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**A competency framework for
global public health nutrition
workforce development
: A background Paper**

A competency framework for global public health nutrition workforce development

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Purpose

Public health nutrition has been a developing field of public health theory and practice for several decades, but it has only relatively recently come into focus in the context of workforce development. This focus, initially directed at under-nutrition, has more recently been applied as a gradual response to public health priorities such as non-communicable diseases (particularly cardiovascular disease) and more recently emerging priorities such as obesity, diabetes and preventable cancers. This increase in focus in developed economies, in response to the unsustainable burden of over-nutrition, has grown in parallel to a recognition that workforce capacity is a critical missing link in scaling up nutrition actions in order to accelerate the reduction of maternal and child under-nutrition in lower and middle income countries, many of which face the double burden of diseases[1-3]. Workforce development is needed at a global level in order to create a workforce and a broader capacity that is central to achieving gains in population health in both developed and developing country settings. There is evidence that in some countries, capacity building is underway via multi-strategy approaches to workforce development. In Brazil, for example, diversified strategies for capacity building have been employed such as professional training, development of leadership at state and municipal levels, continuing education for primary health care professionals and establishment of professional networks to facilitate exchange between professionals working in the health system. The development of the public health nutrition workforce, and a designated PHN professional workforce tier, has been a priority capacity building initiative in a limited number of developed countries (such as Australia, New Zealand, Canada and the USA). In the main however, there is considerable diversity of workforce capacity, with most countries having under-developed workforces to address PHN issues. The emphasis on developing designated public health nutritionists as a workforce and professional group, distinct from clinically orientated dietetics workforce models, recognises that population-based and promotional-preventative actions are required to address malnutrition in both forms. This requires different work that compliments clinical practice and consequently requires additional competencies, the knowledge, skills and attitudes to perform this work[4]. This document provides a rationale for the codification of the competencies required for effective public health nutrition practice, providing the architecture for public health nutrition workforce development in the form of a competency framework.

The relationship between capacity, workforce development and competencies

The capacity of the public health workforce is a key contributor to the ability of communities to address public health nutrition issues[5]. Workforce capacity is influenced by a range of determinants including the quality of workforce preparation and continuing professional development, workforce size, organisation and support[6]. With respect to workforce preparation and continuing professional development, competency-based approaches have been widely embraced as a process central to the professionalization of public health and its related disciplinary groups[7-11], including public health nutrition[11].

In the international context, workforce development that encourages optimal workforce mobility and collaboration in research and practice requires the development of comparably competent practitioners who are capable of developing and undertaking effective population based strategies and practice to meet nutrition and public health objectives. This has been the position of workforce development scholars for at least the last decade[12, 13] . Competency standards provide the architecture for workforce development by codifying the knowledge, skills and attitudes necessary to effectively practice public health nutrition[14]. They have a deliberate focus on effective performance in the workplace, ensuring that workforce preparation and continuing professional development not only enhances what practitioners “know”, but also that they “know how”, can “show how” and “do”[15, 16].

A synopsis of the competencies movement and its relevance to public health nutrition

Competencies, competency standards and credentialing are all variations on a world-wide movement within the education, training and professional sectors. Competency based training (CBT) has been embraced by government and industry in many countries as a result of the economic rationalistic drive for efficiency since the 1980's. This movement is based on the premise that people need to be taught knowledge, skills and attitudes required in the workforce and that these are observable and assessable. This is supported by an argument that CBT would enhance the education sectors responsiveness to the economy and produce reliable outcomes [17, 18].Competency standards are defining statements about a profession or work role that can be

used to assist credentialing. Credentialing is the establishment of a self-regulatory process instituted by the relevant profession to determine and acknowledge that an individual has demonstrated competence to practice [18].

There is now a considerable literature debating the merits and limitations of the competencies movement [18-23]. This debate has been mostly related to the broader training and education environment rather than specifically applied to nutrition or public health, but it is worth considering in any deliberation about the value of competency development for public health nutrition. Differences in the theoretical and philosophical underpinnings of the competencies movement have been the basis for this disagreement and debate.

The *behavioralist approach*, which has its origins in the efficiency movement [24], sees competency as the ability to complete discrete behaviours. This conception tends to atomise tasks, making them easier to measure, but makes training and assessment task focused, which is reductionist rather than holistic. A preoccupation with tasks ignores underlying attributes such as the ability to make judgements and perform multiple tasks simultaneously, overlooking the complexity of performance in the real world [18]. In contrast, the *holistic or integrated approach* draws from the progressive education movement [24] and is concerned with teaching attributes such as critical thinking under the assumption that they will be applied in the workplace in specific contexts. This view is concerned with the way knowledge, attitudes, values and skills are used in combination, in particular situations. In this perspective, competencies are relational, involve reflective practice and place importance on context [18].

CBT has aroused much controversy, especially amongst educationists with a commitment to preparing people as citizens in society rather than just for the workforce who argue that an overemphasis on competencies can mean that people only become skilled in relation to a particular occupation [25]. Advocates of the CBT approach see it as a countervailing force against education producing people who know but cannot do [25].

An holistic or integrated view of competencies is being applied to this competency framework. A summary of the arguments in favour and against CBT is provided in Table 1, which should be considered when applying competency standards in a workforce development context.

Table 1 Summary of the arguments for and against competency based training

Arguments in favour of CBT	
Role clarity and delineation	Competency standards aim to define the work and performance of the profession and therefore help define and delineate roles. Preventing overlap between professions may improve efficiency and this has been a compelling argument in favour of competencies.
Accountability and credibility	Standards help define the nature of the work of a profession and help communicate the complexity of work which may increase the credibility of the profession amongst the community.
Education	Competencies provide clearer goals for educators, learners and assist with curriculum design and assessment
Consistency	Competencies can assist universities to produce graduates with consistent minimum competencies because they provide a common ground for discussion between teachers and the profession.
Equity	Competency measurement can increase equality between people from different backgrounds. i.e. assessed based on ability to perform rather than academic path or course completed.
Cross profession movement	The common language of competencies that are consistent between professions can enable transfer across disciplines or recognition in different countries.
Arguments against CBT	
Reductionism	The tendency of competencies and competency assessment to isolate components of performance ignores the complexity of work.
Efficiency does not mean effectiveness	A more competent worker does not necessarily lead to a more effective worker
Control and sameness	Competencies and the use of competencies as a basis of credentialing can constrain workforce construction and behaviour leading to lack of innovation and diversity
Checklists	Competency assessment can become complicated leading to a simplistic use of competencies as checklists. Skills performance without knowledge and context can be life threatening in the health sector .
Towards mediocrity	Competencies prescribe minimum standards that might discourage excellence by reducing everything to the lowest common denominator.
Teaching to the test	Competencies may encourage a believe that if something is not measurable as a competency it is not worth doing or learning and threatens learning processes.
Questionable reliability	There is no evidence to support CBT as a reliable measure.
Reduced liberal education	The tendency of competencies to be reductionist may reduce elements of liberal education such as experimentation, attributes like learning how to learn and problem solving.

From: [18-23, 25]

Functions of competency standards

Competency standards serve a number of workforce development functions (table 2), including providing a structure for the design and evaluation of curriculum that promote minimum standards, the assessment of individuals in terms of fitness to practice, direct continuing professional development and assist job evaluation and design.

Table 2 **Functions of competency standards**

Competencies serve an overarching function of providing the architecture for workforce development by codifying the knowledge, skills and attitudes necessary to effectively practice or work (perform) in the field. These provide a structure for:

- **Curriculum design and evaluation** – by ensuring competency development through teaching and learning corresponds with agreed competency needs (the primary rationale relevant to APHNAC),
- **Credentialing**—by providing standards that can be used as benchmarks for practitioner recognition or registration (eg. Nutrition Society PHN Registration system[26])
- **Performance review**-by providing standards which enable employers and practitioners to review practises and development needs
- **Recruitment**-by providing a framework for articulating the competency and qualification expectations in position descriptions (duty statements, selection criteria)[27], and
- **Career planning**- by providing direction for individual practitioners considerations about further development needs.

The utility of competency standards as a tool for workforce development is increasingly being recognised worldwide. Public health nutrition specific competencies have been of interest to workforce developers in the United States for at least three decades [28-30]. In Australia, advanced-level competencies have been proposed to help delineate the roles and workforce development needs required for this developing workforce[11] and competencies have been codified as a basis for public health nutritionist registration[31]. Recent workforce development scholarship in Canada [32]has also focused on identifying the competency requirements needed by public health nutritionists. In Europe, the Nutrition Society in the United Kingdom has developed a system for registration of public health nutrition practitioners as a public protection and quality assurance measure[26, 33], and this has included consideration of competency issues[33].

The case for a specific competency framework for public health nutrition.

Public health workforce development scholarship over the last few years has emphasized the importance of developing a competent public health workforce as a precursor to increasing societal capacity to protect and promote the public health [34-38]. As a result, there has been an emphasis on developing competency standards to provide the architecture for workforce development in public health [39-41], preventive medicine [42, 43], health promotion [44, 45] and health education fields [46]. It has also been of interest to public health nutrition scholars internationally [47-51]. In some developed countries (Australia, Canada, UK) competency frameworks have been developed for the public health workforce. Many of the competencies identified in this literature[11-28][52] are similar with considerable overlap across disciplines.

Despite recognition that public health nutrition is a specialisation within public health practice and will share many of the competencies identified as being core to public health practice, reliance exclusively on broader public health competency frameworks, without consideration of the additional or specialty competency elements required for effective public health nutrition practice, is problematic. There are a number of arguments [53] for a specific competency framework to inform public health nutrition workforce development. These include:

- That a tendency towards generalising the public health workforce was counterproductive to developing workforce effectiveness [54].
- That training and experience in nutrition science, food and nutrition systems knowledge and analysis was critical to effective practice in public health nutrition [55], and
- That without specific articulation of public health nutrition competencies required to achieve this specialist, workforce development would be inefficient [56].

Competencies need to be based on an understanding of the required work.

It has been argued previously that workforce development specific to public health nutrition should be directed by analysis of public health nutrition problems, prioritisation of work effort based on intelligence about the most effective interventions, and consideration of the essential work required to effectively intervene [60]. This logic suggests that a clear understanding of the work required is a critical pre-requisite for effective workforce development. Functional analysis is a common analytical approach used to determine required worker competencies across many vocational and professional groups.

Various attempts have been made to identify the work needed from the broader public health workforce as reflected by core functions or essential services [35, 61, 62]. The nomenclature used in these efforts has varied. The World Health Organization (WHO) and United States scholars have codified '*essential*' public health functions using different methods and meaning different things. The WHO used the term "essential" to indicate functions (minimum standards) which ensure that the public health system has the capacity to respond to emerging and priority needs, proceeding from concerns about rapid changes to health systems around the world. The United States definition of '*essential*' refers to practices that must be undertaken to ensure that public health functions are being performed [63]. In Australia "core functions" for public health have been developed differentiated by reference to established or emerging practice. In this work, *core functions* were defined as those being absolutely necessary, the absence of which would imply gaps in public health capacity [63].

Comparison of this core functions work between countries indicates considerable similarity in statements about the work needed by the public health workforce, such as monitoring and surveillance, intervention management (needs assessment, planning, implementation, evaluation), policy and legislative measures and public health service delivery. Public health core functions have obvious currency when considering public health nutrition workforce functions and the work these imply[53]. It is however unclear whether broad public health functions adequately describe the work needed from the public health nutrition workforce in a way that meaningfully assists workforce development specifically to address public

health nutrition issues and challenges. Earlier public health nutrition workforce development research suggests that it is important to delineate specific functions for public health nutrition, and that a blanket application of public health function statements is inadequate for the purpose of workforce development [54, 64]. One of the challenges therefore, is to identify the specific functions or work required of the public health nutrition workforce to inform workforce development initiatives.

Earlier attempts to codify core functions for public health nutrition have been developed to describe the work required of the public health nutrition workforce[65]. In this case the proposed core functions for public health nutrition were underpinned by a number of relevant assumptions, including that:

- Public health nutrition functions are defined as those activities (processes, practices, services and programs) which are undertaken by the workforce in order to promote optimal nutrition, health and well-being in populations.
- Core public health nutrition functions are those functions that are regarded as absolutely necessary, without which would imply gaps in public health capacity.
- The relative importance of functions may vary depending on the jurisdiction or workforce level.
- Core functions are inter-related and complementary.
- Core functions articulate the work required to effectively address public health nutrition problems or issues, and consequently provide a framework for identifying and conceptualising workforce development needs.
- Current public health nutrition work practices do not accurately align adequately with these core functions. They are therefore aspirational, outlining the practices required for effective public health nutrition action and are a pointer to practice improvement[65].

Table 3 suggests ten core public health nutrition functions derived from earlier workforce development research in developed countries[60][66]that describe the nature of public health nutrition work, delineated by different actors in the public health workforce. This table delineates the specialist public health nutritionist from other workforce actors to identify the relative responsibilities and expectations of each actor in terms of work required.

Table 3 *Ten core functions for public health nutrition practice, function of key workforce actors*

	Core public health nutrition function	<i>Front-line</i>	<i>Manager</i>	<i>Specialist</i>
Research and Analysis	1. Monitor, assess and communicate population nutritional health needs and issues	Core	Core	Core
	2. Develop and communicate intelligence about determinants of nutrition problems, policy impacts, intervention effectiveness and prioritisation through research and evaluation	Core	Core	Core
Build Capacity	3. Develop the various tiers of the public health nutrition workforce and its collaborators through education, disseminating intelligence* and ensuring organisational support	Complementary	Core	Core
	4. Build community capacity and social capital to engage in, identify and build solutions to nutrition problems and issues	Core	Complementary	Core
	5. Build organisational capacity and systems to facilitate and coordinate effective public health nutrition action	Complementary	Core	Core
Intervention Management	6. Plan, develop, implement and evaluate interventions that address the determinants of priority public health nutrition issues and problems and promote equity	Core	Core	Core
	7. Enhance and sustain population (community) knowledge and awareness of healthful eating so that dietary choices are informed choices	Core	Complementary	Core
	8. Advocate for food and nutrition related policy and government support to protect and promote health	Complementary	Complementary	Core
	9. Promote, develop and support healthy growth and development throughout all life-stages	Core	Complementary	Core
	10. Promote equitable access to safe and healthy food so that healthy choices are easy choices	Core	Complementary	Core

Core function = those functions that are regarded as absolutely necessary, without which would imply gaps in public health capacity

Complementary functions = may be core in some contexts, often complementary to work of PHN specialist

Adapted from [60] [66]

Table 4 delineates the work functions of public health nutrition (PHN) specialists at different levels in the public health system, recognising that the extent to which the functions of a public health nutrition practitioner may vary depending on their population, organisational and environmental contexts.

Table 4 *Ten core functions for public health nutrition practice, by level in health system, relative importance at level*

Core public health nutrition function		District/ municipal	Provincial/ regional	State/ National
Research and Analysis	Monitor, assess and communicate population nutritional health needs and issues	++	++	+++
	Develop and communicate intelligence* about determinants of nutrition problems, policy impacts, intervention effectiveness and prioritisation through research and evaluation	+	++	+++
Build Capacity	Develop the various tiers of the public health nutrition workforce and its collaborators through education, disseminating intelligence* and ensuring organisational support	+++	++	+++
	Build community capacity and social capital to engage in, identify and build solutions to nutrition problems and issues	+++	++	+
	Build organisational capacity and systems to facilitate and coordinate effective public health nutrition action	+	+++	+++
Intervention Management	Plan, develop, implement and evaluate interventions that address the determinants of priority public health nutrition issues and problems and promote equity	+++	+++	+++
	Enhance and sustain population knowledge and awareness of healthful eating so that dietary choices are informed choices	+++	++	+
	Advocate for food and nutrition related policy and government support to protect and promote health	+++	+++	+++
	Promote, develop and support healthy growth and development throughout all life-stages	+++	++	+++
	Promote equitable access to safe and healthy food so that healthy choices are easy choices	+++	+++	+++

Relative importance increasing by number of +'s and or darkness of shade

Adapted from [60] [66]

Note: The work of a public health nutritionist is very context dependent and may vary considerably. The above table therefore is an attempt to delineate roles by system level, and may not adequately reflect all contexts.

The location of PHN practitioners in the organisational structure of public health systems will vary considerably between countries. Table 5 gives examples from Brazil, Indonesia and Australia to demonstrate the contextual relevance of “level of PHN work”. Although the practice context will vary and the relative importance and or application of core functions will vary, there is a consistent pattern of work that defines public health nutrition practice (as broadly described by these core functions.

Table 5 Description of PHN work at different levels in the public health system

Level descriptors	Practice description
Local health service	The PHN practitioner working at this level will have greater functions in building local community capacity, co-ordinating and value-adding to the nutrition-related work of non-nutritionist health and community workers via intervention management and the education of the public. They will usually have a relatively minor supporting role in monitoring and surveillance and research and analysis, but this can vary.
Province/regional health services	The PHN practitioner at this level has a greater role in intervention management (provision of supplies, funding training of workforce, plus periodic supervision and monitoring), particularly in the development and roll-out of interventions across the provinces districts, usually includes coordination and support for district level PHNs/teams. She/he has a greater monitoring and surveillance and research and evaluation function, and may coordinate provincial monitoring and surveillance. May have broader responsibility for service design and policy at Provincial level, as well as promoting inter-sectoral collaboration. Capacity building tends to focus on partnership building across sectors at provincial level, in addition to PHN workforce development which may extend down to and facilitate at the district level.
State/ National	The PHN practitioner at this level has major roles in development and evaluation of food and nutrition policy, managing departmental politics, may provide advice or direct resource allocation to provincial and district levels and works on a high level strategic planning. This level also includes the development and dissemination of norms and protocols for nutrition interventions at all levels. Usually has a major role in national or state food and nutrition monitoring and surveillance and coordinating research and evaluation activity. Capacity building tends to focus on resource allocation, leadership development, partnerships and to a lesser extent broader workforce development.

Be it in Indonesia, Brazil, Australia or Mozambique (for example), the relative importance of these ten core functions at different levels is very similar. The following example illustrates the relevance of these core function in different practice contexts.

EXAMPLE: Controlling Iron Deficiency Anaemia

To control iron deficiency anaemia in a district could involve: the delivery of iron supplements to cure the anaemia of individuals (be it weekly in school children through school teachers or daily in pregnant women through nurses, midwives and community health workers for extended outreach in antenatal care); the treatment of infections (presumptive malaria treatment during pregnancy and periodic deworming for GI worms in schools as well as in antenatal care); the distribution of insecticide treated bed nets; promoting the use of shoes; as well as promoting the consumption of appropriate foods including those that are fortified^A. Anaemia is so common that these same approaches are likely to be applicable in all three country setting as part of **function 6**. Similarly for **function 9** to promote, develop and support healthy growth and development throughout all stages of the life course will need to focus on the period from conception to two years of age as this is when growth faltering occurs and final adult height largely determined^B. This means ensuring that doctors, nurses and midwives properly treat and advise mothers during the “continuum of care”^C, i.e. from conception to two years of age and from community through to central hospital, so that all infections are treated, and mothers are encouraged to eat properly, not too smoke and to rest adequately in order to gain weight appropriately during pregnancy, as well as promoting exclusive breastfeeding during the first six months of life and adequate complementary feeding from six months onwards. Nurses and midwives need training in the weighing and plotting of foetal and infant growth on appropriate weight and growth charts, including how to make these measurements properly and to counsel the mother accordingly. Most of these promotional activities are not aimed at sick individuals but at promoting health in the whole population and so will depend on community based outreach to achieve high coverage. Indeed community participation has proven essential for most successful nutrition programmes^D. In Indonesia community participation is performed by village volunteers of the Family Nutrition Improvement Activities (UPGK) through the monthly village Posyandu meetings and in Brazil by the community health workers of the Family Health Programme of the Ministry of Health. In Mozambique the coverage of the network of community health workers (Agente Polivalente Elementar) is still being expanded and the nutrition component of their activities yet to be fully developed. The real task for the district PHN specialist is to have oversight and ensure high coverage of the package of interventions that if effectively targeted to mothers and children from conception to two years of age could prevent at least a quarter of child deaths and reduce the prevalence of stunting by about a third^E. What will be different by country are the need for the more curative nutrition interventions and those related to the treatment of other diseases, such as the treatment of severe acute malnutrition for example which is very uncommon in Brazil now and getting much rarer in Indonesia, although still common in Mozambique, where increasingly it is associated with HIV/AIDS. In those countries with the double burden of disease and/or where chronic diseases are more common such as Brazil, the public health services will increasingly need health workers to advise the public on safe and healthy food choices, as well as on dietary regimes for weight loss.

The Capacity Building function has to be one that occupies a lot of the time of the PHN specialist at the district level, although very much supported by the provincial level PHN specialist. The building of community capacity (**function 4**) is one that should take up most time of the District level PHN specialist, as this is a task that most of the other health staff will also be involved in. The PHN specialist at the district level will have to work through and with them in order to ensure that community outreach with the appropriate package of interventions is secured for the most needy communities especially, in order to ensure equity. Oversight of the capacity building function should be the one of the main parts of the work of the provincial level PHN specialist. This would involve carrying out periodic supportive supervision as well as holding training provincial level training seminars and workshops for district PHN specialists, as well as leading training workshops for other health professionals at the district level.

The **research and analysis functions** are obviously going to increase in intensity and complexity going from the district to the centre. But the District level PHN specialist still has considerable responsibility keeping a finger on the pulse, monitoring what is going on in terms of nutrition service delivery, focusing especially on the and sending this “intelligence” upwards to the provincial PHN specialist. The provincial PHN specialist will aggregate this information and supplement it with other “non-health service” sources of information available at the provincial level and provide this on upward. At the national level this “system level information” will be supplemented with national survey information as well as evaluations. The national level PHN specialist would have a major responsibility for evaluation of the effort of the PHN workforce by developing either stand alone evaluations, or incorporating appropriate data collection in other broader national surveys such as demographic and health surveys and/or household expenditure surveys^F.

Refs

^AWHO/UNICEF. 2004. Focusing on Anemia: Towards an integrated approach for effective anemia control. Geneva: World health Organization

^BVictora CG, de Onis M, Hallal PC, Blössner M, Shrimpton R. 2010. Worldwide timing of growth faltering: revisiting implications for interventions. *Pediatrics*. 125(3):e473-80.

^CKerber KJ, de Graft-Johnson JE, Bhutta ZA, Okong P, Starrs A, Lawn JE. 2007. Continuum of care for maternal, newborn, and child health: from slogan to service delivery. *Lancet*. 370(9595):1358-69.

^DShrimpton, R, 1995. “Community Participation in Food and Nutrition Programs: An Analysis of Governmental Experiences”. In: Child Growth and Nutrition in Developing Countries, pp 243-261. Pinstup-Andersen, P, Pelletier, D, Alderman, H. Cornell University Press. Ithaca.

^EBhutta ZA, Ahmed T, Black RE, Cousens S, Dewey K, Giugliani E, Haider BA, Kirkwood B, Morris SS, Sachdev HP, Shekar M; Maternal and Child Undernutrition Study Group. 2008. What works? Interventions for maternal and child undernutrition and survival. *Lancet*. 371(9610):417-40.

^FVictora CG, Habicht JP, Bryce J. 2004. Evidence-based public health: moving beyond randomized trials. *Am J Public Health*. 94(3):400-5.

Consensus on competencies required

Attempts to assess consensus on the competency needs of public health nutritionists as a distinct specialist practitioner in the early 2000s, demonstrated a high level of agreement on essential public health nutrition competencies identified by an international panel of public health nutrition experts from the USA, Europe and Australia[67]. Although panellists were recruited from a limited range of cultural and health system contexts, this finding supported the suggestion that competencies required for effective public health nutrition practice are largely consistent across countries and settings (at least amongst developed countries) and that workforce development for public health nutrition can be based on a consensus set of competencies that are transferable across jurisdictions and in different contexts[14, 68]. Many of these competencies identified were similar to those of general public health practice[7, 9-11], but with a consistent provision that the public health nutrition workforce requires additional competency units in nutritional sciences[68]. This earlier scholarship focusing on public health nutrition competencies has promoted a premise that the mix and level of competency required by an individual practitioner will vary in different practice contexts, but that there are a core set of essential competencies required for a practitioner to be assessed as competent[40]. A similar study in 2008[69] assessing consensus on competencies amongst an expert panel derived from European Union countries has reinforced these findings. [refer Appendix A for response summary][69]

Participants from varying national practice contexts at the September 2010 WPHNA Capacity Building Workshop in Porto considered this premise and agreed that the core competency requirements of a public health nutritionist are similar between developed country and developing country practice contexts.

A framework for competency standards

The competency framework for public health nutrition workforce development presented in the following sections of this report has been based on fusion of existing competency frameworks in the fields of public health in Australia [70], the United States [40] and the United Kingdom [39] and consensus developed via International Delphi Studies [69, 71] . It also cross-references to competency standards developed in the fields of health promotion [72] and advanced-level practice in dietetics [73].

Table 6 summarises the assumptions underpinning the competency framework described in this document.

Table 6: Basic assumptions underpinning this competency framework

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- Public health nutrition practice is public health practice that addresses food and nutrition issues.
 - Public Health Nutrition differs from Dietetics in that it deals with population-based and promotional and preventive nutrition interventions# rather than curative treatment for individuals.
 - Generic public health competency frameworks inadequately represent the nutrition specific competency requirements for specialised public health nutrition practice, but does codify many of the core competencies needed. A PHN specific competency framework is needed to specifically inform PHN workforce development which is aligned with and fuses public health with nutrition competencies.
 - These competency standards codify the minimum base-line set of competencies required for effective public health nutrition practice, irrespective of practice context.
 - Different tiers of the workforce will require different levels of competency, depending on roles, responsibilities and jurisdictions. These competency standards relate to a PHN specialist (a professional who either identifies themselves as a PHN or practices consistent with PHN practice (see core PHN functions)
 - There are a core or essential set of competencies consistently required for effective PHN practice regardless of jurisdiction or context.
 - Competencies should be aspirational, reflect the work needed rather than reinforce the practices (work) that currently exists.
 - This document should be considered as an evolving framework that is responsive to changes in workforce conditions and priorities, and regularly reviewed in this context.
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Preventative interventions may include primary, secondary and tertiary prevention. In many practice contexts, PHNs are treating under-nutrition at a population level (e.g. micronutrient supplementation as a treatment for deficiency).

Competency framework rationale

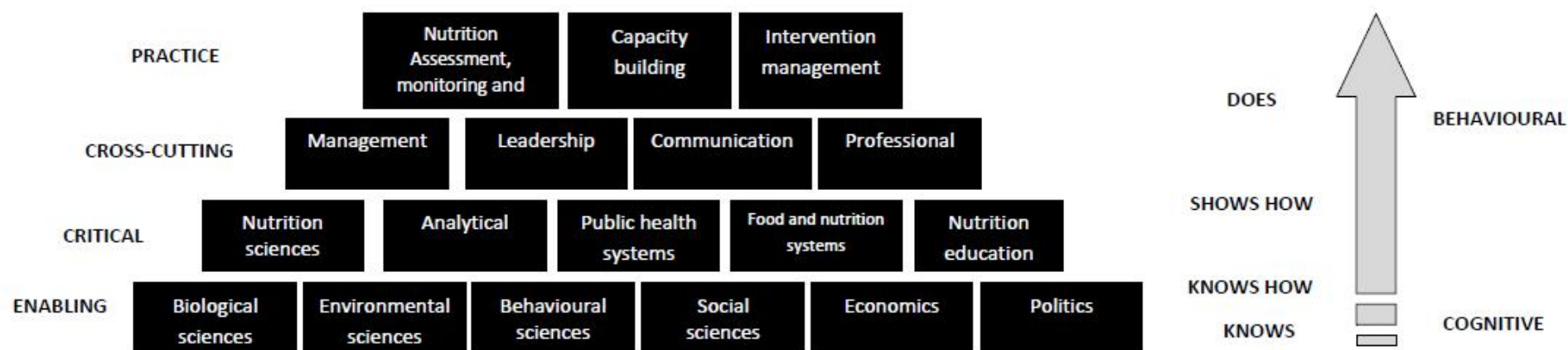
In this framework, the holistic-integrated approach to competency is applied, which outlines the complex combinations of attributes (knowledge, attitudes, values, skills) required to effectively perform public health nutrition work as defined by public health nutrition core functions. Competence is conceived as a complex structuring of attributes needed for effective performance in specific and/or varied situations[22, 74]. Figure 1 illustrates a framework delineating different competency modules that collectively describes the mix of attributes (knowledge, skills, values and attitudes) required to effectively perform core public health nutrition work/ core functions. In this framework, different categories of competency units have been defined and positioned in different tiers of the building block framework. This organisation is informed by a number of principles relating to assessment and demonstration of competence informed by the Dreyfus model of skill acquisition[75-77] and hierarchies of competency assessment outlined by Miller[16].

These include:

- **Enabling** knowledge and skills are required that underpin higher order practice behaviours as the expression of competency.
- **Critical competencies** differentiate practice and help define specialisation of practice.
- **Cross-cutting competencies** exist that are common across professional public health and nutrition practice and help delineate professionalism.
- **Practice competencies** are higher order composite behaviours utilising a combination of knowledge, skills, values and attitudes to perform complex practice behaviours required to perform core functions.

Figure 1 depicts 18 clusters of competency units arranged as different layers or building blocks over 4 levels. In this model, higher level competency units/clusters (e.g. practice competency level) involve a greater degree of behavioural performance (i.e. showing how and doing) than lower level and more cognitive competencies (e.g. knowing and knowing how).

Figure 1: Competency building blocks for effective public health nutrition practice



Competency categories	Description
Practice	Application of an often complex combination of knowledge skills and attitudes in the performance of core public health nutrition functions.
Cross-cutting	Competencies that are consistently required across professional public health and nutrition disciplinary practice.
Critical	Knowledge and skills that are critical to effective practice as a public health nutritionist and delineate specialisation in this field of practice.
Enabling	Enabling knowledge that underpins public health nutrition competency applications in practice.

Structure of competency standards

The basic structure of the competency standards presented in this paper aims to assist recognition of the attributes (knowledge, skills, values and attitudes) required to perform core public health nutrition functions.

The competency standards detailed are structured to include 3 components as described in Table 7.

Table 7: Competency standard components

Component	Description
Unit of competency	Describes different components of work required to achieve practice goal (to perform)
Elements of competence	Describes different components of each competency Unit
Performance criteria	Reflects assessable knowledge observable practice behaviours that are a manifestation of the application of knowledge, skills and attitudes

ENABLING KNOWLEDGE

UNIT 1: THE CONTRIBUTION OF THE BIOLOGICAL SCIENCES TO UNDERSTANDING THE HEALTH AND NUTRITION OF POPULATIONS

Competency Element	Performance criteria	Source
Biological determinants of health	Interpret the biological factors that determine the health and nutritional status of individuals and populations	[70]
Models of disease causation	Compare basic models of disease causation for communicable and non-communicable disease	[70]

UNIT 2: THE CONTRIBUTION OF ENVIRONMENTAL SCIENCES TO THE HEALTH AND NUTRITION OF POPULATIONS

Competency Element	Performance criteria	Source
Environmental determinants of health	Identify environmental determinants of health/nutrition and disease and describe how these factors might be addressed to improve nutrition and disease prevention in populations.	[70]
The risk framework	Appraise the contribution of epidemiology, toxicology and ecology to environmental risk assessment and risk management and identify the principles of risk assessment, risk management and risk communication.	[70]
Paradigms of environmental health	Compare paradigms pertaining to the discipline of environmental health (eg transition from traditional through industrial to ecological systems approaches) and describe the relevance to nutrition.	[70]

UNIT 3: THE CONTRIBUTION OF THE BEHAVIOURAL SCIENCES TO UNDERSTANDING THE HEALTH NUTRITION OF INDIVIDUALS AND POPULATIONS

Competency Element	Performance criteria	Source
Behavioural determinants of health	Examine evidence regarding factors that influence individual health behaviour, health status and utilization of health services.	[70]
The individual in a social environment	Examine social and cultural factors, including the mass media, which influence the health behaviour of individuals.	[70]
Behavioural theories	Apply theories of individual behaviour and behaviour change to public health practice	[70]

UNIT 4: THE CONTRIBUTION OF THE SOCIAL SCIENCE DISCIPLINES TO UNDERSTANDING OF THE HEALTH AND NUTRITION OF POPULATIONS

Competency Element	Performance criteria	Source
Social determinants of health	Analyses the social and cultural factors that influence individual dietary behaviour, health status and utilisation of health services.	[70]
Theoretical foundations	Compares the sociological, anthropological and political science underpinnings of health leading to these determinants.	[70]
Social context	Critiques the role of cultural and social factors in communities, organisations and policy arenas.	[70]

UNIT 5: THE CONTRIBUTION OF ECONOMIC CONCEPTS AND PRINCIPLES TO PUBLIC HEALTH AND NUTRITION

Competency Element	Performance criteria	Source
Economic determinants of health	Analyses the economic factors that influence individual dietary behaviour, health status and utilisation of health services.	
Key economic concepts	Interprets and applies principles of opportunity cost, marginal analysis, efficiency and equity and identify how these are applied in public health programming.	[70]
Financial incentives	Identify how financial incentives promote or create barriers to health at individual and institutional levels.	[70]

UNIT 6: THE POLITICAL AND INSTITUTIONAL CONTEXT OF POPULATION HEALTH AND NUTRITION

Competency Element	Performance criteria	Source
Systems and institutions	Describe the structure and dynamics of the political and bureaucratic systems and identify the roles of various institutions (government and non-government) in shaping health policy.	[70]
Government and legislation	Critically analyse how structures, contexts and processes of government and legislation impact on health programs and policies, including international contexts.	[70]
Global factors	Compare the ways in which global institutions and relationships shape the conditions for health.	[70]

NUTRITION SCIENCE

UNIT 7: SPECIALIST KNOWLEDGE AND SKILLS IN NUTRITION SCIENCE AND THEIR APPLICATION TO PUBLIC HEALTH PRACTICE

Competency Element	Performance criteria	Source
Food composition	Applies knowledge of food composition to relevant aspects of practice	[71]
Food guidance	Uses contemporary and evidence based food guidance devices and nutritional education to promote optimal population dietary behaviour	[71]
Nutritional requirements	Applies knowledge of dietary requirements across age-groups, gender and health states to effective public health practice	[71]
Nutrition intervention strategy options	Uses critically assessed intelligence about intervention options to develop effective public health nutrition interventions	[71]
Food science	Incorporates knowledge of food science to inform public health nutrition practice	[71]
Nutritional Physiology and biochemistry	Applies knowledge of nutritional physiology and biochemistry to public health nutrition analysis and practice	

ANALYTICAL

UNIT 8: GENERIC ANALYTICAL KNOWLEDGE AND SKILLS FOR PUBLIC HEALTH [70]

Competency element	Performance criteria	Source
Research paradigms	Discriminate between deductive and inductive reasoning and identify the strengths and limitations of different research paradigms.	[70]
Information on determinants of health	Locate, evaluate and interpret information about the key determinants of health.	[70]
	Recognize how the determinants of health (biological, social, cultural, economic and physical) influence the health and well-being of specific population groups.	[78]
Information on theory, assessment and intervention	Locate, evaluate and interpret behavioural, and social science theories and models relevant to public health activity, and current paradigms for assessment and intervention.	[70, 72]
The role of data	Identify how data illuminates ethical, political, scientific, economic and overall public health issues.	[40, 70, 72]
Reading critically	Identify ideas and evaluate arguments in texts relevant to public health and apply understanding to various aspects of public practice.	[70, 72]
Community research partnerships	Partner with communities to attach meaning to collected quantitative and qualitative data	[40]
Problem analysis and needs identification	Apply information and intelligence from various sources to analyse public health issues and identify specific intervention needs	[39, 71, 72]
Critical appraisal	Integrate information from descriptions of research activities (eg. journal article, report etc) to assess issues that affect interpretation of results (eg. data quality)	[70, 72]
	Identifies and describes the strengths, uses, interpretation and limitations of different types of data relating to health	[79]
	Critical appraisal of the quality of primary and secondary nutrition and health research and knowledge of the hierarchy of evidence	[79]
	Describes the different ways of assessing nutrition and health outcomes from a range of perspectives e.g. satisfaction, qualitative outcomes, acceptability, quality of life	[79]
Presentation of data	Given a study question and relevant data, choose appropriate forms of presentation of the data for an oral or written report to summarise the information relevant to the study question, to various audiences.	[70, 72]

UNIT 9: FOUNDATION BIostatistical METHODS APPLIED TO FOOD AND NUTRITION ANALYSES [70]

Competency element	Performance criteria	Source
Statistical concepts	Interpret correctly results involving confidence intervals, significance tests and power showing an understanding of the role of random variation and the effects of sample size.	[70]
Comparison of two groups	Conduct a statistical analysis of data from two groups (independent or matched) where the measurements are either categorical or continuous, and present the results in a report that includes an interpretation of the findings and a discussion of their strengths and limitations.	[70]
The relationship between two variables	Investigate by graphical and simple linear regression models the relationship between two continuous measurements and present the results in a report that includes an interpretation of the findings.	[70]
Sample size and power estimates	Obtain the information required to estimate sample size or power, carry out the calculations and report the findings taking into account the practical implications for implementation of a study, involving one or two groups.	[70]
Statistical Software	Use a statistical software program, for example SPSS, including defining data types, selecting appropriate forms of analysis and interpreting the output (to support other competencies).	[70]

UNIT 10: EPIDEMIOLOGICAL METHODS AND THEIR APPLICATION TO FOOD AND NUTRITION PROBLEMS

Competency element	Performance criteria	Source
Routine data collection	Uses health and nutrition -related data collections appropriately to describe the food and nutrition related health situation and trends in populations, identify possible determinants, and monitor progress toward population goals.	[70]
Morbidity and mortality	Describe the major causes of diet-related and all-cause mortality and morbidity in Australia at present and identify trends over the last 50 years, and the projected trends among sub-groups including age, sex, ethnicity and SES.	[70]
Study design (health status)	Select and use appropriate designs to collect data for assessing population health status, the determinants of health, .	[70]
Study design (causality)	Select and use appropriate study designs to investigate causal factors (personal or environmental) for diet-related diseases (acute and chronic) and to evaluate the effects of public health interventions on these diseases or their determinants	[70]
Measures of frequency and association	Calculate and interpret measures of disease occurrence (e.g. incidence), measures of association between exposures and disease (e.g. relative risk) and measures of public health impact (e.g. population attributable risk) and state the designs for which the various calculations are appropriate.	[70]
Study bias	Assess how the three major types of bias (selection, information and confounding) may arise in a study using any of the principle designs and describe what impact they have on interpreting the results.	[70]
Chance and significance	Interpret the role of chance on the measure of effect and distinguish between statistical significance and public health/clinical significance.	[70]
Confounding and effect modification	Discriminate between effect modification and confounding.	[70]
Calculation of mortality and morbidity rates	Calculate age-adjusted rates using the direct and indirect methods and interpret the result.	[70]
Diagnostic test evaluation	Assess the validity of a diagnostic test for nutritional status by calculating the sensitivity and specificity, describe its relative usefulness in various populations (positive predictive value) and to describe the criteria that should be present for deciding whether a population screening program is worthwhile.	[70]

UNIT 11: METHODS OF QUALITATIVE INQUIRY AND THEIR APPLICATION TO RESEARCH, PLANNING AND EVALUATION IN PUBLIC HEALTH NUTRITION

Competency element	Performance criteria	Source
Qualitative inquiry	Compare different approaches to qualitative inquiry and identify their theoretical foundations.	[70]
Qualitative data collection	Demonstrate competence in at least one qualitative data collection technique. Identify appropriate uses of qualitative information for research, planning and evaluation in public health nutrition	[70]
Qualitative data analysis	Describe the range of data analytic techniques and demonstrate competence in at least one.	[70]
Interpretation	Categorise the range of data interpretation methods and models and interprets an analysis.	[70]
Software for qualitative research	Competently use a qualitative data management and analysis software program, for example NUD*IST or Ethnograph.	[70]

UNIT 12: METHODS AND EVIDENCE FOR NUTRITION POLICY, PROGRAM PLANNING, EVALUATION AND MANAGEMENT.

Competency element	Performance criteria	Source
Using information	Uses of information for decision-making and collects, summarises and interprets information relevant to policy, planning, management and evaluation of programs.	[70]
Applied quantitative and qualitative methods	Apply quantitative and qualitative research methods in policy, programming, evaluation and management.	[70]
Evidence	Identify the role of evidence in developing health policies and programs and appropriately apply evidence to these tasks.	[70]
Performance monitoring and program evaluation	Describe methods of performance monitoring and program evaluation and is able to develop mechanisms to monitor and evaluate programs for their quality, implementation, and effectiveness.	[70]
Economic evaluation	Identify the value of economic evaluation to evidence required to select interventions. Distinguish the methods of health economic evaluation and identify their appropriate application.	[70]

UNIT 13: HEALTH, WELFARE, FOOD AND NUTRITION POLICY ANALYSIS

Competency Element	Performance criteria	Source
Policy analysis	Identifies and communicates the health, fiscal, administrative, legal, social and political implications of policy options	[40]
	Describes and apply the components and processes of a major policy analysis using epidemiological, economics and social science tools.	[70]
Determinants and theories	Considers biological, behavioural, social/cultural and environmental factors and relevant models and theories in policy analysis.	[70]
Presents policy options	Articulates policy options and states the feasibility and expected outcomes of each policy option.	[40, 70]

PUBLIC HEALTH SYSTEMS KNOWLEDGE AND SKILLS

UNIT 14: HEALTH SYSTEMS KNOWLEDGE

Competency Element	Performance criteria	Source
Set priorities	Contrast and use various approaches for setting priorities regarding problems and population groups to target, health and nutrition service development and investment, and nutrition-related research.	[70, 72]
Understands health system structures and the drivers of health system change	Describe the structure and dynamics of the health system and the key dimensions of health system performance.	[70, 72]
Health system development	Describe the major trends in health system development and identify their implications for society.	[70]
Healthcare financing	Describe financing arrangements and mechanisms for funding health services.	[70]
Public health functions	Identify and define the core functions of public health and identify the individual and organisational responsibilities within health and other sectors that fulfil these functions.	[70]
Public health history	Describe the historical development of public health and assess the implications of historical developments for current practice.	[70]
Public health in a system	Describe the interaction of public health with social and bureaucratic systems (including the health care system) to promote the health of populations.	[70]

FOOD AND NUTRITION SYSTEMS KNOWLEDGE

UNIT 15: FOOD AND NUTRITION SYSTEMS KNOWLEDGE

Competency Element	Performance criteria	Source
Key players	Identifies key stakeholders in the food and nutrition system	[71]
Understands food and nutrition system structures and the drivers of system change	Describe the structure and dynamics of the food and nutrition system and the key dimensions of system performance.	[71]
Food security	Describes the determinants of food security in the relevant community/population context.	
Food and nutrition system development	Describe the major trends in food and nutrition system development and identify their implications for society.	[71]
Food service	Describes and compares food service systems Assesses opportunities to improve nutrition and food standards within a food service	[80]
Food and nutrition as business	Describes the mechanisms and impact of corporate profit motives and strategies that impact on food and nutrition	[71]

NUTRITION EDUCATION

UNIT 16: EDUCATION COMPETENCIES

Competency Element	Performance criteria	Source
Translates technical information	Translates technical nutrition information into practical advice on food and eating	[80]
Identifies and develops education resource material	Develops education material that is evidence-based, culturally sensitive, and pitched at the appropriate literacy level, to meet the needs of the target group	[80]
Nutrition education	Communicates with individuals, groups, organisations and communities from various cultural socio-economic, organisational and professional backgrounds to enable them to take actions to improve nutrition and health outcomes applying the principles of learning theory	[80]
Education programs	Develop and implementing education programs to enable people to change their knowledge, attitudes and behaviour concerning health choices, taking account of the context in which target behaviours are performed, or planning or commissioning or evaluating such programmes	[79]
Educational theory	Applies the basic principles of education theory as it applies to public health nutrition practice	[80]

MANAGEMENT KNOWLEDGE AND SKILLS

UNIT 17: MANAGEMENT

Competency Element	Performance criteria	Source
Policy implementation	Describe and apply the procedures involved in translating policy into organisational structures and plans.	[70]
Human resource management	Describe human resources principles for organizational development, conflict resolution, and motivation of personnel.	[70]
Financial management	Describes financial management for health programs, including budgeting.	[70]
Change management	Recognises and manages change taking into account educational, cultural , social, technical, economic and political considerations	[73]
Risk management	Effectively identifies, estimates potential implications and manages risk as it applies to public health nutrition practice	[73]
Project resource management	Manage project resources achieving and reporting progress within budget and on time	[72]

LEADERSHIP KNOWLEDGE AND SKILLS

UNIT 17: LEADERSHIP

Competency Element	Performance criteria	Source
Advocacy and lobbying	Applies the principles of advocacy and lobbying appropriately to garner support for action on nutrition problems of public health significance.	[40, 70, 72]
	Acting as an advocate for the public's health and articulation of the needs of vulnerable groups.	[79]
Decision-making	Use analytical, critical thinking, and problem-solving skills to make decisions effectively.	[70]
	Teamwork Coaches, develops and motivates team members and evaluates their performance	[73]
Leadership in practice	Facilitate group/team work and operate effectively as a member of a group or team	[40, 70, 73]
	Accepts leadership roles in organisations and committees to promote nutrition and health	[73, 79]
	Uses different leadership styles to inspire and motivate others to promote nutrition and health	[73, 79]
	Manages complex relationships and competing interests of the various stakeholders in the food and nutrition system	[73]
	Describe the mission and priorities of the public health organization where one works, and apply them in practice.	[78]
	Contribute to developing key values and a shared vision in planning and implementing public health programs and policies in the community.	[78]
	Promotes intersectoral collaboration and inclusion of nutrition objectives in other key sectors of government (Agriculture, social security, education, women's affairs)	

PROFESSIONAL

UNIT 18: PROFESSIONAL ATTITUDES AND VALUES

Competency Element	Performance criteria	Source
Values	Identify the values and principles that underlie public health nutrition policy debates, organisational practices, and program planning and evaluation.	[70]
Capacity building	Critiques the central function and role of public health nutrition practitioners as instruments for capacity building	
Ethics	Prepare ethics /evaluation proposals relating to aspects of public health nutrition research and evaluation	[72]
	Applies principles of ethical decision making in the context of clinical and cost effectiveness	[79]
	Applies ethical principles to the collection, maintenance, use and dissemination of data and information	[40]
	Give prominence to promoting equity in approaches to improving nutrition in populations	
	Identifies and discloses potential, perceived and real conflicts of interest in practice	
Commitment to better practice	Demonstrates consistent reflective practice	[73]
	Prioritises professional development to meet learning goals	[73]
	Committed to life long learning	
Commitment to practice improvement	Contributes to the evidence base relating to effective public health nutrition practice and actively communicates this information	[71, 73]
Cultural competency	Apply culturally-relevant and appropriate approaches with people from diverse cultural, socioeconomic and educational backgrounds, and persons of all ages, genders, health status, sexual orientations and abilities.	[78]
Financial probity	Applies principles of budget management and financial probity	[79]
Human resource management	Applies principles of good employment practice, including fair and effective recruitment	[79]

COMMUNICATION

UNIT 19: COMMUNICATION

Competency Element	Performance criteria	Source
Communication	Communicates effectively with individuals, families, groups, communities, colleagues and political decision makers	[79]
	Demonstrate effective written and oral communication in a range of contexts.	[70]
Listening	Methods of listening to and involving the public and communities in improving health and reducing inequalities	[79]
Cultural competency	Considers the need to communicate effectively across social groups in diverse cultures and sub-cultures and understands cultural obstacles to effective communication.	[70]
Information literacy	Collect and evaluate and interpret information from a variety of traditional and new technology sources	[70]
	Interpret information for professional, nonprofessional and community audiences	[78]
Information technology	Use information technology to effectively communicate, locate information and analyse data	[70]
Interpersonal skills	Apply interpersonal skills (negotiation, team work, motivation, conflict resolution, problem solving skills)	[72]
Grantmanship	Identifies and applies for funding to undertake research and evaluation to inform public health problem resolution	[73]
Media utilisation	Uses the media, advanced technologies and community networks to communicate information	[40]
	Mobilize individuals and communities by using appropriate media, community resources and social marketing techniques.	[78]
Consultation	Solicits input from individuals, organisations and community groups	[40]
	Listens to others in non-biased manner, respects points of view and promotes the expression of diverse opinions and perspectives	[40]
Cultural competency	Utilises appropriate methods for interacting sensitively, effectively and professionally with persons from diverse backgrounds, ages and preferences	[40]

NUTRITION ASSESSMENT, MONITORING AND SURVEILLANCE

UNIT 20: NUTRITION ASSESSMENT

Competency Element	Performance criteria	Source
Assessment of dietary intakes	Develop dietary assessment protocols for population level dietary assessment using various methods appropriate to context, resources and purpose	[71]
Collects food intake and food systems data	Identifies and uses appropriate dietary methodology to collect retrospective, current and prospective food and nutrient intakes for individuals which identify nutrient and food intake patterns as required by the situation	[80]
Assesses food intake data	Selects a suitable method and level of detail for assessing intake of foods and nutrients	[80]
	Is able to estimate nutrient intake for individuals using food composition tables and/or databases and compare with Nutrient Reference Values (NRVs) or estimated requirements	[80]
	Uses food guidance systems to contribute to the assessment of the client's dietary intake	[80]
Assesses nutritional status	Selects suitable methods for assessment of anthropometry and body composition	[80]
	Is able to interpret anthropometric and body composition and nutritional assessment data using appropriate reference ranges	[80]
	Recognises clinical signs of malnutrition	[80]
	Accurately interprets dietary, health, medical, anthropometric, and body composition data against standards relevant to the nutritional issues	[80]

UNIT 21: FOOD AND NUTRITION MONITORING AND SURVEILLANCE

Competency element	Performance criteria	Source
Diet-related disease surveillance and monitoring	Identify the contribution of disease surveillance and monitoring to policy and program planning and evaluation.	[70]
Disease and exposure monitoring and surveillance	Demonstrate familiarity with the procedures undertaken by public health units to investigate and control an outbreak of communicable disease, such as food borne diseases.	[70]
Levels of Prevention	Analyse a health problem and identify the appropriate level/s at which to target the disease, condition or determinant, and population groups to be targeted.	[70]
Risk factor surveillance, including food and nutrition data	Identify and understand the role of risk factor surveillance to inform analysis of diet-related problems. Utilise data from monitoring and surveillance to describe trends in risk factors for diet-related disease, among key population groups.	

BUILDING CAPACITY

UNIT 22 BUILDING CAPACITY FOR PUBLIC HEALTH NUTRITION ACTION

Competency Element	Performance criteria	Source
Capacity building principles	Apply the principles of capacity building to enhancing public health effort and outcomes	[70]
Stakeholder analysis	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	[41]
Determinants of capacity	Describe the determinants of community and organisational capacity as it relates to public health action	
Capacity assessment and evaluation	Describe methods of evaluating community, organisation and system level capacity to address public health nutrition issues	
Intersectoral action	Establishes linkages with key stakeholders	[40]
	Apply the principles of effective intersectoral action and apply to population health activity	[70]
Organisational development	Demonstrate knowledge of organisational development and change.	[70,
	Recognise that organised effort at a population level to is required to achieve improved health outcomes.	72]
	Identifies individual and organisation responsibilities for promoting public health	[40]
	Contribute to team and organizational learning in order to advance public health goals.	[78]
Workforce development	Identify and develop key workforce components (individuals, groups, units) with a stake in public health nutrition effort	
Partnership development	Describe the key determinants of effective partnership development and apply strategies to support sustainable and effective collaboration	[40,
	Identify and collaborate with partners in addressing public health issues.	70]
	Use skills such as team building, negotiation, conflict management and group facilitation to build partnerships.	[78]
Community development	Identifies community assets and available resources	[40]
	Involve communities as active partners in all aspects of public health nutrition effort	[39]
	Apply community development processes and principles in public health nutrition practice	[72]
	Demonstrate an ability to build community capacity by sharing knowledge, tools, expertise and experience.	[78]
Resource mobilisation	Advocate for resource allocation that promote and protect the health and well-being of individuals and communities.	[78]

INTERVENTION MANAGEMENT

UNIT 23 : PROGRAM PLANNING, ORGANISATION AND MANAGEMENT

Competency Element	Performance criteria	Source
Problem analysis and needs identification	Apply information and intelligence from various sources to analyse public health issues and identify specific intervention needs	[39, 71, 72]
Intervention Planning	Apply the principles of public health intervention planning and develop a plan for a specified population, including the evaluation of objectives.	[70]
Intervention research	Assessing the evidence of effectiveness of interventions, programmes and services designed to enhance nutrition and public health.	[79]
	Assesses the relative merits (e.g. considering suitability to target group, resource requirements, etc.) of alternative disease prevention measures (e.g. education, incentives, legislation, policies, standards, screening)	[41]
	Explain how legal frameworks, organisational structures and service delivery systems influence nutrition intervention implementation	[41]
Intervention design	Design a health promoting intervention for an individual, community or organisation using theory and evidence to guide the selection of strategies and the identification of outcomes.	[70, 72]
Logic modelling	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)	[41]
Health promoting strategies	Describe the range of health promoting strategies and methods, and for each strategy and method, define appropriate groups for whom the strategy or method is designed.	[70, 72]
Theoretical applications	Apply relevant behavioural and social science theories to a selected health promotion intervention, and review and evaluate the adequacy of the approach(es) selected for practice.	[70, 72]
Implementation planning	Identify capacity building, timeframes, governance structures, resource needs (budgeting), organisational and agency needs that would allow an intervention to be effectively implemented.	[70]
	Knowledge of project management principles (including scope, time, cost, procurement, quality, risk, human resource, and communication management) as they apply to population health interventions.	
Evaluation planning	Design a process, impact and/or outcome evaluation plan for a public health nutrition program/project that reflects the needs of key stakeholders	[41]
Valorisation	Actively communicates and promotes intelligence gains from program planning, implementation and evaluation activities, to maximise diffusion of innovation, share intervention research findings and practice wisdom	

UNIT 24 : POLICY PLANNING, IMPLEMENTATION AND EVALUATION

Competency Element	Performance criteria	Source
Policy advocacy	Advocate for healthy public food and nutrition policies that promote and protect the health and well-being of individuals and communities.	[78]
Policy interpretation and implementation	Interpret and apply national policy or strategy at local, regional or national levels OR influence or develop policy or strategy at national or regional levels	[79]
Policy development	Influence or develop policy or strategy at national or regional levels	[79]
Policy evaluation	Use appropriate methods and tools to assess the impact or potential impact of policy on health at local, regional or national levels	[79]

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