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Enhancing the Public Health Nutrition Workforce: What Canada can learn from the Australian Experience

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Background and context

Over the last decade, Australia has experienced a surge in interest, investment and activity in public health nutrition as a public health priority and as a field of practice. As a result it provides a case study for public health nutrition (PHN) workforce development that can be used to highlight some of the challenges for strategic and effective public health capacity building via workforce development. This is particularly true for comparisons between countries such as Australia and Canada that are similar in their economic prosperity, population distribution, political and cultural heritage and the relative similarity of our health systems. Some of the important milestones in the development of public health nutrition as a field of practice in Australia are summarized in the following table.

Table 1. Important milestones in public health nutrition workforce development in Australia

Year	Milestone	Ref
1995	First National community and public health nutrition workforce study	[1]
1995-1998	National Specialty Program in Public Health and Community Nutrition funded by the Australian Government to progress	[2]
1997	Hughes & Somerset publish definitions and conceptual framework paper for community and public health nutrition initiating professional debate about the differences between dietetic and PHN practice.	[3]
2001	Australian Government releases ten year National Public Health Nutrition Strategy <i>Eat Well Australia</i> . This is followed by State Government developing State level PHN strategies, many recognizing the need for PHN capacity building, including workforce development.	[4]
2001-3	Australian Public Health Nutrition Workforce Development Study conducted, including workforce enumeration, practice and continuing professional development assessments.	[5-7]
2003	Australian Public Health Nutrition Academic Collaboration (APHNAC) formed to progress development of advanced-level training for PHN	
2005	Suite of 8 courses developed by APHNAC faculty for cross-university enrolment (virtual Masters of Public Health Nutrition)	
2006	Public Health Nutrition competency framework developed	[8]
2006	Numerous state obesity summits initiated by governments in response to growing recognition of the obesity epidemic. Unfortunately very little consideration of workforce capacity in these debates.	

These milestones illustrate that PHN workforce development has been on the agenda at a health sector and within the profession for a ten year period, and there has been significant progress. Table 2 lists 12 key lessons for PHN workforce development based on this experience, that may be of relevance to Canada.

Table 2. Key lessons for public health nutrition workforce development based on the Australian experience

1.	Definitions and conceptual clarity are important and debate is needed to progress to a shared understanding
2.	The public health nutrition workforce is multidisciplinary and has numerous tiers, but there is a need for a workforce leader/specialist to facilitate effective practice and intervention
3.	Workforce capacity has multiple determinants
4.	Workforce development needs to be considered in its complexity and not simply a result of training
5.	Workforce development needs to be strategic and sustained
6.	A major barrier to WFD by governments is a fear that it will cost a lot
7.	Workforce development needs to be future orientated and aspirational rather than playing catchup
8.	Workforce development systems (supply vs demand) need to align

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9. Competencies should be considered the architecture for workforce development
 10. Public health nutrition is a practice specialty requiring advanced level competencies
 11. Leadership by Dietitians and their professional associations is required and professional chauvinism is counterproductive
 12. Dietetic practice improvement and reorientation is required
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Definitions and conceptual clarity are important and debate is needed to progress to a shared understanding

Experience and international consensus suggests we need to be speaking from the same script[9].

Public health nutrition is the promotion and maintenance of nutrition related health and well-being of populations through the organised efforts and informed choices of society

(Constitution of the World Public Health Nutrition Association being launched in 2007)

The proposed **core functions** for public health nutrition are underpinned by the following assumptions:

- 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.

Table 3. Ten core functions for public health nutrition practice (practice functions)[10]

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

*Intelligence refers to information and knowledge from various sources that is used to inform decisions relating to problem resolution in public health nutrition practice.

The public health nutrition workforce is multidisciplinary and has numerous tiers, but there is a need for a workforce leader/specialist to facilitate effective practice and intervention

Table 4. Key findings relating to workforce composition and enumeration in the Australian PHN workforce[5]

- Conceptualisations of public health nutrition workforce composition are that it is multi-disciplinary with many “players”
- There are multiple workforce tiers with each tier having different roles, competency needs and mandates for public health nutrition action
- A key and major constituent of the public health nutrition workforce is the public health nutrition “specialist”
- Practitioners with a dietetics training and practice background, working in community settings, are the dominant workforce constituent in Australia
- Other key workforce constituents include individual care dietitians, health promotion officers, academics, managers, nurses and home economists.
- The existing Australian community and public health nutrition workforce is highly feminised and most have entry-level dietetic qualifications as their highest qualification.
- Inconsistent and variable position nomenclature is used for “designated” community/public health nutritionists
- The size of the designated community and public health nutrition workforce is relatively small(<300 nationally), with many working part-time or in temporary positions and few dedicated to population based preventive work

Workforce capacity has multiple determinants

Workforce development as a strategic approach to capacity building needs to be informed by an understanding of the determinants of workforce capacity- in order to focus development efforts.

Table 5. Determinants limiting public health nutrition workforce capacity[11]

Human resource infrastructure

- A small designated PHN workforce relative to need limits capacity. Workforce enumeration and existing benchmarks suggest workforce size between 20—33% size required.
- Importance of a designated PHN workforce tier (specialists) to provide practice leadership.
- Workforce capacity is limited by high staff turnover associated with short-term project funding.
- Workforce effort largely limited to disciplinary and health sector boundaries at odds with health promotion rhetoric and employer expectations

Organisation and policy environment

- Inequitable resource allocation to support existing policy and strategic frameworks associated with variable leadership
- The absence of systematic and strategic frameworks for effective workforce development
- Evidence of workforce disorganisation including a lack of consensus about the required work, role ambiguity and organisational structures limiting workforce capacity

Intelligence access and use

- Suboptimal access to, and use of, available PHN intelligence limiting workforce capacity
- An under-developed workforce research culture and workplace incentives that reward research and evaluation work, contributing to intelligence gaps.
- Limited collaboration between workforce and academia.

Practice improvement and learning systems

- Workforce practices do not reflect the required work. Activities do not match priority action areas identified in national PHN strategy documents.
- Limited targeting of interventions specifically to disadvantaged groups
- The main settings for intervention used by the workforce focus mainly on hospitals and primary schools, suggesting narrow settings utilisation in workforce practices

- Strategy utilisation more aligned with clinical practices than public health, with limited use of environmental change strategies such as food supply change, health service reorientation, organisation development and policy processes
- Academic workforce contributions to public health nutrition practice limited by excessive teaching and administrative loads
- Limited access to PHN mentors
- Limited incentives for excellence in practice
- Numerous barriers limiting access to continuing competency development including cost, availability and relevance of available courses

Workforce preparation

- The large majority (75%) of the designated public health nutrition workforce has entry-level dietetic training as their highest qualification. Few of the existing workforce have public health, higher degree or research qualifications.
- Inadequate public health training in dietetic degrees.
- Low self-reported confidence and high training need relative to public health nutrition practice
- The almost exclusive recruitment of dietetic trained practitioners to the designated workforce, limits the diversity of the workforce

Workforce development needs to be considered in its complexity and not simply a result of training

Workforce development needs to be informed by an understanding of the determinants of workforce capacity. A focus only on training will lead to disappointing returns on investment (ie. highly skilled workers who are not in a position to perform the required work).

Table 5. Framework for workforce development strategy planning

Strategy category	Focus^A	Rationale
Building human resource infrastructure	Quantity	A critical mass or size of the workforce is required to sufficiently organise community and organisational efforts.
Organisational systems and policy	Performance	Organisational systems and policies effect the work environment and require major organisational change to become learning systems.
Intelligence support	Performance	Creating the organisational capacity to enable knowledge creation and use, increasing access of practitioners to information that supports effective practice. Linked closely with learning systems.
Learning systems	Quality	Systems that contribute to organisational learning and continuing competency development of the workforce.
Workforce preparation	Quality	Ensuring training of the public health nutrition workforce prepares graduates for public health nutrition practice and encourages lifelong learning.

Adapted from [12, 13]

Workforce development needs to be strategic and sustained

A major barrier to WFD is a fear amongst government agencies that it requires significant additional costs rather than being seen as an investment that produces economic returns (eg. reduced burden of disease etc). There is limited research that provides evidence that growing the PHN workforce enhances health outcomes although the underlying logic suggests it should. Sporadic and ad hoc workforce growth (increase recruitment) with attention to workforce organization, preparation and support is likely to result in less effective outcomes. More staff on the ground is not better, if it means more of the same ineffective practice. Workforce development needs to be ongoing and mindful of the changing issues and environments on which the workforce bases its activity.

Workforce development needs to be future orientated and aspirational and workforce development systems (supply vs demand) need to align

Workforce development needs to focus on building capacity that will be required in the immediate future rather than what is needed now and based on current practice. The lag between supply (workforce preparation by universities) and demand (employment opportunities, market needs etc) is as much as 5-10 years. This requires educators to base curriculum development and competency development on competencies that reflect predicted practice needs (future orientated rather than traditional). This is made difficult by the lack of scholarship in this area.

Forward planning and developing systems to respond to sudden increase market needs (surge capacity) is a major challenge and weakness in the PHN workforce globally.

Competencies are the architecture for WFD. Public health nutrition is a practice specialty requiring advanced level competencies

Competency frameworks are a valuable tool for workforce development as they codify the skills, knowledge and attitudes required for effective performance in the workplace. There is international agreement about the importance of and general structure of competencies required for effective public health nutrition practice[14], and that this agreement and need is evolving. It is widely recognized that public health nutrition is a specialization within public health and/or dietetics requiring advanced-level competencies. Entry-level dietetic qualifications are inadequate credentials for PHN practice.

Table 6. Summary PHN competency framework [8]

Competency domain	Example Units
Foundation knowledge and skills	Biological, sociological, cultural, economic environmental determinants, Nutrition assessment, food guidance and goals, lifespan nutrition and requirements
Analytical	Nutrition monitoring and surveillance, applied research, needs assessment, evaluation
Sociocultural & political processes	Advocacy, policy development and analysis, building capacity, cultural awareness
Public health system knowledge and skills	Intervention planning, strategy design, workforce development, intervention research, health promotion
Communication	Interpersonal, scientific, media skills, writing skills, grantsmanship
Management and leadership	Strategic planning, team building and staff management, negotiation, collaboration
Professional	Ethics, quality assurance, evidence based practice, reflective practice, commitment to lifelong learning

Dietitians and the dietetic profession world-wide are well placed to take leadership roles and form the basis of the public health nutrition workforce, but reorientation of practice is required.

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