulate clear and measurable objectives, an effective action plan and a sound and sufficient budget **EXAMPLES OF SPECIALIST ELEMENTS** 9.6. Implement and manage a health promotion initiative 9.7. Catalyse community engagement and leadership to promote health 9.8. Advocate across sectors to build capacity to promote, protect, and maintain good health 9.9. Strengthen inter-sectoral partnerships and capacity to promote health

* See Appendix 2 for Indigenous competencies

Underpinning knowledge – Health promotion	
• Comprehensive Primary Health Care: The Alma Ata Declaration on Primary Health Care; The Ottawa and Bangkok Charters on Health Promotion, WHO Commission on Social Determinants of Health and the Millennium Development Goals • Patterns of health, illness, injury and their determinants in populations • Health promotion theories and models of individual, community and organisational behaviour change • Social capital, social inclusion, social networks and their influence on health • Social and political structures, processes and their effects on health including international charters, human rights, primary health care, mutual obligation, market forces, self-determination and strategies of empowerment • Effective group work practice	• Theories, models, evidence of effective community engagement and capacity building, including consultation, community development and empowerment, project and program planning and management • Criteria for prioritising health interventions balancing competing needs, equity and social justice • Social marketing theory, new communication technologies as applied to health promotion communication and learning theories • Social mapping • Needs assessment theory and its application • Advocacy theory and practice

Area of Practice: Health policy, planning and management

Practice Goal: Promote efficient and equitable gains in population health by developing appropriate policy, legislation, regulation, governance and/or fiscal measures

Unit of competency	Elements of competence
10. Develop an advocacy strategy regarding a population health issue to influence public policy	10.1. Articulate the role of public policy in promoting and protecting health and preventing disease 10.2. Articulate key institutional structures, political processes and influences on the public health system 10.3. Analyse the feasibility of a population level public health policy (including consideration of relevant social, economic, political, legal, ethical and environmental factors, organisational, governance, regulatory and financial structures, workforce capacity, and international obligations) 10.4. Develop an advocacy strategy regarding a population health issue to influence public policy and/or regulations, based on evidence of both effective interventions to address the problem and effective public health advocacy **EXAMPLES OF SPECIALIST ELEMENTS** 10.5. Analyse leadership styles appropriate to the effective implementation of a specific health policy 10.6. Analyse communication and coordination challenges to policy change within an organisation 10.7. Facilitate collaboration between internal (organisation) and external (community) stakeholders and reconcile their potential competing interests and power differentials to develop effective health policy
11. Articulate key funding mechanisms and finance sources, and distinguish costs and benefits in relation to specific population health projects/ programs	11.1. Describe principal funding/finance sources relevant to a public health system 11.2. Apply the principles of economic evaluation to public health allocations at the population/community level 11.3. Apply the principles of economic evaluation to Aboriginal and Torres Strait Islander programs with a particular focus of the allocation of resources relative to need* E**XAMPLE OF SPECIALIST ELEMENTS** 11.4. Develop a cost effective public health project/program/contract for which, in terms of scope of work, performance, deliverables, probity, fairness and value for money, is able to be audited

* See Appendix 2 for Indigenous competencies

Unit of competency	Elements of competence
12. Analyse a government population health policy	12.1. Describe the historical policy context and current evidence regarding a population health problem 12.2. Describe key stakeholders in a population health problem 12.3. Describe key institutional structures, agencies and workforce capacity relevant to a key population health problem 12.4. Analyse the efficacy of a population health policy on the basis of an appropriate set of criteria. 12.5. Critically evaluate an Aboriginal and Torres Strait Islander health policy*
13. Analyse/evaluate the management of a population level program/ project	13.1. Identify the program logic of a population health program/project (i.e. The relationship between the rationale and objectives of a program, program planning, implementation and evaluation) 13.2. Analyse the management of a population health program in terms of strategic focus, organisational authority, leadership capacity, strategic partnerships, resource allocation, workforce capacity and mechanisms of accountability 13.3. Analyse/evaluate a population health program/project outcomes relative to relevant performance standards, objectives and negotiated specifications 13.4. Design a process, impact and/or outcome evaluation plan for a population health program/project that reflects the needs of key stakeholders **EXAMPLES OF SPECIALIST ELEMENTS** 13.5. Design and conduct an economic evaluation of a program 13.6. Integrate the results of an evaluation/analysis of a population health program/project with current policy and practice in collaboration with policy makers and practitioners

Underpinning knowledge – Health policy, planning and management	
• The political system in Australia; Government and legislative processes • The international, federal, state and local contributions to the health system • Systems, key institutions and stakeholders in the Australian Health system: understanding principles of governance, how to assess appropriateness of governance arrangement at institutional and system level • The health systems in Australia and in each jurisdiction (eg. COAG, AHMC, AHMAC, etc) • Public health law and regulations (International, Commonwealth, State) • Political theory, policy analysis and development theory	• Leadership, organisational and management theory • Health financing, economic analysis/evaluation • Performance monitoring and program evaluation • Advocacy theory and practice • Implementation and constituency building • Project management tools, for example: critical path method (CPM), bar and Gantt charts, Program Evaluation and Review Technique (PERT), Logic models • Social, economic, environmental, legal and ethical factors relevant to policy development

* See Appendix 2 for Indigenous competencies

Area of Practice: Evidence-based professional population health practice

Practice Goal: Engage professionally across population health with generic knowledge and skills of systematic research, ethical practice, teamwork, stakeholder analysis, health communication and cultural safety.

Unit of competency	Elements of competence
14. Design a systematic, appropriate and ethical population health study and synthesise and articulate findings	14.1. Describe key issues in population health that are amenable to research and ultimately contribute to health gain 14.2. Assess peer-reviewed and evidence-based information (including systematic reviews) relevant to a study in population health 14.3. Critically apply findings from a literature search to clearly define a population health research problem 14.4. Formulate and articulate testable hypotheses / researchable research questions relevant to population health 14.5. Outline an appropriate population health research design that meets ethical and legislative requirements 14.6. Outline methods to identify, collect and analyse relevant population health data/appropriate information and to ensure the veracity of sources 14.7. Synthesise and articulate population health research findings **EXAMPLE OF SPECIALIST ELEMENT** 14.8. Identify, collect and analyse relevant population health data/information and justify the veracity of sources
15. Describe core principles of just, ethical/legal public health practice	15.1. Describe the potential benefits, risks and costs of population health project/research to the community 15.2. Justify population health activities by applying ethical principles including maleficence, beneficence, equity and justice 15.3. Analyse population health activities (collection, management, dissemination and use of data and information) with regard to the public health code of ethics 15.4. Outline the central intent of privacy laws to protect confidentiality including implications for population health practice **EXAMPLE OF SPECIALIST ELEMENT** 15.5. Develop an ethics proposal and seek approval from appropriate bodies as required

Unit of competency	Elements of competence
16. Collect, organise, critically analyse and articulate secondary information	16.1. Locate secondary information, systematically review and assess its quality and usefulness for the purposes of public health research, policy and practice (including systematic reviews – Cochrane, Campbell etc) 16.2. Present information in a truthful and useful way, and evaluate both the information itself and the sources and methods used to collect it
17. Analyse own professional strengths and personal skills to work effectively with others and in teams	17.1. Demonstrate the capacity to interact effectively with other people both on a one-to-one basis and in groups and to work effectively as a member of a team to achieve a shared goal 17.2. Demonstrate a capacity for critical self-assessment regarding the ability to interact effectively with other people both on a one-to-one basis and in groups and to work effectively as a member of a team to achieve a shared goal 17.3. Demonstrate a capacity for critical self-assessment regarding personal leadership and advocacy skills
18. Enable an environment of cultural safety	18.1. Demonstrate the capacity to foster an environment, which is culturally safe for people where there is no assault, challenge or denial of identity of who they are in accessing what they need for optimal health 18.2. Demonstrate a reflexive public health practice for cross-cultural contexts 18.3. Demonstrate a reflexive public health practice for Aboriginal and Torres Strait Islander health contexts*
19. Undertake a stakeholder analysis	19.1. Map key interest groups with a stake in a specific population health issue on the basis of available information 19.2. Articulate potential stakeholder standpoints regarding a specific population's health on the basis of available information

Underpinning knowledge – for public health practitioners

- Comprehensive Primary Health Care: The Alma Ata Declaration on Primary Health Care; The Ottawa Charter on Health Promotion and Millennium Development Goals
- Research design and methods
- Quantitative and qualitative data analysis and recognition of the value of both types of data in gathering evidence
- Public health laws
- Concepts of reliability, validity and responsiveness of measures
- Communication and dissemination approaches
- Location of peer-reviewed evidence based information (including Cochrane, Campbell etc)
- Cultural security and safely
- Privacy legislation
- NHMRC Guidelines For Ethical Conduct of Research in Humans

* See Appendix 2 for Indigenous competencies

Appendix 1: Australian public health training context

Public Health Education and Research Program (PHERP)

Established in 1987, the Australian Government's Public Health Education and Research Program (PHERP) was a nationally coordinated response to Professor Kerr White's 1985 review of public and tropical health in Australia. The Kerr White review initiated a significant shift in thinking within the health system from a largely curative focus to a more preventive emphasis.

The vision articulated in the Kerr White review led to the establishment of PHERP to ensure a well-trained quality Australian public health workforce. Key initiatives were subsidized university places for public health education and research training, and a complementary research program. Before PHERP commenced there was only one postgraduate public health education program in Australia.

Over the past twenty-two years, the Australian Government has made a significant investment in PHERP, which has now evolved through four phases, although funding for PHERP will not be continued beyond the end of Phase IV in 2010. In the final phase of PHERP, the Australian Network of Academic Public Health Institutions (ANAPHI) has been supported by PHERP to complete the national competency framework, seek endorsement of the framework and propose an implementation plan.

ANAPHI: An historical context

There were two main drivers that resulted in the formation of Australian Network of Academic Public Health Institutions in 2000. The first imperative was the need for broader partnerships in the public health teaching and research effort through greater collaboration among and between Australian academic public health institutions and industry. The second was the need for closer partnerships between the State, Territory and Commonwealth Governments, and industry, in order to better understand competing priorities and needs. Nationally, academic public health leaders recognized the importance of these partnerships as a vehicle to enable a greater responsiveness to national public health concerns.

ANAPHI has four specific goals: to raise the profile of public health; to improve the accessibility and the quality of public health education and training; to improve the quality and accessibility of Australian public health research; and to raise the impact of Australian public health education and research. ANAPHI includes all Australian universities that teach public health at undergraduate and postgraduate levels. Some, but not all, ANAPHI affiliated universities receive PHERP funding to support both undergraduate and postgraduate public health course coordination, curriculum development, and public health research training.

Indigenous public health: Closing the gap

The commitment by the Australian Government and the Council of Australian Governments (COAG) to Closing the Gap regarding the health of Indigenous Australians was underscored in November 2008 with COAG committing to the provision of an additional $1.6 billion over four years to expand primary health

care and targeted prevention activities to reduce the burden of chronic disease on Indigenous Australians. This investment follows a previous commitment towards other significant measures to strengthen workforce capacity in Indigenous health.

It is due to the significant emphasis being given to Indigenous health in the contemporary context that this document places special emphasis on the core competencies in Indigenous public health that are required of every MPH graduate. The substantial policy commitments require a trained public health workforce with the ability to engage in Indigenous public health practice with a set of foundational core competencies that enable skilful, effective and appropriate engagement regarding the complexities of Indigenous public health. The core Indigenous public health competencies outlined in this document and associated pedagogical considerations are given more in-depth coverage in the complementary National Indigenous Public Health Curriculum Framework (available at the Onemda website at http://www.onemda.unimelb.edu.au/publications/reports.html#communityreports).

Public health workforce training in Australia

Aspects of public health workforce training have been addressed recently in two documents: the National Health and Hospitals Reform Commission's report, *A healthier future for all Australians* (2009) and the Preventive Health Taskforce report *Australia: the healthiest country by 2020*. Both documents highlight the importance of an appropriately trained, competent workforce. At the time or writing both of these reports are available for discussion.

The new prevention agenda

The 2008 *Australia 2020 Summit* included a stream which reported proposed 'A long-term national health strategy'. A number of important recommendations were made, the framework for their report being almost entirely around evidence-based medicine and policy, illness prevention, and workforce training. The five themes of the report were – *healthy lifestyles, health promotion and disease prevention, the health workforce and service provision, addressing health inequalities, future challenges and opportunities in health; and health research, research translation and research training*. The development of a national preventive health agency was an important recommendation of the Summit.

The Preventative Health Taskforce was set up to address the agenda set by the Summit, and its final report, *Australia: the healthiest country by 2020,* has a clear vision for halting the rise in obesity, reducing smoking and harmful alcohol consumption rates, and addressing the gap in life expectancy between Indigenous and non-Indigenous Australians. Apart from endorsing the Council of Australian Government's commitment to a National Prevention Agency to facilitate the coordination and liaison of health promotion, health information and policy and practice, the taskforce also sets out the possible core work of such an agency, summarised as:

- Translate broad policy into evidence-based strategies;
- Monitor and evaluate national policies and programs in preventative health;
- Administer national programs, facilitate national partnerships, and advise on national infrastructure for preventative health;
- Develop and implement comprehensive, sustained social marketing strategies for preventative health;
- Develop comprehensive national surveillance systems for identified preventative health priority areas;
- Establish a National Strategic Framework for preventative health research;
- Foster leadership, mentoring and knowledge sharing across a network of preventative health research centres;
- Conduct a national audit of the prevention workforce;
- Develop immediate, mid and long term strategies to build a competent national preventative health workforce with the capacity to meet the health care needs of all Australians;
- Develop sustainable and cost-effective funding models for a comprehensive and integrated approach to prevention both within and external to the health sector (ibid: p51).

The core work of the proposed agency described above is highly relevant in the context of the Master of Public Health competencies, as core MPH training addresses all of these work areas at least at a minimum level. An audit of the national public health workforce is a priority area in the work of the new Agency.

Emerging public health problems and surge capacity

Chronic diseases

The changing demographic structure of the Australian population is altering the national disease profile. The Australian Institute of Health and Welfare now lists the national health priority as: arthritis and musculoskeletal disorders; asthma, cancer; cardiovascular disease; diabetes mellitus; injuries; mental health; and obesity (for details see http://www.aihw.gov.au/nhpa/index.cfm).

The diseases of ageing are clearly becoming more important in that to a substantial extent it is possible to prevent or delay onset. The prevention agenda will become increasingly important, and will be provided to a large extent by public health practitioners.

Pandemics

Almost every year since the 1970s a new disease has emerged in the world. Not all of these have caused widespread ill health in humans, however the diseases which have occurred in the last few years, SARS(2003), H5N1 Avian Influenza (from 2003 and ongoing) and AH1N1 variant influenza (‘swine flu’) in 2009. All have had the potential to cause widespread disease, and have been identified, monitored and partially controlled by public health activities.

Biosecurity

Biosecurity depends in a stable ecosystem and a peaceful environment. Threats to biosecurity therefore include two distinct areas, bioterrorism and environmental disruption. Either of these can threaten the health and security of people, and their effects can be monitored and to some extent addressed and modified through public health efforts.

In light of these national developments, the development of an agreed set of competency guidelines for MPH training across ANAPHI is a critical component to ensure public health educators are able to guide developments in the arena of public health training.

Public health workforce training: The international context

Unlike other postgraduate degrees, the MPH is generally considered to have a number of core components transportable within and outside Australia. Global recognition of an MPH award is an important and integral part of the marketing of these degrees to potential students.

Internationally, regulation and registration of public health professionals is increasingly seen as the way to ensure the delivery of safe public health services. Registration entails practitioners to demonstrate a high level of professional competence and the capacity to make safe and professional judgements. In the European Union and the United States, in order to ensure the development of a safe and accredited professional workforce, MPH degrees require registration. Increasingly in both jurisdictions, competency based training linking education and practice is the norm. These standards are promoted by the Public Health Foundation in the United States of America (2009); the Core Competency Standards of the Public Health Agency of Canada (2007); and the Association of Schools of Public Health in the European Union (2008) under the Bologna process (2005).

In Australia various competency frameworks and standards have been developed for a number of sections of the health and public heath workforces. (Lin at al, 2009). Nevertheless, despite global recognition of the MPH and the necessity for quality public health institutions, workforce and training, the public health workforce is the only sector of the Australian health workforce which remains largely unregistered or formally regulated, the notable exception being the Australasian Faculty of Public Health Medicine (AFPHM). A number of MPH programs are accepted by AFPHM as fulfilling the requirements of their Part I training.

Appendix 2: Underpinning knowledge for Indigenous public health competencies

The underpinning knowledge for the Indigenous public health core competencies is an extract from the National Indigenous Public Health Curriculum Framework. This document is available from www.onemda.unimelb.edu.au/publications/reports.html

The Framework outlines an approach to the integration of Indigenous health within Master of Public Health teaching programs and provides some foundation principles, pedagogical strategies and institutional guidelines to support delivery of the six core Indigenous public health competencies. In addition to outlining the underpinning knowledge, the Framework provides suggested teaching and learning strategies, resources and assessment approaches for each competency.

Underpinning knowledge for Indigenous public health elements of competence

Area of Practice: Monitoring and surveillance

Practice Goal: Assess, analyse and communicate population health trends

Unit of competency	Elements of competence (Aboriginal and Torres Strait Islander public health)
1. Monitor and evaluate trend/s in population health	1.8 Analyse key comparative health indicators for Aboriginal and Torres Strait Islander peoples 1.9 Analyse key comparative indicators regarding the social determinants of health for Aboriginal and Torres Strait Islander peoples

Underpinning knowledge	
1.8 Indigenous and Australian population health status indicators regarding • chronic diseases • childhood diseases • mental health Key considerations regarding data reliability Ethical considerations regarding data collection	1.9 Key social determinants of Aboriginal and Torres Strait Islander Health based on demographic data regarding • population structure • housing • education • employment • income • access to health care.

Area of Practice: Health promotion

Practice Goal: Promote population and community health by both changing social, economic, cultural and physical environments through consultation, engagement and empowerment, and strengthening the skills and understanding of individuals to achieve and maintain their health.

Unit of competency	Elements of competence (Aboriginal and Torres Strait Islander public health)
8. Prioritise population/ community health needs	8.2 Describe Aboriginal and Torres Strait Islander health in historical context and analyse the impact of colonial processes on health outcomes.
9. Plan evidence-based health promotion initiatives	9.3 Critically evaluate an Aboriginal and Torres Strait Islander health promotion program.

Underpinning knowledge

8.2 Key historical legislation – immediate and long-term effects

- Invasion – the concept of '*Terra Nullius'* and related implications
  - Protection and Segregation
  - Assimilation
- Colonisation and trans-generational effects
  - Stolen land
  - Stolen children
  - Stolen wages
- Indigenous initiatives and health
  - Maintaining connection to the land
  - Aboriginal community-controlled health service delivery
  - Aboriginal health workers
  - Indigenous models of health

9.3 Human rights, self-determination and empowerment

- Comprehensive Primary Health Care
- Cultural dimensions of Indigenous health
  - Local and regional diversity regarding the social determinants of health
  - Indigenous spirituality and traditional healing practices
  - Kinship, group affiliations and gendered social practices
  - Community governance structures and protocols
  - Existing community initiatives, capacities and strengths
- Colonisation and health:
  - Racism, its institutional manifestations and effects
  - Colonising discourses about Indigenous people and related effects

Area of Practice: Health policy, planning and management (health systems)

Practice Goal: Promote, develop and support efficient and equitable gains in population health by developing appropriate policy, legislation, regulation and/or fiscal measures.

Unit of competency	Elements of competence
11 Articulate key funding mechanisms and distinguish costs and benefits in relation to specific population health projects/programs within the Australian health care system	11.3 Apply the principles of economic evaluation to Aboriginal and Torres Strait Islander programs with a particular focus of the allocation of resources relative to need
12. Analyse a health policy relevant to the Australian health system	12.5 Critically evaluate an Aboriginal and Torres Strait Islander health policy

Underpinning knowledge	
11.3 An understanding of economic analysis of Indigenous health spending with particular consideration of funding equity in relation to burden of disease • equity considerations regarding burden of disease in funding allocations • factoring implicit costs of delivering effective and cultural safe and competent care	12.5 Human rights, self-determination and strategies of empowerment Comprehensive Primary Health Care Cultural dimensions of Indigenous health: • Local and regional diversity regarding the social determinants of health • Indigenous spirituality and ongoing traditional healing practices • Kinship, group affiliations and gendered social practices • Community governance structures and protocols • Existing community initiatives, capacities and strengths Colonisation and health • Local experiences of racism, its institutional manifestations and effects • Colonising discourses about Indigenous people and related effects Indigenous initiatives and approaches to health • Aboriginal models of health and wellbeing • Aboriginal community-control of health services • Aboriginal healthworkers and their role

Area of Practice: Professional population health practice

Practice Goal: Engage as a professional in population health with knowledge and skills in population health research, ethical population health practice, stakeholder analysis, information synthesis, effective communication and cultural safety.

Unit of competency	Element of competence
18. Enable an environment of cultural safety	18.3 Demonstrate a reflexive public health practice for Aboriginal and Torres Strait Islander health contexts

Underpinning knowledge

- Ethical Indigenous health practice as informed by the NHMRC Ethics and Values statement for Research with Aboriginal and Torres Strait Islander Australians
- Reflexive public health practice for Indigenous contexts – understanding factors shaping own professional, socio-cultural and personal standpoint including values, perspectives, attitudes, assumptions, beliefs, behaviours regarding Indigenous people and their health
- The nature of evidence and ways to access knowledge from an Indigenous perspective
- Effective communication with Indigenous Australians – appreciating the existence of local protocols; an awareness of cultural safety; awareness of Indigenous learning styles

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