Public Health Nutrition:  
Identifying Models and Effective Approaches to Workforce Development

by

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for

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About the SA Community Health Research Unit

SACHRU provides advice on research and evaluation to a range of groups including community health services, community organisations and primary health care projects. In addition the Unit conducts research and evaluation projects that are either funded from its core budget from the Department of Human Services, or from external sources. SACHRU runs training seminars on topics such as Needs Assessment, Program Planning, Questionnaire Design, Report Writing and Evaluation. Other activities include writing peer reviewed articles, and disseminating information to the community through publication.

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We have been buoyed by the enthusiasm and encouragement of the Reference Group and sincerely thank each of the members for contributing their time and skills to ensure the literature review is relevant to diverse workforces in both metropolitan and country South Australia.

We also wish to thank our colleagues at SACHRU. Megan Kyriacou undertook the extensive literature search of library databases and assisted in the identification and retrieval of the ‘grey’ literature that informed this report. Helma Hooper desktop published the final report.
## Abbreviations

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<tr>
<th>Abbreviation</th>
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<tr>
<td>AHPA</td>
<td>Australian Health Promotion Association</td>
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<td>AHW</td>
<td>Aboriginal Health Worker</td>
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<td>ATSI</td>
<td>Aboriginal and Torres Strait Islander</td>
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<td>DAA</td>
<td>Dietitians Association of Australia</td>
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<td>DHS</td>
<td>Department of Human Services (SA)</td>
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<td>EWA</td>
<td>Eat Well Australia</td>
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<td>EWSA</td>
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<td>GHR</td>
<td>Generational Health Review</td>
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<td>NATSINAP</td>
<td>National Aboriginal and Torres Strait Islander Nutrition Strategy and Action Plan</td>
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<td>NCETA</td>
<td>National Centre for Education and Training on Addiction</td>
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<td>NHMRC</td>
<td>National Health &amp; Medical Research Council</td>
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<td>NOOSR</td>
<td>National Office of Overseas Skills Recognition</td>
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<td>NPHP</td>
<td>National Public Health Partnership</td>
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<td>PHAA</td>
<td>Public Health Association of Australia</td>
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<td>PHC</td>
<td>Primary Health Care</td>
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<td>PHSWOW</td>
<td>Public Health Schools Without Walls</td>
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<td>SACHRU</td>
<td>South Australian Community Health Research Unit</td>
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<td>SIGNAL</td>
<td>Strategic Inter-Governmental Nutrition Alliance</td>
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<td>WHO</td>
<td>World Health Organisation</td>
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1. Executive Summary

The *Nutrition Workforce Development for Primary Health Care* project was initiated as part of implementing Eat Well South Australia, a strategy to improve nutrition for South Australians. An important theme of the strategy is the need to engage a broad range of organisations from both health and non-health sectors in achieving change. This is reflected throughout the strategy by a focus on partnerships and workforce development.

Overall, the *Nutrition Workforce Development for Primary Health Care* project is envisaged as containing the following three phases:

1. Identifying effective approaches to workforce development for the primary health care and other relevant non-health sector workforces
2. Establishing strategies, in conjunction with key groups, to enhance workforce capacity to contribute to addressing Eat Well South Australia priorities.
3. Implementing and evaluating workforce development approaches to improving population health via improved nutrition.

This literature review *Public Health Nutrition: Identifying Models and Effective Approaches to Workforce Development* is concerned with the first of these phases. The review has drawn on published literature, reports and expert knowledge to identify models and effective approaches to workforce development for the nutrition, primary health care and other relevant non-health sector workforces.

Three main approaches to workforce development were identified: action research, capacity building and competencies. None of these approaches appears to have been evaluated systematically, in terms of their contribution to workforce development.

The action research approach, which here includes action learning, focuses on generic skills and abilities, building autonomy and professional knowledge and developing practice wisdom. The approach can be applied at individual worker, team or organisational level. Concepts such as community partnerships, intersectoral work and consideration of equity can be explored and developed. This makes it ideally suited as a method to reorientate the workforce and services to a primary health care approach.
and to increase individual and organisational capacity to undertake primary health care.

Capacity building aims to increase the range of people, organisations and communities who are able to address health problems. It is an approach that encourages partnerships, critical problem solving and leadership. Capacity building builds on existing structures and capacities within individuals, groups, organisations and systems. It is explicitly focused on the sustainability of health promotion initiatives following the initial investment phase.

The competencies approach tends to be discipline specific, and focuses on technical expertise, standards and accreditation, and safety and quality of services. Competencies are assessed and applied at individual worker level and can be standardised across services or (inter-) nationally. The competency of workers may be assessed in terms of their knowledge, or by observing the results of their actions. Increasingly, the competency approach is also being used to assess generic skills (for example, advocacy, partnership development, planning and evaluation).

The review next illustrates the three approaches to workforce development using case study examples and discusses the lessons for public health nutrition workforce development. There appears to have been little documented use or evaluation of the action research model in this setting. The health sector has instead taken on a capacity building model as first developed in NSW. These case studies demonstrate the importance of organisational, community and environmental support. This support might be realised as ‘champions’ within an organisation, supportive policies and practices, and the availability of on-site workforce development opportunities and support to take advantage of these. Workforce development needs to be planned, comprehensive and integrated with the goals of the organisation. In a primary health care context the notion of ‘workforce’ may be extended to include the wider community of stakeholders. A partnership or multidisciplinary approach to workforce development facilitates exchange of skills and knowledge but this requires trust and good working relationships in order to be successful.
Some barriers and challenges were identified in the action research and capacity building approaches. Information provision on its own is insufficient to bring about change in behaviour. A strength of action research and capacity building approaches is that there is a focus on transferring new knowledge and skills into practice. This is more likely to occur when there is reflection and action at system, organisational and individual levels. A barrier to taking up workforce development opportunities is the financial and time constraints on workers in most primary health care organisations. This again stresses the need for organisational and system support.

An action research/capacity building approach starts from the premise that improving population health outcomes related to nutrition is a complex goal that needs a primary health care approach which encapsulates community participation, a focus on the socio-economic determinants of nutritional health, a partnership approach, healthy public policy, intersectoral collaboration, and a comprehensive range of strategies. Effective implementation of a primary health care approach requires a range of skills and (re)orientation of health services and the health workforce. Workforce development incorporates, for example, a focus on developing skills in advocacy, community participation and partnership approaches across a broad range of disciplines.

The competency model has been developed over the last 10 – 15 years, mainly by professional associations and/or in consultation with the relevant workforce. The main benefits are consistency of skills and knowledge, portability of qualifications and quality assurance. Other than the use of accreditation to meet quality assurance indicators, there appears to have been little evaluation of the effectiveness of this model for workforce development in the public health nutrition sector. A question that arose in one case study concerned the cost of training and education towards accreditation, and the additional costs of employing accredited workers. This is part of a broader question about who should pay for quality assurance within an organisation.

A competency approach to improving population health outcomes related to nutrition focuses on the available evidence to support specific interventions and the skills that are required to implement these. The development of competencies facilitates assessment, accreditation and standardisation of skill sets.
In order to draw on the strengths of each approach, a model that uses action research, capacity building and competencies is proposed. Figure 1.1 illustrates a workforce development model that encompasses evidence-based practice in the development of policies and programs and the use of action research to identify what workforce development is needed to implement these. Workforce development strategies are then implemented using competencies or capacity building approaches as appropriate, giving consideration to the context and target population. Reflection and evaluation occurs at each step and feeds back to policy or program development.

Figure 1.1  A Model for Workforce Development
In summary, the review findings are that:

- there does not appear to be a body of evidence on workforce development methodologies in the peer-reviewed literature or the grey literature reviewed.
- there appears to be little evaluation of workforce development models and programs for the primary health care, including specialist nutrition, workforces.
- there are acknowledged limitations of current education/training in supporting the primary health care workforce to incorporate change.
- the focus on workforce alone is not sufficient – workforce development approaches tend to be individualistic, rather than environmental.
- there is a need to integrate workforce development into the broader context of the organisation and public health policy.
- capacity building and competency-based approaches both have a place and show promise.
- transfer of new evidence into practice is key and needs organisational support as well as support for the primary health care workforce.

**What do we need to know in order to take the next step?**

A number of questions arise that need to be considered in establishing strategies and implementing workforce development. Some questions are relatively simple, others will require broad engagement by policy makers and the primary health care sector.

1. What are the future needs and directions in health services and public health nutrition (eg policies, structures, programs) to address South Australia’s nutrition priorities?
2. What are the implications of these for workforce development – at health service, regional and state levels and across government departments?
3. Which are the workforces with potential to contribute to making improvements in nutrition-related health outcomes in priority populations or around priority issues?
4. Who should be the initial target for workforce development – nutritionists/dietitians or the broader primary health care workforce, or both?
5. What are the characteristics – number, roles and positions – of the specialist nutrition workforce and other primary health care workforces whose work encompasses addressing nutrition issues?
6. What current education and training is available in SA in food and nutrition issues for public health and primary health care, including specialist nutrition, workforces?

7. What theories of behaviour change are most appropriate for workforce development?

8. What approaches to workforce development are most effective and for whom?

9. What resources are needed to support workforce development and where might they be found?
2. Introduction

The *Nutrition Workforce Development for Primary Health Care* project was initiated as part of implementing Eat Well South Australia, a strategy to improve nutrition for South Australians. An important theme of the strategy is the need to engage a broad range of organisations from both health and non-health sectors in achieving change. This is reflected throughout the strategy by a focus on partnerships and workforce development.

2.1 Why develop the public health nutrition workforce?

Good nutrition is fundamental to good health throughout life. It underpins healthy growth and development (from before birth), contributes to general health and wellbeing, positive mental health and quality of life and plays a key role in preventing disease and disability.

There is strong evidence for the benefits to individuals and the social and economic wellbeing of society in improving nutrition through healthy eating throughout life. Breastfeeding and eating a diet consistent with the NHMRC dietary guidelines and the Australian Guide to Healthy Eating — along with physical activity and not smoking — has the potential to prevent a significant amount of chronic disease (NPHP 2001).

The evidence regarding the relationships between diet, nutrition and disease is well summarised in a critical report just released by the World Health Organisation: [http://www.who.int/hpr/nutrition/ExpertConsultationGE.htm](http://www.who.int/hpr/nutrition/ExpertConsultationGE.htm); accessed 16/4/2003

2.2 About the literature review

Overall, the *Nutrition Workforce Development for Primary Health Care* project is envisaged as containing the following three phases:

1. Identifying effective approaches to workforce development for the primary health care and other relevant non-health sector workforces
2. Establishing strategies, in conjunction with key groups, to enhance workforce capacity to contribute to addressing Eat Well South Australia priorities.
3. Implementing and evaluating workforce development approaches to improving population health via improved nutrition.
This literature review *Public Health Nutrition: Identifying Models and Effective Approaches to Workforce Development* is concerned with the first of these phases.

In July 2002, the South Australian Community Health Research Unit (SACHRU) was contracted by Health Promotion SA to undertake a literature review on models and effective approaches to workforce development for the primary health care and other relevant non-health sector workforces.

**Review Aim**

To identify models and effective approaches to workforce development for the primary health care and other relevant non-health sector workforces.

**Review Objective**

To undertake a literature review on the theoretical and methodological approaches to workforce development in the primary health care sector, with a focus on action research methods, and approaches to improving nutrition.¹

**Review Strategies**

1. Search existing literature (both peer reviewed and ‘grey’ literature) for models of workforce development which have used a primary health care approach eg action research, and address improving nutrition
2. Describe theoretical frameworks used for models of primary health care workforce development in different settings
3. Examine methods and strategies used for workforce development in primary health care approaches and report on their effectiveness.

This report presents the findings from the review. Firstly, three approaches to workforce development are described: action research, capacity building and competencies. Secondly, some models of workforce development in primary health care settings are illustrated by examination of case studies. Thirdly, the review attempts to assess the effectiveness of workforce development strategies, although little theoretical underpinning or evaluation of workforce development methods was

¹ The New South Wales capacity building framework definition of workforce development and NCETA work on workforce development for Drug and Alcohol workers provide examples of the approach taken in the project. For the purposes of this project ‘primary health care’ also includes relevant non-health sector workforces such as those in local government, community services, and industry. The particular workforces will depend on the particular issue being addressed.
found. Finally, the report presents some conclusions and discusses the next steps for public health nutrition workforce development.

The Appendices contain more detailed information. Appendix A describes the background and context to the work and outlines the implementation process for the review. Appendix B describes the primary health care workforce development context in Australia and South Australia. Appendix C provides a description of the public health nutrition workforce and Appendix D discusses public health nutrition workforce development issues.
3. Approaches to workforce development

Three main approaches to workforce development were identified from the literature on workforce development methods: i) action research or action learning; ii) capacity building; and iii) competencies. This section of the review describes the three approaches, their strengths and weaknesses and examines their relevance for the primary health care and nutrition contexts.

3.1 Action research and action learning

Definition of action research

Action research as a concept is not easy to define. There are a multitude of definitions, approaches and uses, with no consensus on core characteristics (Hart 1996). The term is often used interchangeably with action learning and participatory action research.

However, most commentators identify two key aims of action research: to improve practice and to increase knowledge. Elliot (1991) places a firm emphasis on the improvement of practice and argues that the production and utilisation of knowledge is subordinate to this. Others describe the dual aims in terms of i) implementing change and improving practice (Greenwood 1994; Gregory 1994) and ii) generating theory (Greenwood 1994), increasing knowledge and understanding (Malterud 1995), and as a technique in education (Gregory 1994). In terms of nursing, Hart (1996) argues that action research reflects recognition, on behalf of the nursing research community, that nursing is a social practice, the central purpose of which is to bring about positive change in the health status of individuals and communities.

Action research is regarded as a problem-solving methodology, requiring a cycle of action and reflection. The cycle of action is described thus:

- problem identification
- summarise previous experience
- determine the aims of the intervention
- plan and develop the intervention method
- design and articulate intervention strategy
- implement the action
- redefine the problem (Malterud 1995).
Pyett (2002) places action research on a continuum by degree of political intent. At one end is advocacy research, with no claim to researcher control, the purpose is to serve disadvantaged groups. Next is participatory action research, where subjects participate in the entire process from setting the research agenda, collecting and analysing data, to controlling the use of outcomes. Next is action research that involves research and a high level of community participation and action to improve the situation (Pyett 2002). What is intended is that the participants, through using theory to illuminate or describe the actions they have taken, will be equipped with power to reflect and experiment on the outcomes of a project (Gregory 1994).

**Strengths**

Two main benefits of action research for workforce development are that it develops professional knowledge that is more appropriate to practice, and it empowers practitioners to think critically and analytically in order to increase their autonomy to use professional judgment (Hart 1996). Since action research focuses on real-life problems, it may also facilitate collaboration between professionals and the individuals and groups with whom they work.

*Professional and practice wisdom*

Action research improves practice by developing practitioners’ capacity for discrimination and judgment in complex human situations. It therefore informs professional judgment and develops so-called ‘practice wisdom’ (Elliott 1991). Practice wisdom may be understood as the ability to comprehend, analyse and respond to practical problems in situ. It is a key characteristic of advanced level practice.

*Empowerment*

Another benefit of action research is described in terms of empowerment for the practitioner/researcher. It enhances the potential for increases in autonomy in using professional judgment. Hart (1996) describes the empowering benefit of action research as a

*means of improving quality of care by narrowing the gap between research and doing, theory and practice, defines individuals as active partners and not as passive subjects, directed towards change and improvement, non exploitive, collaborative and through reflective practice offers possibility of autonomous practice* (Hart 1996).
It is developmental for practitioners involved to the extent that it can be emancipatory (Greenwood 1994).

Action research underpins professionalism and leads to empowerment by employing methods and procedures based on theoretical research and knowledge for improving practice; establishing sound rationale for what professionals are doing and building confidence and resolution to change things. Adopting a thinking, critical attitude towards practice and testing findings, the professional becomes a catalyst for change and rises above the merely technical to make autonomous and independent judgments within a professional sphere (Gregory 1994).

**Weaknesses**
Pyett (2002) argues that the term ‘action research’ has become too broad – largely because of its use in workplace and industrial settings, where workplace harmony and improved productivity are the goals of the research rather than empowering the workers. There is also a risk of focusing on individual practice rather than collaborative action to challenge the status quo (Hart 1996).

**Relevance to primary health care workforce development**
Action research is part of an approach to professional development which may transform the ‘professional culture into one which supports collaborative reflection about practice and takes the experiences and perceptions of clients into account in the process’ (Elliot quoted in Hart 1996 p 5). It is therefore highly relevant for multidisciplinary, multisectoral and participatory approaches to service delivery. Practice wisdom is particularly important in a field like primary health care where evidence-based practice (as identified by the randomised controlled trial) is often very difficult to demonstrate. Action research develops the capacity of professionals to make judgments in complex environments such as community-based health promotion settings. Action research brings together theory and practice and so helps to make research relevant and useful to policy and practice. This, in turn, increases the likelihood of uptake of research findings in the workplace. Practitioners involved in action research can act as ‘catalysts of change’ so are useful in reorientation services to a primary health care approach.
At a practical level, Gregory (1994) maintains that action research is a relevant way to build on postgraduate qualifications and professional experience, it presents academic challenges as well as being directly related to work, and that the approach works well with diversity (for example, part time study) and can respond to needs and changes in the circumstances of the participant.

3.2 Capacity building

**Definition of capacity building**

Capacity building is defined as an approach to ‘the development of sustainable skills, structures, resources and commitment to health improvement in health and other sectors to prolong and multiply health gains many times over’ (Hawe, King et al. 2000). Capacity building has been described as the ‘invisible’ work of health promotion (Hawe, King et al. 1998). It encompasses a range of ‘behind the scenes’ efforts and activities directed toward sustainability of health promotion initiatives. Examples include:

- developing and maintaining genuine partnerships with other stakeholders
- lobbying to get an issue ‘on the agenda’ across a range of organisations and sectors
- working with management to develop organisational policy or change practice.

Capacity building efforts may be directed towards individuals, groups, organisations, coalitions or communities. The following table demonstrates how capacity building efforts may be directed at a number of levels, concurrently.

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<th>Table 3.1 Levels of capacity building</th>
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<td><strong>Level</strong></td>
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<td>Management</td>
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<td>Project team</td>
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<td>Other sectors</td>
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(Adapted from NSW Health Department 2001)
The NSW Capacity Building Model
The NSW Capacity Building model (refer Figure 3.1) comprises five key areas for strategy development and links these to the three dimensions of capacity building identified by Hawe, King and colleagues in 1998. The three dimensions describe the intent of capacity building activity, which is to enhance independence in health promotion.

1. Health infrastructure refers to the capacity to deliver particular program responses to particular health problems – it includes the structures, organisations, skills and resources for effective program delivery
2. Sustainability refers to the capacity to continue to deliver a particular program through a network of agencies, in addition to, or instead of, the agency that initiated the program
3. Problem solving refers to the capacity, of a more generic kind, to identify health issues and develop appropriate mechanisms to address them (Hawe, King et al. 2000).

In addition, the NSW model highlights the importance of the ‘context’ within which capacity building occurs. Context refers to the physical, economic, political, organisational and cultural environments. It is dynamic and multi-faceted and may enhance, or act as a barrier to, a health promotion initiative. A practical example might be the range of legislative, industry, media, political and social factors that influence smoking behaviour in public places.

Figure 3.1 Capacity Building Framework (NSW Health Department 2001)
Within health departments and agencies, much of the energy has been directed towards the sustainability of specific health promotion programs and broader community capacity building initiatives. In the foreword to the oft-cited NSW publication ‘A Framework for Building Capacity to Improve Health’ (NSW Health Department 2001), the Director General challenges health practitioners and administrators to consider also, the importance of system level capacity.

…it is paramount that when thinking about building capacity within programs, or within the community, that we are also focused on building the capacity of the system to support change (NSW Health Department 2001).

**Strengths**

Some of the identified strengths of a capacity building approach include:

- links local people with content and context expertise with health promotion practitioners with technical and capacity building expertise
- explicit intent of enhancing independence in promoting health
- encourages a progression from ‘hands-on’ development to ‘hands-off’ consultative or facilitative relationships
- focuses on the processes that support change within and between organisations
- encourages partnerships, critical problem solving and leadership
- increases the range of people, organisations and communities who are able to address health problems
- identified as a key ingredient in redressing social exclusion, inequality and vulnerability (Fitzgerald 1999 cited in NSW Health Department 2001)
- works with existing structures, avoids duplication
- evidence that programs that are integrated into existing structures, roles and accountability processes are more likely to be sustained (Bossert 1990 cited in NSW Health Department 2001).

**Weaknesses**

Capacity building is conceptualised by different organisations and sectors in quite different ways. It has been criticised as a ‘top down’ approach that is often linked to a government’s agenda for change. The language of capacity building has similarly been described as paternalistic.

The proponents of the capacity building approach have identified several challenges that lie ahead. These include the need:
for further evidence of how capacity building contributes to health outcomes
to strengthen links between theory and practice
for further application of the approach to designated health priority issues such as physical activity, nutrition and injury prevention (NSW Health Department 2001).

Relevance to workforce development
Proponents of capacity building recognise that the size and scale of action required to improve the health of the population is beyond that which the current workforce can achieve (King and Wise 2000). Similarly, Eat Well Australia and SIGNAL recognise that the specialist nutrition workforce can’t achieve population health outcomes in nutrition-related areas on its own.

Capacity building aims to increase the range of people, organisations and communities who are able to address health problems. This is congruent with the public health nutrition goals advanced by Eat Well Australia and SIGNAL.

3.3 Competencies
Definition of competencies
A definition of competency in a workforce context is given by Heywood, Gonczi et al. (1992) as 'the ability to perform the activities within an occupation or function to the standard expected in employment'. Competencies are:

- based on discrete, atomized, pre-determined and identifiable elements
- derived from management science of prediction and control
- concrete, tangible, measurable
- unchanging, not culturally or socially constructed (Elliott 1991).

Competency standards arose from industry led training systems. As the Generational Health Review points out:

*Industry, as the key driver, determines what it needs as outcomes from training rather than training providers telling industry what they could have as a product* (GHR 2002).

The competency approach assumes that there are defined common tasks to be undertaken by the workforce group. Once core functions have been identified, competency-based approaches to workforce development tend to follow.
Heywood, Gonczi et al. (1992) provide a conceptual basis for competency standards. Competence is an intangible construct and therefore personal attributes that underlie professional competence are assessed. Since competence cannot be observed directly, indirect evidence from which competence may be inferred is needed. Attribute-based inference involves definition of personal attributes believed to underlie competence, and testing to see if they are present. This approach is often used in relation to knowledge and tested by written examination. It assumes that the attribute will translate into competent performance in the workplace. Other attributes such as analytical capacity, experience of judgment, problem solving, empathy etc are difficult to assess and test so may be ignored in assessment of competence.

Performance based inference involves observation of performance in the workplace. Competence is demonstrated by doing something competently, as defined by pre-set standards. Actual results are assessed rather than potential competence. While some attributes are not readily observable eg problem solving, the performance and the results are, so competence can be inferred. It is hard to assess transferability to other settings, so the context needs to be identified. Heywood, Gonczi et al. (1992) note that professionals need to be competent in a range of contexts and suggests combining the two approaches to obtain the benefits of both and overcome the limitations of each.

**Strengths**
The strengths of the competency approach are:

- consistent recognition across States and Territories
- accreditation by all States and Territories for applicants who meet the standards (whether trained in Australia or overseas)
- open and equitable assessment of those with overseas education and work experience against agreed, public standards of performance
- articulated training and progression within industries
- recognized articulations with related occupations (Heywood, Gonczi et al. 1992)².

The Generational Health Review also notes the advantage of training and development being accredited and articulated into further qualifications (GHR 2002).

² The emphasis on overseas qualifications and need for portability across states reflects NOOSR priorities.
**Weaknesses**

Elliot (1991) suggests that the competency approach denies professional judgment and reduces the workforce to technical operatives. The competency approach only delivers ‘habitual skill knowledge’ but the professional needs ‘intelligent skill knowledge’ that allows situational understanding. Intelligent skill knowledge includes discernment, discrimination and intelligent action; that is, practice wisdom.

**Relevance to primary health care workforce development**

The competencies approach facilitates the development of an accredited and standardised workforce. This is likely to encourage flexibility between different areas of work and articulated training, rather than the ad hoc approach often experienced. This could be an advantage in the primary health care context, where many workers are not trained in a specific discipline or profession. However, competencies are developed to deliver a workforce with the specific skills that an industry needs. This focus on industry needs may be in conflict with professional views and expectations of workforce development and broader educational goals.

**3.4 Summary and conclusion**

Three main approaches: action research, capacity building and competencies have been described. The action research approach, which here includes action learning, focuses on generic skills and abilities, building autonomy and professional knowledge and developing practice wisdom. The approach can be applied at individual worker, team or organisational level. Concepts such as community partnerships, intersectoral work and consideration of equity can be explored and developed. This makes it ideally suited as a method to reorientate the workforce and services to a primary health care approach and to increase individual and organisational capacity to undertake primary health care.

A more recently developed approach – capacity building – has been enthusiastically promulgated within the Australian health promotion and primary health care workforces. Capacity building aims to increase the range of people, organisations and communities who are able to address health problems. Like action research, it is an approach that encourages partnerships, critical problem solving and leadership. Capacity building builds on existing structures and capacities within individuals, groups, organisations and systems. It is explicitly focused on the sustainability of
health promotion programs and initiatives following the initial investment phase.
Workforce development is identified as one of the core strategies of a capacity
building approach, along with organisational development and resource allocation. In
this context, workforce development largely refers to training and education
initiatives. The crucial factor, however, is that a capacity building approach views
education and training as just one of the strategies that are required to sustain health
promotion initiatives and outcomes.

The competencies approach tends to be more discipline specific, and focuses on
technical expertise, standards and accreditation, and safety and quality of services.
Competencies are assessed and applied at individual worker level and can be
standardised across services or (inter-) nationally. The competence of workers may be
assessed in terms of their knowledge, or by observing the results of their actions.
Increasingly, the competency approach is also being used to assess generic skills (for
example, advocacy, partnership development, planning and evaluation).

None of these approaches appears to have been evaluated systematically, in terms of
their contribution to workforce development.

Although presented here as exclusive streams it would seem sensible to take the best
from each approach depending on the specific goal of the workforce development. For
example, a community nutritionist might need competencies around diagnosing and
responding to specific dietary needs and advocacy skills to work with local media to
promote healthy foods. A school canteen manager would need safe food handling
knowledge and skills but also the confidence and ability to work with teachers,
parents, students and local communities in establishing a healthy eating policy at
school.

If the focus of the workforce development is to produce a workforce capable of
driving and responding to a reorientation to primary health care, then an approach that
reflects primary health care values is an important criterion.
4. Models, Methods and Strategies

This section of the review describes and assesses models of workforce development in a range of primary health care settings. There is also discussion of the effectiveness of the approaches, where such evidence has been identified. The models have been classified under one of the three approaches described in Section 3. It should be noted that the classifications overlap and are not intended to be definitive.

The following models, methods and strategies for workforce development are discussed:

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<td><strong>Capacity building</strong></td>
<td>Moving the Focus: Health Promotion in Domiciliary Care – Port Augusta</td>
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4.1 Action research models

Only one documented workforce development example of action research in a primary health care setting was found. This probably reflects the educational background of the action research methodology.

**Public Health Schools Without Walls**

Public Health Schools Without Walls (PHSWOW) is a 2-year postgraduate course conducted by the Division of International Health, Centers for Disease Control, Atlanta. The PHSWOW course is undertaken as a collaborative venture between a sponsoring university and the ministry of health (or other sponsor). The program aims to provide students with tools in epidemiology, management, behavioural science, communications and economics that will help them to assess priorities and develop
effective public health interventions. Ghana, Uganda, Zimbabwe and Vietnam have been involved in PHSWOW collaborations. Examples of PHSWOW initiatives include evaluating programs for HIV/AIDS and other diseases, and studying epidemics of diseases such as cholera.

The PHSWOW approach has a strong action research focus, acknowledging the socio-economic determinants of health and the political and cultural enablers and barriers to effective solutions. It aims to assist students to:

- identify priority problems
- learn to ask the right questions
- retrieve and synthesise relevant information
- develop habits of reflection and critical appraisal
- base decisions on an analysis of available evidence
- recognise gaps and inconsistencies in knowledge
- balance accepted knowledge against observed reality, and
- accept viable solutions, even when they are less than ideal

(Centers for Disease Control and Prevention 2002).

Evidence of effectiveness
The Centers for Disease Control website provides a brief description of PHSWOW collaborations in Ghana, Uganda, Zimbabwe and Vietnam, including the number of graduates from each country. However, no evaluation of PHSWOW initiatives could be found so it is not possible to provide an assessment of effectiveness.

4.2 Capacity building models
Many health services and systems in Australia have adopted the language of capacity building, and workforce development is a key component of this approach.

Moving the Focus: Health Promotion in Domiciliary Care – Port Augusta
The Port Augusta Domiciliary Care Team comprises 50 workers and is one of four teams in the Flinders and Far North Community Health Service. In 2000 – 2002, the Service was engaged in a project to develop an organisational culture that was team oriented and cognisant of a primary health care approach. A strategic plan was developed that focused upon implementing changes to service delivery informed by a
philosophy of cultural diversity, primary health care, continuous quality improvement, community partnerships, participation and improved accessibility.

Project funding from Health Promotion SA supported the employment of a project officer to implement the strategic plan. The project utilised a set of established capacity building strategies – the NSW Capacity Building Framework (NSW Health Department 2001) – that were both adapted to suit the region and expanded to include the development of the health promoting capacity of consumers and other stakeholders.

The project had three objectives and was evaluated in terms of how well it met each of them. The objectives were:

1. Develop the skills and knowledge of key people within the Health Unit, local organisations and community groups
2. Strengthen organisational support for health promotion action
3. Develop and implement resources to conduct continuing primary health care and health promotion activities and projects (Lawler 2002).

Evidence of effectiveness
The evaluation was supported by the South Australian Community Health Research Unit (SACHRU) and utilised a questionnaire survey and interviews to gather feedback from allied health and home care staff and members of the consumer reference group. The evaluation demonstrated that the project had improved health promotion knowledge and practice in the rural domiciliary care setting. It found that the project had developed an effective consumer participation model that had gained strong community and organisational support. The evaluation also identified a number of factors that were crucial to project sustainability and success. These included the presence of the health promotion project officer as part of the Domiciliary Care Team over a 15-month period and who was able to provide on-site support and workforce development opportunities. The role of community health managers as ‘champions’ of the change process and in developing organisational supports for health promotion (by writing health promotion into job descriptions, for example) was also crucial.
**Eat Well SA project**

The Eat Well SA (EWSA) project was a multi-pronged, multi-sectoral strategy aimed at increasing the consumption of healthy food by young families in South Australia. The project used a settings approach based on Ottawa Charter strategies rather than the traditional nutrition education model. The activities and achievements of the project from 1997 to 2000 were evaluated and reported in 2001 (Laris, Jolley et al. 2001).

One of the objectives of EWSA for this period was to promote healthy eating by preschool-aged children. The strategy involved establishing a SA Child Care Nutrition Partnership that undertook a number of workforce development activities. Partnership members included child care associations, the Department of Education, Training and Development, TAFE, Gowrie Training Centre, SA Dental Service, Australian Nutrition Foundation, cooks working in child care, nutritionists, Eat Well SA, Anti-Cancer Foundation, National Heart Foundation, Community Health Services and the Department of Human Services. Main activities were production of a newsletter, workshops for nutritionists, two conferences for child care centre cooks, input to TAFE training course, contributions to the SA Child Care Centre Regulations Handbook and conference presentations.

**Evidence of effectiveness**

Competency standards and workplace assessment tools were developed for a stream of the Community Food Services Certificate for childcare centre cooks. Respondents to the evaluation saw this as a positive step, however there were some concerns about the financial burden to centres in terms of trained cooks being more expensive to employ. The newsletter received a mixed reception – it was considered a reliable source of information but often workers did not have time to read it carefully. The newsletter was considered useful in disseminating ideas and raising awareness of food and nutrition issues. The conferences were also considered to raise awareness about food and nutrition in cooks but there was some indication that those who attended were already interested in, and committed to providing, healthy food. Financial and time constraints were mentioned as barriers to attending these activities, particularly for rural child care centre staff.
Overall, the Partnership acted as a strategy to raise awareness and share knowledge and skills. Once trust was established, good working relationships enabled the sharing of advice and support.

The evaluation suggested that a mix of strategies is more likely to be effective in achieving wide coverage of the target population for workforce development. While the dissemination of credible and reliable information is important, it is insufficient on its own. Workshops and conferences facilitate increased awareness and uptake of new ideas but it is important to find ways to engage those members of the workforce who do not, or cannot, choose to participate. System or organisational support and encouragement are likely to be needed. Multi-sectoral groups can be very effective in driving change in training and policy, provided time is allowed for building trust. Such partnerships also facilitate exchange of skills, knowledge and ideas and can act to support members in developing their capacity to work in a way consistent with primary health care principles.

**NCETA: workforce development for the Alcohol and Other Drugs field**

In May 2001, the National Centre for Education and Training on Addiction (NCETA) held a three-day Symposium on Workforce Development for the Alcohol and Other Drugs field. The meeting identified the following challenges:

- significant expansion in the AOD knowledge base in recent years
- growing emphasis on evidence-based practice
- information technology explosion (Roche and McDonald 2001).

NCETA aims to re-orient workforce development from a narrow focus on education and training toward a broader approach that is inclusive of systems and settings approaches. ‘Newer’ approaches to workforce development include lifelong learning, organisational change and systems approaches. Roche notes:

> The strategies required to develop an adequate workforce response to alcohol and drug problems extend well beyond the narrow traditional notion of “training”. Systemic and sustainable changes within key organisations and agencies are also essential. A major paradigm shift is required to refocus our thinking away from an exclusive orientation on training to one which encapsulates factors such as organisational development, change management, evidence-based knowledge transfer and skill development.
To date, these areas have received relatively little attention in the AOD field, and yet remain crucial to the successful implementation of services, programs and policy responses. Encouraging reflection and action at a systems level, rather than exclusively at an individual level, is pivotal to achieving sustainable improvement and change (Roche and McDonald 2001).

Conceptually, workforce development necessitates a broad, comprehensive and multifaceted approach. It involves systems, settings and people. To facilitate and sustain new practices in the workplace requires a range of strategies that can be grouped as:

- education and training – which address knowledge, attitudes and skills
- support for skills and knowledge (e.g., information systems)
- workplace structure and policy (e.g., resource allocation, management support and priorities).

For the alcohol and other drugs field, workforce development is primarily concerned with the process of translating research to practice. Research in this context is broadly defined to encompass not only the ‘evidence base’ for specific interventions but also the ‘program logic’ of contemporary approaches to complex social phenomena such as substance misuse and addiction.

Evidence of effectiveness
Much of what has been written about workforce development in the alcohol and other drugs field ‘makes sense’ for nutrition. The critical issue, or challenge, would appear to be how to do education and training to facilitate transformation and the uptake of new knowledge into practice. This is where action research would seem to have much to offer. Effective and sustainable workforce development requires reflection and action at the systems level, as well as at the individual and workgroup levels.

Preparing the Ground for Healthy Communities: workforce development in rural SA
The ‘Preparing the Ground for Healthy Communities Manual’ describes:

one approach to making the shift towards working in a primary health care way. It is an approach which focuses on using workforce planning and development as a strategy for change. In this approach, the workforce includes community members and involves them as full participating and contributing partners. This approach to workforce development has grown out of the experience of a rural area in SA (May, Crawford et al. 1997).
May, Crawford et al. (1997) identify the integration of a primary health care approach across human services as a key driver of the change process in rural SA. The authors argue that implementation of a primary health care approach across human services challenges individuals, organisations and systems to change and that workforce development is one of the tools that can facilitate effective primary health care practice.

May and Crawford et al. (1997) provide the following description of system, organisational and individual change:

- **System level change** occurs when policy changes or new structures are introduced. Examples include the regionalisation of health services and the adoption of a primary health care policy at State level.
- **Organisational level change** occurs in response to system level change or as a result of rethinking within an organisation, sometimes led by one or more key individuals.
- **Personal level change** occurs when an individual is exposed to new and different ways of approaching an issue or a new way of thinking which challenges their traditional or usual ways of thinking or doing things.

‘Traditional’ approaches to workforce development have focused primarily on training workers without considering other changes in the workplace or health system. Some of the limitations of past approaches include:

- Limited coordination and planning.
- Ongoing demand for ad hoc training for individuals.
- Limited structures and processes to support workplace change.
- Lack of management support.
- Limited opportunities for workers and managers from different sectors, disciplines and the community to train and work together in primary health care.
- Driven by, and reliant on, city based training providers.

(May, Crawford et al. 1997).
Evidence of effectiveness
The challenge of integrating primary health care across human services was seen to require a more comprehensive approach to workforce development, one that included human service organisations and systems. May and Crawford et al describe nine key features of their model and rank them in order of priority. The key features are:

1. A planned approach
2. Integrated into a broader change framework for primary health care
3. Collaborative
4. Multidisciplinary
5. Intersectoral
6. Involves the community
7. Regionally and locally relevant
8. Sustainable
9. Integrated into all workforce development activities in the region.

May and colleagues acknowledge the importance of a supportive environment, both in terms of resources and the workplace infrastructure/culture, for example through role legitimization:

[The Manual] can assist a region or community to achieve their vision for a healthy community...by developing a workforce and a community which can work from a primary health care perspective and is supported by infrastructures and a framework for PHC.

The critical factor in this approach is working with key people so they have a:

- common vision for the health of their community
- common understanding of PHC
- supportive framework within which they can practise primary health care effectively (May, Crawford et al. 1997).

Health Promoting Schools – a settings approach
The Health Promoting Schools approach provides a framework for schools to improve the health and wellbeing of the school community.

The concepts of the health-promoting schools provide vision and direction for creating a framework for policy and actions that can strengthen both education and health. (AHPSA not dated).
Health Promoting Schools:

- take a whole school approach
- address initiatives within the curriculum, school environment and partnerships
- provide a process for planning, implementing and evaluating
- help to unify a range of initiatives.

The health-promoting school approach is based on the following principles. It:

- links health and education
- is evidence based
- recognises and builds on the social determinants of health
- is cost-effective
- offers opportunities for coordinated and integrated responses
- recognises schools as key agents of socialisation and settings for health development (AHPSA not dated).

Workforce development is identified as one of eight key action areas to support health promoting schools. The strategic recommendations relating to workforce are:

- that the development and delivery of health-promoting school training, which is informed by contemporary theories of learning, educational change, and school-based practice should be coordinated, supported and resourced
- that national, state and territory education and health departments and the tertiary education sector:
  - support pre-service and in-service health-promoting school training programs for health and education professionals and other members of school communities (eg. parents, students, health staff)
  - encourage use of health-promoting school approaches in reforming school organisational structures and processes
  - sanction the place of staff well-being in the workplace/ school, and address it through health-promoting school approaches
- That at the school level, time and resources are made available to enable a critical mass of school community members to engage in health-promoting school professional development including:
o school-based reflection on practice, and action in relation to curriculum teaching and learning, school ethos, environment and organisation, and school community partnerships and service links (e.g. action research process)

o use of health-promoting school principles to review and revise school organisation, management decision-making and operating practices

o partnerships with education and health researchers (AHPSA not dated).

Evidence of effectiveness
The National Framework for Health Promoting Schools 2000–2003 identifies the health promoting schools initiative as a ‘best practice’ framework for school health promotion and for intersectoral collaboration for health in schools. Four references are cited as supporting this claim: AHPSA (1997); Lister-Sharp, Chapman et al. (1999); NHMRC (1996); WHO (1996). The NHMRC examined the evidence concerning school health programs in 1996. The aim was to identify necessary criteria for successful health promotion in schools. The NHMRC report concluded that:

The evidence points overwhelmingly to the adoption of comprehensive and integrated approaches to teaching and learning, which foster teams within the school and in the local community, and which support healthier behaviours by addressing the physical and psychosocial environment of the school, through supportive policies and practices (NHMRC 1996 cited in AHPSA not dated).

The Health Promoting Schools model warrants close inspection. Staff pre-service and in-service training is one aspect of the health promoting schools model, situated within a broader focus on student learning and curricula. The model highlights school ethos, values, policies and partnerships as other important and intersecting dimensions of a health-promoting schools approach. It is more akin to an organisational learning/change model and capacity building approach than a workforce development model. Yet the critical factor in the health promoting schools approach is likely to be the same as that identified by May et al (1997) in relation to the integration of a primary health care approach across human services in rural areas – working with key people so they have:
➢ a common vision for the health of their community
➢ a common understanding of health promotion
➢ a supportive framework for practice.

4.3 Competency models

In the early 1990s, there was considerable interest in the development of competencies for the public health and health promotion workforces. Some of these initiatives are described below. The ‘drivers’ of this work have included educational and professional bodies as well as state and commonwealth health departments. This is contrary to the suggestion that industry is, or ought to be, the key driver in identifying the desired outcomes of training (GHR 2002). While there has been considerable effort and resources put into competency development, there appears to be little, if any, evaluation of this approach.

Public Health

As part of the Public Health Workforce Study in 1990, the Public Health Association of Australia (PHAA) delineated a set of 19 core competencies for professionals working in public health. Public health employers were asked to identify which competencies were essential and those which were desirable. Students enrolled in postgraduate public health courses were asked to report areas in which they wished to be more competent.

The Public Health Workforce Education and Training Study was commissioned by the Department of Human Services and Health and undertaken by the Centre for Public Health, University of New South Wales (UNSW) in 1995. As part of this work, the Centre for Public Health developed 28 competencies covering both knowledge and skills domains. Students and graduates of postgraduate programs in public health were asked to nominate the importance of the areas to their present work, as well as their perceived competency in the 28 areas. In addition, graduates were asked to nominate how well the area was covered in their studies and whether they required additional training in that area. Managers and staff of public health programs and services were also surveyed.
**Health Promotion**

In 1994, the NSW Health Promotion Unit articulated six roles that would be expected of a health promotion practitioner after two years of experience. These roles comprised 24 competencies. The Competency Based Standards for Health Promotion in NSW include performance criteria for each of the competencies, consistent with the National Training Board format (Public Health Association of Australia Inc. 1995). The NSW competencies have been used extensively in training staff (AHPA 2001).

The Centre for Health Promotion Research at Curtin University and the Australian Association of Health Promotion Professionals undertook a Delphi study and workshops in WA to identify core competencies for health promotion graduates. Thirty-seven competencies were identified and subsequently used in evaluating undergraduate health promotion courses conducted by the Department of Public Health at Curtin (Public Health Association of Australia Inc. 1995). The competencies were revised in 2000 (AHPA 2001).

**Aboriginal Health Workers**

In May 2002, the Standing Committee on Aboriginal and Torres Strait Islander Health released the ATSI Health Workforce National Strategic Framework. The report argues that a competent health workforce is integral to ensuring that the health system has the capacity to address the needs of ATSI peoples. Workforce reform and consolidation are posited as key strategies to achieve a competent workforce, and as requiring collaboration between Commonwealth, State and Territory governments and the ATSI community controlled health sector (Standing Committee on Aboriginal and Torres Strait Islander Health 2002).

The aim of the National Strategic Framework is:

> To transform and consolidate the workforce in Aboriginal and Torres Strait Islander health to achieve a competent health workforce with appropriate clinical, management, community development and cultural skills to address the health needs of Aboriginal and Torres Strait Islander peoples, supported by appropriate training, supply, recruitment and retention strategies.

The strategic framework is developed around five objectives. The second objective embodies a discussion of competencies as a way to better define the scope of practice of Aboriginal Health Workers.
Improve the clarity of roles, regulation and recognition of ATSI Health Workers as a key component of the health workforce, and improve vocational, education and training sector support for training for ATSI Health Workers.

Currently, the term Aboriginal Health Worker encompasses a number of related vocational streams, including liaison, patient transport, alcohol and substance misuse workers, social and emotional well-being workers, and men’s, women’s and sexual health workers. The report endorses the development of an Aboriginal health worker vocational system to support comprehensive primary health care practice (i.e., a system that accommodates the various vocational streams and roles mentioned earlier).

The report recommends the development of national competency standards for Aboriginal Health Workers to promote consistency, portability and safety to practice. The national competency-based training framework is suggested as an appropriate base from which to develop these competencies.

The Standing Committee also recommends an increased focus on training for work in multi-disciplinary teams, particularly for allied health, medical and nursing students. It suggests that initiatives to improved current training programs could include coaching and mentoring strategies.

**Dietitians Association of Australia**

The Dietitians Association of Australia first developed competencies for entry-level dietitians in 1990, followed by further development of assessment strategies for National Competency Standards in 1992-3. The DAA states that:

> competency-based assessment is an approach to establishing occupationally-relevant standards of competence. The emphasis is on demonstrated competence in the skills important to an occupation or profession, rather than measuring knowledge in isolation from skill, or on measuring the time that has been spent in formal professional or academic training (Dietitians Association of Australia 1993).


The standards were developed by group workshops and interviews with recent graduates and draft papers were circulated widely for comment. Competencies are inferred by testing for the presence of desired attributes and by observation of
performance by individuals in the workplace. The first sub-division of the overall competency framework is into units reflecting the significant major functions of the profession or broad areas of performance. There are eight units of competency for entry-level dietitians in Australia, as listed:

1. Demonstrates knowledge sufficient to ensure safe practice
2. Interprets and translates scientific knowledge and principles related to nutrition into practical information
3. Collects, organises and assesses data relating to the health and nutritional status or individuals and groups
4. Manages nutrition care for individuals
5. Manages components of programs which deal with nutrition issues in the community as part of a health care team
6. Influences and contributes to activities promoting a safe and nutritious food supply
7. Demonstrates basic skills in research and evaluation
8. Demonstrates an organised, professional and ethical approach to work.

Units are further sub-divided to elements describing in more detail what is done within each competency. Performance criteria then describe what would constitute adequate evidence of personal competence.

**Evidence of effectiveness**
This literature review did not find documentation of an evidence base for the competencies approach to workforce development.

### 4.4 Discussion

This section has reviewed several approaches to workforce development in primary health care, variously described as models, methods or strategies. What are the lessons for public health nutrition workforce development?

There appears to have been little documented use or evaluation of the action research model in this setting. The health sector has instead taken on a capacity building model as first developed in NSW. From the case studies described earlier some key lessons can be identified. The importance of organisational, community and environmental support is stressed. This support might be realised as ‘champions’ within an
organisation, supportive policies and practices, and the availability of on-site workforce development opportunities and support to take advantage of these. Workforce development needs to be planned, comprehensive and integrated with the goals of the organisation. In a primary health care context the notion of ‘workforce’ may be extended to include the wider community of stakeholders. A partnership or multidisciplinary approach to workforce development facilitates exchange of skills and knowledge but this requires trust and good working relationships in order to be successful.

Some barriers and challenges to the capacity building approach were identified. Information provision on its own is insufficient to bring about change in behaviour. A strength of action research and capacity building approaches is that there is a focus on transferring new knowledge and skills into practice. This is more likely to occur when there is reflection and action at system, organisational and individual levels. A barrier to taking up workforce development opportunities is the financial and time constraints on workers in most primary health care organisations. This again stresses the need for organisational and system support.

An action research/capacity building approach starts from the premise that improving population health outcomes related to nutrition is a complex goal that needs a primary health care approach which encapsulates community participation, a focus on the socio-economic determinants of nutritional health, a partnership approach, healthy public policy, intersectoral collaboration, and a comprehensive range of strategies. Effective implementation of a primary health care approach requires a range of skills and (re)orientation of health services and the health workforce. The focus of workforce development is to develop skills in advocacy, community participation and partnership approaches across a broad range of disciplines. The logic of this approach is illustrated in Figure 4.1
The competency model has been developed over the last 10 – 15 years, mainly by professional associations and/or in consultation with the relevant workforce. The main benefits are consistency of skills and knowledge, portability of qualifications and quality assurance. Other than the use of accreditation to meet quality assurance indicators, there appears to have been little evaluation of the effectiveness of this model for workforce development in the public health nutrition sector. A question which arose in one case study was about the cost of training and education towards accreditation, and the additional costs of employing accredited workers. This is part of a broader question about who should pay for quality assurance within an organisation.

Figure 4.2 illustrates the logic of a competency approach to improving population health outcomes related to nutrition. This model focuses on the available evidence to support specific interventions and the skills that are required to implement these. The development of competencies facilitates assessment, accreditation and standardisation of skill sets.
COMPETENCIES APPROACH

Goal: Improved nutritional health of population

What interventions work?

Define priorities

Apply evidence

What knowledge, skills, abilities does workforce need to implement

Identify competencies

Assess current workforce capacity

Identify gaps

What workforce development is needed?

Driver of workforce development is the need to deliver interventions that work.

(based on work of Roger Hughes pers. comm. October 9, 2002)

Figure 4.2 A Competency Approach to Workforce Development

Primary health care settings provide opportunities for implementing nutrition prevention strategies. SIGNAL maintains that the most effective way to engage primary health care professionals in preventive initiatives is to provide programspecific training (SIGNAL 2001).

Most of the ‘models’ seem to be about broadening workforce development to include organisational and system changes. Workforce development has been used to drive change, for example in implementing a primary health care approach in rural and regional setting. Workforce development is also described as a strategy to respond to, or cope with, change (as in the alcohol and other drugs field).
This review of the literature suggests that, in order to improve nutrition outcomes for populations or settings of interest, there is a need to take action at both:

- system/policy level – to create an environment supportive of workforce development
- primary health care workforce level – to support the uptake of evidence into practice.
5. Evaluation of workforce development strategies

The literature search for this review found little evaluation of workforce development strategies. Similarly, there has been little systematic evaluation of the models described in Section 4 above. According to the Australian Health Promotion Association (2001)

\textit{Evaluation of workforce development activities isn’t part of organisational planning.}

An indicator of the effectiveness of workforce development is a positive change in behaviour or practice. The difficulties of translating new knowledge, skills and research evidence into practice are widely recognised. The report on health promotion workforce development (AHPA 2001) mentions formative evaluation with regard to the effectiveness of traineeships, research scholarships and other short education and training initiatives. It also describes the ‘Core Skills Health Promotion Course’ in NSW and the range of strategies used to support the short course, maintaining that ‘a number of reports have been produced that describe changes in practice following implementation’. However, no references are cited.

The AHPA report cites performance indicator work in SA and NSW as one attempt to integrate workforce development with organisational planning and review. As part of the ‘Performance Indicator’ project in community health services in SA, one of the task groups developed draft performance indicators for workforce development. The task group included several members of the Country Primary Health Care Forum and looked at developing indicators appropriate for a regional primary health care context (AHPA 2001; Performance Indicators in Community Health Project Working Group 2002).

Best practice evidence for workforce development specifically in health promotion is scarce. However, research evidence in the fields of knowledge use, practice development, organisational learning, diffusion of innovation and professional development indicate that training alone cannot resolve complex problems (AHPA 2001).
There are many different types of interventions that can be used to promote behavioural change among professionals and the implementation of research findings, but few rigorous studies that have examined the effectiveness of these interventions. In a review of interventions to promote the implementation of research findings by frontline workers, the Cochrane Effective Practice and Organisation of Care Review Group found that passive dissemination of information is generally ineffective in changing workplace practice no matter how important the issue or how valid the assessment methods (Bero, Grilli et al. 1998). The review found that multifaceted strategies were more effective than single strategies. Effective interventions for promoting behavioral change among health professionals included:

- educational outreach visits
- workshops involving discussion and practice
- reminders or prompts for behavioral change – manual or computerised.

Other strategies were found to be effective when used as part of a multifaceted approach. Strategies in this category included:

- audit and feedback techniques
- key practitioners as opinion leaders
- local consensus approaches.

The review also reported that few researchers attempted to link their findings to theories of behaviour change. Possible theoretical perspectives from which practice behaviour change can be studied include:

- diffusion of innovations
- education theory
- social influence theory
- management theory
- marketing
- a rational (or epidemiological) approach.

To date, no single theoretical perspective has been adequately validated by research (Bero, Grilli et al. 1998).
6. Conclusions and next steps

Is there an evidence base for effective approaches to workforce development for the primary health care and other relevant non-health sector workforces who have a role in improving nutrition? If not, how do we develop one?

This review has found that:

- there does not appear to be a body of evidence on workforce development methodologies in the peer-reviewed literature or the grey literature reviewed
- there appears to be little evaluation of workforce development models and programs for the primary health care, including specialist nutrition, workforces
- there are acknowledged limitations of current education/training in supporting the primary health care workforce to incorporate change
- the focus on workforce alone is not sufficient – workforce development approaches tend to be individualistic, rather than environmental
- there is a need to integrate workforce development into the broader context of the organisation and public health policy
- capacity building and competency-based approaches both have a place and show promise
- transfer of new evidence into practice is key and needs organisational support as well as support for the primary health care workforce.

6.1 Implications of health sector reform

The needs of the health system are changing, locally and globally, but professional roles are entrenched (National Health Service 2001; GHR 2002). Reform and change within health systems is being driven by globalisation and adoption of market forces, increasing development and cost of high technology treatment and pharmaceuticals and the ageing of the population. Within Australia, one response to the spiralling cost of acute care is to consider a re-orientation to primary care or primary health care. If this does occur it will impact on the type of workforce required to deliver services.

*There is a need to ensure levels of education and training provided match the needs of health system. For example, if significant activity is shifted from acute sector to primary health care in the community, then the education and training system needs to respond to this change and design courses that reflect the competences required to work within community settings (GHR 2002).*
Workforce development needs are also changing, but again the mechanisms are somewhat entrenched in an individual approach – tertiary, vocational education and training, staff development programs etc. A shift to primary health care will require a workforce that is willing and able to work in multidisciplinary teams and across sectors.

The Generational Health Review suggests some possible ways forward:

- establish a formal structured and resource program for capacity development and career advancement of all staff in the health sector
- develop a strategy that ensures education and training institutions meet the future health workforce needs of the State
- support measures to enable health professionals to easily obtain training in different specialties – thereby enhancing the movement and access of skills
- explore the development of a common health professional training base (GHR 2002 p119).

6.2 How can we get food and nutrition on everyone’s agenda?

The primary health care workforce includes specialist dietitians and nutritionists, other health workers and people in the non-health sector. In order to promote an understanding of the importance of good food and nutrition more widely, the nutrition health promotion sector needs to advocate and lobby for primary health care and food/nutrition topics to be included in all health education and training. It will be important to characterise all the workforces with an interest or impact on nutrition so that specific approaches and issues for workforce development can then be identified to suit particular populations and settings. Organisational and system development needs to run concurrently in order to increase the effectiveness of workforce development and ensure the transfer of evidence into practice.

Figure 6.1 illustrates a workforce development model that encompasses evidence-based practice in the development of policies and programs and the use of action research to identify what workforce development is needed to implement these. Workforce development strategies are then implemented using competencies or capacity building approaches as appropriate, giving consideration to the context and
target population. Reflection and evaluation occurs at each step and feeds back to policy or program development.

![A Model for Workforce Development](Figure 6.1)

**Evidence**
(Health status/outcome)

**Program or Policy**

**Action Research**
Identifies workforce development needs

**Competencies**

**Capacity Building**
(System/organisational support)

Specific workforce Methods/strategies Resources

Figure 6.1 A Model for Workforce Development
6.3 What do we need to know in order to take the next step?

A number of questions arise that need to be considered in establishing strategies and implementing workforce development. Some questions are relatively simple, others will require broad engagement by policy makers and the primary health care sector.

1. What are the future needs and directions in health services and public health nutrition (eg policies, structures, programs) to address South Australia’s nutrition priorities?

2. What are the implications of these for workforce development – at health service, regional and state levels and across government departments?

3. Which are the workforces with potential to contribute to making improvements in nutrition-related health outcomes in priority populations or around priority issues?

4. Who should be the initial target for workforce development – nutritionists/dietitians or the broader primary health care workforce, or both?

5. What are the characteristics – number, roles and positions – of the specialist nutrition workforce and other primary health care workforces whose work encompasses addressing nutrition issues?

6. What current education and training is available in SA in food and nutrition issues for public health and primary health care, including specialist nutrition, workforces?

7. What theories of behaviour change are most appropriate for workforce development?

8. What approaches to workforce development are most effective and for whom?

9. What resources are needed to support workforce development and where might they be found?
Appendix A: Description of *Nutrition Workforce Development for Primary Health Care* project and context of the review

This section provides a brief overview of the food and nutrition context in South Australia, information about the background to the review, the purpose and aims, and the process of implementation.

**A.1 Context and background**

**Food and Nutrition Policy context**

The Commonwealth Government launched a National Food and Nutrition Policy in 1992 with the aim of fostering changes in food choice and eating behaviour at the individual and population level. Its goal is to ‘improve health and reduce the preventable burden of diet-related early death, illness and disability among Australians’ (SIGNAL 2001). There are five key policy issues or principles identified by the policy document:

- social justice
- quality of food supply and food system
- community participation, intersectoral action and partnerships
- food and nutrition system and its wider interactions
- ecological sustainable development.

Following evaluation of the implementation of the policy in 1995, critical partnerships and whole of system issues were emphasised. Subsequently, Eat Well Australia – the national public health nutrition strategy – was developed under the guidance of SIGNAL.

**SA Food and Nutrition Policy context**


**Background to project**

Eat Well South Australia is the state public health nutrition action plan. The *Nutrition Workforce Development for Primary Health Care* project was initiated as part of Eat Well South Australia, in response to the national nutrition strategy, Eat Well Australia (incorporating the National Aboriginal and Torres Strait Islander Nutrition Strategy and Action Plan), and the SA Food and Health Policy. Eat Well South Australia is a population strategy. It reflects the need to engage a broad range of organisations in both health and non-health sectors, the latter, for example, including the community services and local government sectors.
The draft Eat Well South Australia plan comprises six key action areas:

1. Improving nutrition for mothers, infants and young children
2. Increasing consumption of vegetables and fruit
3. Promoting the healthy growth and weight of children and the prevention of weight gain in adults
4. Improving nutrition for older people
5. Improving food supply, food access, food security (particularly for vulnerable groups) and increasing demand for healthy food
6. Developing state infrastructure and capacity to support nutrition improvement.

Workforce development, along with research, communication, monitoring and evaluation is a component of this last area and an integral part of achieving outcomes in all other areas.

Health Promotion SA sees one of its roles as contributing to building capacity to promote health. As far as nutrition is concerned, organisations and workers have articulated a range of needs. A survey was conducted in 2001 in preparation for the preliminary draft of Eat Well South Australia. In response to questions about what organisations needed to support their nutrition work and what they thought the SA Department of Human Service (DHS) could do, broad themes identified were the need for funding, partnerships, resources, training and more specialist nutrition staff. A state nutrition network was established in December 2002. At the first two meetings, the members, who are almost all specialist dietitians or nutritionists, identified the need for a more coordinated approach to improving nutrition, resources, more support for nutrition at central level and in their own organisations. It is thus an ideal time to commence tackling workforce development for improved nutrition.

Overall the public health nutrition workforce development project is envisaged as containing the following three phases:

1. Identifying effective approaches to workforce development for the primary health care and other relevant non-health sector workforces
2. Establishing strategies, in conjunction with key groups, to enhance workforce capacity to contribute to addressing Eat Well South Australia priorities
3. Implementing and evaluating workforce development approaches to improving population health via improved nutrition.

This review and report is concerned with the first of these phases.

A.2 Description of review

Aim

To identify models and effective approaches to workforce development for the primary health care and other relevant non-health sector workforces.
**Objective**

To undertake a literature review on the theoretical and methodological approaches to workforce development in the primary health care sector, with a focus on action research methods, and approaches to improving nutrition.3

**Strategies**

1. Search existing literature (both peer reviewed and ‘grey’ literature) for models of workforce development which have used a primary health care approach eg action research, and address improving nutrition
2. Describe theoretical frameworks used for models of primary health care workforce development in different settings
3. Examine methods and strategies used for workforce development in primary health care approaches and report on their effectiveness.

The target audience for the report is: Health Promotion SA; DHS; managers and service delivery staff in organisations that have a role in addressing priorities of Eat Well South Australia, for example, organisations in the community health (metro), regional health (country), local government and community services sectors.

**Implementation and management**

A small reference group was formed to provide expert advice to the review. The reference group comprised the contract manager, Patricia Carter, Health Promotion SA, DHS; a consultant, Dr. John Coveney, Department of Public Health, FUSA and representation from other relevant groups, including:

- Australian Health Promotion Association (SA branch) – Cynthia Spurr
- Nutrition Unit at Flinders University – Kaye Mehta
- Metropolitan Division, DHS – Alison Pascoe
- Social Justice & Country Division, DHS – Geoff Cook

Three reference group meetings were held – October 24th and Dec 17th 2002 and March 19th 2003.

The purpose of the Reference Group was to:

- provide expert knowledge on public health nutrition and primary health care workforce development issues
- assist with identification of literature, particularly ‘grey’ literature
- read and comment on report drafts.

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3 The New South Wales capacity building framework definition of workforce development and NCETA work on workforce development for Drug and Alcohol workers provide examples of the approach taken in the project. For the purposes of this project ‘primary health care’ also includes relevant non-health sector workforces such as those in local government, community services, and industry. The particular workforces will depend on the particular issue being addressed.
**Method**

A literature search strategy using electronic databases and the internet was piloted in April/May 2002 and, from the results of this, search terms and limits were established. The main literature searching took place in July-August. Relevant material was identified from abstracts and full texts obtained. All material was entered onto Endnote v5 bibliographic databases according to main topics of interest. The topics were divided between two researchers for the purpose of reading and summarising the literature into main themes and ideas. Each researcher drafted sections of the report based on their topics and these were then revised in light of discussions between the researchers and the reference group and integrated.

A draft report was presented to the project manager on 29th November. The reference group met to consider this draft on 17th December. Early findings were also presented to the state Public Health Nutrition Network on 13th December. Following feedback, a second draft was sent out to the reference group at the end of February 2003. The reference group met on March 19th to consider the second draft. Following some further writing and editing the final draft was presented to the reference group on 14th April 2003.

**A.3 Definitions and scope**

This section outlines the definitions and scope of terms as used in the review.

**Workforce development**

The Workforce, Research and Training Taskforce of the South Australian Generational Health Review provides the following definitions:

- **Training** – has a focus on the skills and knowledge necessary to perform a job that exists now

- **Education** – provides a broad theoretical and conceptual framework that encourages and requires critical analysis. The focus of education is general preparation for a future role

- **Development** – is that activity that prepares (usually) employees for a future role that is specific and strategically determined by the organisation (GHR 2002).

This suggests that the individual worker is ‘developed’ to fulfil a strategic need within the organisation.

A definition of workforce development from the NSW Framework for Capacity Building (2001) has a similar theme of workforce development being used to help achieve organisational goals.

...a process initiated within organisations and communities, in response to the identified strategic priorities of the system, to help ensure that the people working within these systems have the abilities and commitment to contribute to organisational and community goals. (AHPA 2001).
This definition broadens the role to include systems and community goals. It suggests that drivers for workforce development exist at many levels. However, it is also explicitly about organisational change. A national study by the Australian Health Promotion Association (AHPA) reported that current approaches to workforce development were, for the most part, confined to individual staff development. The AHPA reported that limited support or consideration was given to strategies that changed organisational structures as part of an overall approach to support practice development.

Workforce development for health promotion is not generally considered a core activity to develop the infrastructure for health promotion (AHPA 2001).

The exception to this appears to be clinical and educational settings. There has been considerable learning in settings approaches to health promotion (eg Health Promoting Hospitals, Health Promoting Schools, Healthy Cities) about how to build the infrastructure for health promotion. Settings approaches incorporate workforce development but have a different starting point, eg reorienting health services or building capacity for health promotion in schools. Evidence for comprehensive or system approaches to workforce development is therefore likely to exist outside the ‘workforce development’ literature, in organisational learning and health promoting settings literature. For example, much of the action research evidence is embedded in classroom and school settings or relates to implementing educational reform. This means that how workforce development is conceptualised determines where evidence of its effectiveness may be found.

Primary health care

Primary health care is a complex concept. It is both a level of service delivery (the primary health care sector) and a set of principles of practice (the primary health care approach) (Legge, Wilson et al. 1996; May, Crawford et al. 1997). This project focuses on primary health care as service delivery but also touches on an understanding of the primary health care approach to workforce development itself.

The principles which define the primary health care approach include:

- self reliance
- community participation
- intersectoral collaboration
- integration of health services
- special attention to high risk and vulnerable groups

Primary health care aspires to integrate:

- the personal and population level of analysis
- the technical and biological with the social and existential aspects of health care
- the sectoral tasks of health care delivery with the wider civic project of social development (Legge, Wilson et al. 1996).
A primary health care approach to workforce development would emphasise characteristics such as intersectoral and multi-disciplinary work, skills in communication and working with communities and an understanding of equity and the social determinants of health.

**Definitions of public health nutrition**

In the Australian context, the Strategic Inter-Governmental Nutrition Alliance (SIGNAL) provides a definition of public health nutrition that includes a population focus and recognises all aspects of the food supply as well as community attributes.

*Public health nutrition focuses on issues affecting the whole population rather than the specific dietary needs of individuals. The impact of food production, distribution and consumption on the nutritional status and health of particular population groups is taken into account, together with the knowledge, skills, attitudes and behaviours in the broader community* (SIGNAL 2000). [http://www.dhs.vic.gov.au/nphp/signal/whatis.htm](http://www.dhs.vic.gov.au/nphp/signal/whatis.htm); accessed 24/10/02

**Primary health care/nutrition workforce**

Three major categories of worker are used in this report: professional dietitians and nutritionists, the primary health care workforce and non-health sector workers.

SIGNAL and the Eat Well Australia Agenda for Action clearly recognise the need for workforce development and capacity building in a broad range of primary health care and non-health workers as well as those directly responsible for nutrition and dietetic work.

*Government health departments can seek to improve the infrastructure for delivery of public health nutrition programs, with the tertiary sector to increase the number and skills of qualified personnel, and with both the health and non-health workforces to develop their capacity to provide effective nutrition-related programs and services* (SIGNAL 2001 p19).

**Nutrition and dietetic workforce**

The nutrition and dietetic workforce includes public health nutrition specialists, community nutritionists and dietitians and private sector dietitians.

**Primary health care workforce**

The primary health care workforce includes health promotion and public health generalists, Aboriginal Health Workers, general practitioners, community nurses, maternal and child health nurses, physiotherapists, oral health therapists, occupational therapists and pharmacists. To enable them to be involved in implementing Eat Well Australia they need access to nutrition information and program specific training (SIGNAL 2001).
Non-health sector workforce

The NHRMC subcommittee on nutrition education alluded to the need for nutrition education for non-health professions such as teaching staff, and for nutrition training for those people having the opportunity to influence food knowledge or eating habits, for example, food service and catering personnel, police, physical fitness instructors, social security and welfare workers, community workers, youth leaders, social workers, agricultural scientists, food technologists and food scientists (Australian Institute of Health and Welfare 1994). People working in non-health sectors can influence nutrition in positive or negative ways. Providing training to these workers to improve their nutritional influence on the population is stated to be a cost efficient way to increase the reach of Eat Well Australia (SIGNAL 2001).
Appendix B: Workforce development activity

This section describes workforce development activity at a national level and within South Australia. Workforce development activity in public health is described, as well as initiatives that focus on nutrition.

B.1 National workforce development activity

National Public Health Partnership

The National Public Health Partnership (NPHP) was established by Health Ministers in 1996. This partnership plays a planning and coordinating role for public health efforts by bringing together Commonwealth, State and Territory governments.

In 1998, the New South Wales Department of Health, on behalf of the NPHP, undertook a statewide consultation re the development of the national public health workforce. Madden and Salmon (1999) describe the consultation process and report on four of the themes that emerged:

1. There was a consensus re the need to articulate the specialised knowledge and skills required by the public health workforce and that training should be directed at achieving an appropriate level of skill, commensurate with role responsibilities.

2. Three broad types of public health worker were identified - specialist and generalist public health workers and health workers who have a public health component embedded within their practice. It was agreed that most health workers require some public health knowledge and skills to be effective. Respondents cited the Royal Australian College of General Practitioners which has included population health needs and priorities as one of three dimensions used to develop their new curriculum.

3. There was recognition that workforce development is seldom achieved effectively in isolation from broader organisational concerns. Physical infrastructure, appropriate job descriptions and roles that support the desired skills and knowledge, organisational support for change and adequate resources were identified as pre-requisites for effective workforce development. A ‘learning organisation' approach was highlighted as an appropriate model.

4. The rural public health workforce was identified as priority group. (Madden and Salmon 1999)

Respondents identified the need to link workforce issues to long-term broad goals in public health and argued for greater recognition of the value of knowledge and skills available through work settings and evaluation and practice-based research in the development of organisational learning (NSW Department of Health 1998).

As a result of the NSW consultation, the NPHP agreed on three priority areas for public health workforce development, including health promotion and leadership skills. As a further outcome, the NPHP commissioned work on the development of a planning framework for the public health workforce. The resulting discussion paper (Ridoutt, Gadiel et al. 2002) proposed a model that focused on social and community needs rather than staff as the providers of services. The proposed model entailed:
defining the services the public need
- determining the skills and competencies needed to deliver these services
- deriving both the numbers and types of staff required to satisfy competencies
to deliver services at the organisational / program level
- matching actual positions with competencies and identifying gaps
- linking to training and education policies.

A similar model has been piloted at the Northern Metropolitan Community Health Service (AG 2002) pers. comm. February 1, 2002.

Roger Hughes’ work relating to workforce development for public health nutrition (in Victoria) starts from a similar position of defining priority actions. In broad terms, Hughes advocates for a model of workforce development that encompasses the following steps:

- define priorities
- find out what works (ie evidence base for interventions)
- decide what intervention is required
- articulate what the workforce needs to be doing – and competencies required
- assess the capacity of the current workforce
- identify training needs, policy and organisational structures required to effectively intervene (RH 2002) pers. comm. October 9, 2002.

In addition to a population focus, the model proposed by Ridoutt et al focuses on the core functions of public health as the basis for defining competencies. Organisations first identify those core functions that are relevant to their objectives. Competencies are further defined by the public health domain (eg communicable disease) or specific target populations (eg refugee population). In this way, Ridoutt et al’s model avoids the focus on personal attributes that has beset competency approaches to workforce development (Public Health Association of Australia Inc. 1995).

**The health promotion workforce: a NPHP priority**

As stated earlier, the NPHP identified the health promotion workforce as a priority group and in 2000 invited the Australian Health Promotion Association (AHPA) to join with NPHP to develop a national strategic approach to development of the health promotion workforce. The Health Promotion Workforce Development Task Group was formed and commissioned a scoping paper. This was followed by meetings and teleconferences to debate issues raised by the scoping paper and to make recommendations to AHPA and NPHP (AHPA 2001).

Key issues arising from Australian Health Promotion Association consultations were:

- lack of a coordinated and strategically planned approach to workforce development
- lack of a clearly defined resource base for workforce development
- limited approach – focus on individual, limited support or consideration was given to organisational infrastructure, policies, as part of an overall approach to support practice development
lack of quality criteria in health promotion education and training. No national framework to drive better links between training and practice. Piecemeal approach - individual Universities were creating their own links, structures and processes for working with industry/employers

little evaluation of workforce development strategies.

**SIGNAL**

The Strategic Inter-Governmental Nutrition Alliance (SIGNAL) is the nutrition arm of the National Public Health Partnership (NPHP). Its role is to coordinate action to improve the nutritional health of Australians. SIGNAL representatives include Commonwealth Department of Health and Ageing, all the State/Territories Government Health Departments, the Australian Institute of Health and Welfare, the Australian New Zealand Food Authority, and the National Health and Medical Research Council.

**Eat Well Australia**

Eat Well Australia is the national framework aimed at expanding the national capacity for addressing health gain priorities through research, dissemination, workforce development, communication and information resources. The Agenda for Action report (SIGNAL 2001) presents planned initiatives for Eat Well Australia, including some relevant to workforce development. Thus, workforce development is seen as part of a strategic plan for improving nutrition.

The Eat Well Australia Strategic Framework (SIGNAL 2001) comprises three major domains:

1. Health Gain
2. Capacity Building

One of these, Capacity Building, includes a sub-domain ‘Building Human Resource Capacity’ that is relevant to workforce development. The ‘Agenda for Action’ statements relating to building human resource capacity include:

- building human resource requirements
- expand and extend tertiary education
- training PHC professionals
- training the non-health workforce.

The SIGNAL report recognises the need to improve the capacity of the public health nutrition and health promotion workforce, in order to implement public health nutrition initiatives. An objective under the ‘building human resource requirements’ component of the *Eat Well Australia Agenda for Action* is to:

*Improve the capacity of public health nutrition and health promotion workforces, including increasing the specialist nutrition workforce, to support and deliver Eat Well Australia and National Aboriginal & Torres Strait Islander Nutrition Action Plan initiatives (SIGNAL 2001).*
Proposed actions under this objective include:

- fund a needs assessment to investigate the workforce requirements and structural relationships necessary to deliver Eat Well Australia initiatives
- fund adequate human resources to implement Eat Well Australia initiatives
- review, restructure and resource workforce infrastructure according to recommendations of the needs assessment
- include public health nutrition training as part of a new monitoring system of public health workforce needs
- offer training packages tied to implementation of Eat Well Australia initiatives
- examine outcomes of the Public Health Research & Education Program (PHERP) in relation to the public health nutrition workforce.

B.2 Workforce development: the South Australian context

**Health promotion**

In 2000, the Australian Health Promotion Association (AHPA) consulted with key players in health promotion in each of the states and territories to develop a ‘snapshot’ of workforce development practice (AHPA 2001). South Australian respondents identified two major workforce development initiatives: the South Australian Community Health Research Unit (SACHRU) consultancies and seminars, and the Country Primary Health Care (PHC) Forum.

**South Australian Community Health Research Unit**

SACHRU is a small Department of Human Services funded unit with the primary purpose of conducting research and evaluation in the community health sector in South Australia. In addition to conducting core and grant funded research, SACHRU contributes to workforce development in two ways. Training seminars and workshops specifically targeted at the primary health care sector are run annually. Topics on planning and conducting research and evaluation are covered. Additional workshops on research related topics may be requested by primary health care organisations. SACHRU also undertakes research and evaluation consultancies that are designed as capacity building projects. SACHRU researchers work collaboratively with primary health care practitioners to enhance their skills and ability to conduct research and evaluation within their own organisations.

**Country PHC Forum**

The Country Primary Health Care Forum is a network of primary health care/health promotion staff across the seven country health regions in South Australia. It is a key structure in terms of providing peer support to relatively isolated workers. There are few staff positions dedicated to health promotion within country health regions. More than that, the network has effectively pooled its human resources and developed strong links with ‘central office’ staff to tackle some major challenges:
integrating a Primary Health Care/Health Promotion framework across health, housing and community services
- strengthening community participation
- developing structures and processes that acknowledge communities as key players in the planning, implementation and outcomes of PHC/ Health Promotion initiatives.

The Preparing the Ground for Healthy Communities Manual: a new approach to workforce planning and development in primary health care (May, Crawford et al. 1997) is one of the resources that this group has compiled to document the learning that has occurred in responding to the specific challenges of rural, remote and regional settings.

**Public health nutrition**

Several South Australian initiatives have identified workforce development in public health nutrition as an important strategy to improve population health status. A brief description of these initiatives follows:

**Eat Well South Australia**

Workforce development is one component of Eat Well South Australia.

**SA public health nutrition network**

A state public health nutrition network has been established. It involves a representative of each metropolitan community health service, regional health service, metropolitan major hospitals, non-government organisations and university departments. The group has met four times since December 2001. Its goal is to support implementation of Eat Well South Australia.

**Improving nutrition for older people**

A short-term needs assessment is currently underway to identify priorities to improve nutrition for older people in SA. Although not complete, as at March 2003, emerging themes include:

- nutrition is not on the agenda of those in the Department of Human Services charged with developing ageing strategies or, largely, of those services engaged in delivering care to older people
- once the issue is raised, there is considerable enthusiasm for workforce development.

**Improving nutrition for Aboriginal people**

Improving ATSI workforce capacity is a priority identified in NATSINSAP (the indigenous component of EWA). In May 2001, a joint workshop was held with Aboriginal Health Workers and dietitians to explore a partnership approach to developing workforce capacity in public health nutrition. Since then, there have been discussions with two Aboriginal Health Worker forums, within DHS and with the Aboriginal Health Council of SA Inc. There is a current proposal to develop a case for
nutrition training for Aboriginal Health Workers, decided at an initial meeting of key interest groups in Port Augusta on Feb 27th and follow up working group meetings in March and April 2003.

*Improving breastfeeding rates*

Workforce training has been identified as a key strategy in improving breastfeeding rates in South Australia, in the development of the SA breastfeeding strategy.

*Other initiatives*

In addition to the South Australian initiatives described above, a range of workforce development initiatives are being developed and implemented as components of other DHS and Commonwealth funded nutrition programs, for example:

- Start Right, Eat Right nutrition award scheme (Gowrie, Noarlunga Health Services)
- Healthy Food Choices in Family Day Care Project (Flinders University, Noarlunga Health Services)
- Community Foodies (Noarlunga Health Services).

*Generational Health Review*

In 2002, the incoming State government announced a wide-ranging review of South Australia’s health system. The Generational Health Review began in July 2002 and is due to release its final report in May 2003. The Workforce, Research and Training group is one of five Task Groups assisting the Review Committee. The terms of reference for this task group include:

1. Making recommendations re appropriate structures for healthcare staffing, including opportunities for redesigning roles
2. Taking a long-term view – examining knowledge and skills required ten years from now
3. Examine methods for improving work practices, especially re multi-disciplinary approaches
4. Explore the feasibility of developing an education and training model that crosses professional boundaries and acts as core platform on which all specialisation is built; flexible career pathways (GHR 2002).

The Workforce, Research and Training group had its first meeting in August 2002. Key points arising from the meeting were:

- tertiary sector training is expensive and numbers are limited
- the roles of health professionals are blurring, and professional groups are taking even more entrenched positions (GHR 2002).

In October 2002, the Review produced a Discussion Paper that refers to a number of international reports on workforce and training. For example, in the United Kingdom, workforce planning and development arrangements were found to inhibit multi-disciplinary planning and creative use of professional skills. A review of funding for education and training of health care workers has suggested reorganisation of funding
on an interdisciplinary basis to produce new types of health worker. In Canada, an ‘integrated educational curriculum for health [care] providers, including common courses that would facilitate cooperation and build mutual respect between different types of providers’ has been proposed (GHR 2002).

In terms of the allied health workforce, the Review notes that funding shortages resulted in cuts to positions in the 1980s and these positions have, for the most part, not been regained. Shortages are linked to salary levels, training and development opportunities, and lack of opportunity to contribute at senior level in hospital policy and planning. Allied health professionals are more likely to be managers of community-based agencies than hospitals (GHR 2002). The Review goes on to state that services are being run on unpaid overtime, with no budget to cover planning and unplanned leave and no locum agencies. These current funding arrangements have driven the workforce to focus on direct clinical work and service improvement, with research and continuing education the components that have suffered. Changes to work organisation are suggested including: consistent access to training, qualifications and professional development, multidisciplinary teams, multi-skilling, and valuing the contribution of other workers and disciplines.

The Review describes the failure of a true partnership between the education sector (which has failed to fully recognise its role in assisting to meet workforce needs) and employers (who have failed to fully recognise their responsibility to support and explore quality clinical training with flexible options) (GHR 2002).

The Review notes that difficulties in workforce planning in Australia arise from the different levels at which funding responsibilities operate. This impacts on health services, educational system, industrial relations and professional registration. An Australian Health Care Agreement Reference Group Report highlights the need for a national approach to health workforce issues (GHR 2002).
Appendix C: Public health nutrition workforce

This section of the review describes the public health nutrition workforce. The scope of this workforce, as defined in Section 2, includes specialist dietitians and nutritionists, other health workers, and people working outside the health sector but whose positions have an influence on community food and nutrition.

C.1 Characteristics of the nutrition and dietetic workforce

Dietitians and nutritionists working in public health nutrition are an important subset of the health workforce with a role in improving community nutrition.

There are no accurate data enumerating and describing the nutrition and dietetic workforce in Australia. A number of surveys have been conducted nationally and in state jurisdictions to estimate the number and characteristics of the workforce.

In 1991, an Australian survey of 165 dietitians, recently graduated from Australian training institutions (Scott 1991) found that 91% were female, 53% were aged under 25 years and 40% held a previously awarded nutrition related undergraduate degree. This contrasts with the situation in the United States where, of those classifying themselves in public health nutrition, 47% had graduate degrees and only 14% had graduate degrees in public health nutrition or public health (Haughton, Story et al. 1998). In the Australian survey, nearly three-quarters of those surveyed worked in hospitals, and the same proportion had direct responsibility for patients or clients.

Williams (1993) presents the results of two surveys of the dietetic workforce in New South Wales over a seven-year period 1984-1991. The survey method focused on hospital dietitians and DAA members but there was an attempt to capture non-DAA member dietitians also. The survey revealed that the proportion of non-DAA members fell over the period 1984-1991 to 11.6% of the active workforce. However, the author notes this still relatively high figure reduces the reliability of DAA statistics. The results indicated that over 70% of respondents had less than 10 years experience, the workforce was relatively young compared to the national average and only 5-7% were male. The active workforce grew by 155 positions (60%) between 1984 and 1991. Most of this growth was in hospital positions but there was an increase in other sectors from 20% to 29% of the total workforce. The largest growth area was in community-based ambulatory services and health promotion, private practice, NGOs and industry. National data for 1993 reveals that among members of the DAA, 15% were working in community health (Australian Institute of Health and Welfare 1994). This trend to dietitians working in non-hospital sectors is important in planning competency-based standards for entry level dietitians and for training schools (Williams 1993).

The NSW survey was updated in 2000 (Meyer, Gilroy et al. 2002). The new survey found that there had been a 48% increase in the number of dietitians (from 468 to 666) since 1991. The majority still worked in hospitals but there was an increase in the proportion employed in other sectors from 29% to 38% of the total. Half the workforce time is spent on non-clinical work, and the authors note that this has implications for competency standards and undergraduate programs.
The Dietetics Association of Australia (DAA) collates information annually from its membership renewal forms. This provides a snapshot of the dietetic and nutrition workforce who are financial members of the DAA. In 2001, total membership was 2,245. Employment status for Australia and South Australia is shown in Table 1.

Table C.1 Numbers of DAA members and employment status in 2001

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Australia</th>
<th>South Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently employed as a dietitian or nutritionist</td>
<td>1,500</td>
<td>108</td>
</tr>
<tr>
<td>Student</td>
<td>244</td>
<td>49</td>
</tr>
<tr>
<td>Other</td>
<td>501</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>2,245</td>
<td>179</td>
</tr>
</tbody>
</table>

The DAA also collates data on category of employment of members. The information for 2001 is shown in Table 2. These data include part-time workers and are for individuals rather than FTE positions.

Table C.2 Number and percent of positions (full and part time) occupied by DAA members in 2001

<table>
<thead>
<tr>
<th>Employment category</th>
<th>Australia (number)</th>
<th>Australia (%)</th>
<th>South Australia (number)</th>
<th>South Australia (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>960</td>
<td>45.3</td>
<td>58</td>
<td>39.2</td>
</tr>
<tr>
<td>Community health</td>
<td>223</td>
<td>10.5</td>
<td>27</td>
<td>18.2</td>
</tr>
<tr>
<td>Private practice</td>
<td>426</td>
<td>20.1</td>
<td>36</td>
<td>24.3</td>
</tr>
<tr>
<td>Commonwealth, State or Local government</td>
<td>70</td>
<td>3.3</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>Industry</td>
<td>85</td>
<td>4.0</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>Education</td>
<td>104</td>
<td>4.9</td>
<td>8</td>
<td>5.4</td>
</tr>
<tr>
<td>Nursing homes</td>
<td>42</td>
<td>2.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>209</td>
<td>9.9</td>
<td>15</td>
<td>10.1</td>
</tr>
<tr>
<td>Total</td>
<td>2,119</td>
<td>100%</td>
<td>148</td>
<td>100%</td>
</tr>
</tbody>
</table>

A number of commentators have suggested that it is important to have information about the dietetic workforce in order to assist health planning, education and training and resourcing issues. Accurate workforce statistics are vital for health planning: to plan training courses, to develop continuing education programs, and to support arguments for changes in staffing establishments (Williams 1993). Hughes (1998) maintains that a lack of national workforce data is a weakness for workforce development and the identification of issues.

An audit of the South Australian specialist nutrition workforce in March 2003 revealed a total of 76.8 FTE in South Australia (56.8 in metropolitan Adelaide, 20.0 in country SA). Of the FTE metropolitan positions, approximately 43 are clinical and 12 are community based. These data do not include dietitians working in private practice, private hospitals or non-government organisations.
**Implications**

Although there is no date on the profile (e.g., age, experience) of the SA dietetic workforce, observation would suggest that, as in NSW, it is substantially female and relatively young, with most individuals having less than ten years experience in the profession. The workforce is growing rapidly with the majority employed in hospitals but over one third working in other sectors. Half of all time is spent on non-clinical work.

These findings suggest that the dietetic workforce is likely to be mobile, seeking flexibility in work hours and moving to positions outside the clinical hospital setting. Education, training, and workforce development should take into account the need for a range of non-clinical skills to reflect the actual work undertaken. The changing role of the public health nutrition workforce and the specific implications for workforce development are discussed next.

**C.2 Describing and classifying roles**

The definition of public health nutrition given by SIGNAL (see page 39) suggests a number of roles, skills, and competencies are needed for an effective workforce. In addition to clinical and dietary services for individuals, public health nutrition workers need to be able to take a population health perspective and act in a way consistent with primary health care and health promotion principles.

An ongoing concern highlighted in the literature is the problem of defining and identifying different classes and roles within the public health nutrition workforce. In the United States, Rogers (2001) argues that public nutrition goes beyond public health nutrition by including action on public policy outside direct health and nutrition areas. Public nutrition includes a range of professional practitioners, and an activist, problem-solving approach to nutrition issues. Rogers (2001) argues for the definition and promotion of public nutrition as a professional discipline. This would:

- encourage specific education and training
- provide a context for research (as currently grants and publications follow traditional disciplinary lines)
- attract people with the broad skills (e.g., anthropology, sociology, economics, statistics) needed at a high level in order to influence policy.

In Australia, this distinction between public health nutrition and public nutrition is less precise, perhaps due to the higher rate of graduate nutrition training that includes a public health focus. Public health nutrition, using the ‘new public health’ framework includes multi-disciplinary and intersectoral approaches, a focus on policy and systems change and is supportive of a mix of epidemiological and qualitative research.

Hughes and Somerset (1997) present a model for defining and categorising different classes of dietetic/nutrition work in Australia. They argue that having no consistent terminology for community-based dietetics/nutrition, impacts on developing and assigning competencies for training and quality assurance. They propose four modalities for human nutrition:
clinical dietetics
- community dietetics
- community nutrition
- public health nutrition.

These modalities are distinguished by the setting, reach, level of prevention, illness or wellness paradigm, key personnel, determinants of action and outcome timeframe.

Public health nutrition is defined as

_The art and science of promoting population health status via sustainable and equitable improvements in the food and nutrition system. Based upon public health principles, it is a set of comprehensive and collaborative activities, ecological in perspective and intersectoral in scope – including environmental, educational, economic, technical and legislative measures_ (Hughes and Somerset 1997).

The definitions and descriptions of different classes of the nutrition workforce provoked considerable debate in the field. For example, Ash, Capra et al. (1997) argue that the distinction between nutrition and dietetics is inappropriate and outdated. They point out that the competency standards published by the DAA in 1994 take a primary health care approach to all aspects of practice and that professional nutrition services encompass individual and population strategies. Further, they argue, dietitians working in hospitals and industry often use public health strategies, and that most nutrition and dietetic degrees are based in schools of public health and all courses offer substantial public health nutrition components.

**Support to non-specialist nutrition workers**

The Australian Institute of Health and Welfare (1994) suggests that because there are so few dietitians, the best use of resources would be for this group to provide authoritative dietetic support to other professional groups. Although somewhat dated, the report suggests that their training equips dietitians for this role. Similarly, the most effective use of dietetic specialists is in training other professionals to provide nutrition education. This means that the education of specialists should include teaching, management and negotiation skills.

**Changing roles**

Australian governments are encouraging a shift in health system thinking to incorporate a population approach and focus on evidence based practice. Health services are starting to move resources into primary health care and public health. The implementation of public health principles and moves to evidence based practice have resulted in a need for the dietetic workforce to take on a health promotion approach. Health promotion practitioners are expected to strengthen the field through story telling, research, testing strategies and development of new skills and expertise and contribute to a role for health promotion that anticipates changing the understanding of government and health systems (Health Canada 1997). Training is needed for this activist role (Rogers 2001).

To contribute to health promotion strategies, public health nutrition workers need skills in research and evaluation and working in a multi-disciplinary framework (Yngve, Sjostrom et al. 1999). Multidisciplinary and intersectoral collaboration is a
major strategy in community/public health nutrition practice (Hughes and Somerset 1997). Specifically, dietitians and nutritionists must be able to:

- apply knowledge, leading to research led action
- use evidence based practice, evaluation and monitoring
- link policy to evidence (Yngve, Sjostrom et al. 1999).

**Implications**

Classification and delineation of roles within the specialist public nutrition workforce is the subject of debate. It is clear, however, that roles are changing as the health sector moves to population health and primary health care approaches. As roles change and are redefined, education, training and workforce development needs to change in order to provide the workforce with the skills and knowledge needed to implement new strategies and ways of working. These skills include working collaboratively with health and non-health professionals and with groups and communities, undertaking research and using research evidence, understanding the social determinants of health and equity issues, and tackling advocacy and system change.

Another major role for the specialist nutrition workforce is in training, supporting and providing leadership to other health and non-health personnel in strategies to improve community nutrition. There are two main drivers of this role. The shortages in the specialist workforce mean that it would be both unrealistic and ineffective to expect all nutrition work to be directly undertaken by professional dietitians and nutritionists. Food consumption and nutritional health is necessarily determined by a large range of factors outside the scope of the specialist workforce. This means that training and workforce development must equip dietitians and nutritionists to act as leaders, trainers, supports and mentors to a wide range of others.

From a primary health care perspective that espouses intersectoral and multi-disciplinary work, there is also value in using dietitians and nutritionists to support and influence the broader health promotion and food related workforce. This increases the scope and coverage of nutrition health promotion and helps to build capacity in a range of workforces and communities. All primary health care workers need to be able to contribute to organisational change in order to bring about the re-orientation of health services.

**C.3 Workforce issues**

**Recruitment and retention**

Nationally, there is a shortfall in the number of post-graduate nutritionist/dietitians working in the public sector that are needed to make achieve a major impact (SIGNAL 2001). This is particularly the case outside metropolitan regions and is exacerbated by short term stays. For example, Hughes (1998) found that 11% of the rural workforce was likely to leave the rural area within one year. Rural upbringing was identified as a major factor in determining return to work in rural areas following training.
**Training and education**

Barriers to continuing education have been identified. For example, 36% of the rural nutrition workforce reported that it was difficult for them to achieve continuing professional development points (Hughes 1998).

Referring to the formal education of health and food industry professionals, the Australian Institute of Health and Welfare (1994) notes that graduate and Masters courses are available in most states. However, the Master of Nutrition and Dietetics is a full fee paying course, at least in South Australia, which presents a barrier to many potential students.

**Implications**

Nationally, there is a shortage of specialist nutrition workers, particularly in rural areas. Barriers to continuing education have been identified, again, these are particularly relevant in rural areas. Given the key strategy of a partnership model in SIGNAL and public health approaches generally, consideration needs to be given to breaking down professional training in isolation and to the promotion of broader learning across disciplines. The Generational Health Review has a strong focus on encouraging multidisciplinary education and training in order to increase movement across disciplines and access to skills.
Appendix D: Public health nutrition workforce development

D.1 Rationale for workforce development

Changing role to PHC

As health services move towards primary health care and an early intervention focus, the role of the specialist nutrition workforce is changing. Skills are needed in work with a health promotion focus involving multi-disciplinary and intersectoral work, community participation, community development and advocacy. Recognition of the social and environmental determinants of health mean that the nutrition workforce needs to engage with a wide range of other health and non-health workers and systems that influence the food supply and consumption.

New models of professional development are needed to support reform changes (Firestone and Pennell 1997). SIGNAL agrees:

The need for a broader, population centred approach has driven much of the more recent nutrition policy initiative. In contrast to the past emphasis on ‘at risk’ individuals and nutrition behaviour counselling by dietitians or other health personnel, the 1990s have seen the growing recognition that primary prevention at the population level may provide greater benefits in the long term (SIGNAL 2001 p8).

In the United States, Haughton, Story et al. (1998) concur that if health agencies are to shift in function, then ‘a substantial proportion of the public health nutrition workforce must not only change how they practice but also have the knowledge and skills to do so’.

Retaining a skilled workforce

The National Centre for Health Promotion argues that keeping a skilled workforce requires the development of a strategic planned approach to workforce development and training (National Centre for Health Promotion 1998).

Improve health of Australians

Several writers have suggested that workforce development for nutrition workers is a strategy needed in order to improve the nutritional health of the population. For example, the long term goal of the Masters project is to contribute to improvements in the health of people across Europe (Yngve, Sjostrom et al. 1999). The task of undertaking effective population based strategies over Europe in the field of public health nutrition demands people that are trained and competent, with comparable skills. Haughton, Story et al. (1998) argue that a well trained public health nutrition workforce is needed to improve the nutritional health of Americans and meet national nutrition objectives.

This is also the view of the Centre for Public Health Nutrition in New South Wales where Moxon, Macoun et al. (2000) argue that effective change in the nutritional health of populations requires a range of actions including workforce development within the field of nutrition. According to SIGNAL, the non-nutrition public health workforce needs more training in aspects of public health nutrition. All public health
practitioners need to be competent and have knowledge of nutrition and public health practice.

**Rise of evidence based practice and developing best practice**

The increasing emphasis on outcomes and evidence based practice also requires practitioners to understand and apply research and evaluation, or to undertake this themselves.

> Good scientific evidence is the base for clear messages to the public. The task of developing and undertaking effective population based strategies over Europe demands people that are trained and competent with comparable skills. This calls for proper training across Europe (Yngve, Sjostrom et al. 1999 p 449).

Rada, Ratima et al. (1999) describe evidence based health promotion (based on the concept of evidence based medicine) as an approach to practicing health promotion in which the provider and purchaser are aware of the evidence supporting selected strategies, and the strength of that evidence.

Swaby and Biesot describe a demonstrable improvement in the quality of health promotion activities with better skilled staff, greater awareness of community needs and resource and information sharing (Swaby and Biesot 2001).

**Improve use of information and research uptake**

It is not sufficient to undertake research and evaluation to identify effective interventions without ensuring dissemination of findings to policy makers and practitioners. One of the goals of the Centre for Public Health Nutrition is to support public health workforce development in New South Wales in order to improve the use of information for decision making, policy formulation and practice relating to public health nutrition (Moxon, Macoun et al. 2000).

In a context of HIV prevention, Kelly and colleagues argue that dissemination of effective interventions needs more than information: it also requires intensive staff training and ongoing communications. The authors go on to say that service providers need integrated systems of training and technical assistance to move intervention from research to the field. For example, professionals can be trained as volunteer 'research translators' to service provider organizations (Kelly, Sogolow et al. 2000). This also supports capacity building in the workforce.

**Sustainability of health care system**

Olsen describes sustainability of health care under three dimensions one of which is organisational capacity (Olsen 1998). An ingredient of organisational capacity is workforce capacity. Strategies for increasing workforce capacity include encouraging personal development through in-service training, delegation of responsibility and authority, rewarding through promotion, salary raises and recognition.

Professional development of staff in health promotion practice is identified as a key outcome of the best practice framework developed by Swaby and Biesot (2001). The framework comprises three key components —structural, strategic and supporting.
The structural component embodies the development of health promotion policy and commitment at organisational level, an intersectoral reference group to facilitate partnership approaches and capacity building and relevant working groups. The strategic component includes resources and procedures to plan, implement and evaluate health promotion initiatives, including the requirement that the intersectoral health promotion reference group endorses all health promotion initiatives. The supporting component builds on the planning and evaluation requirements, ensures staff have access to relevant health and social demographic information at community/regional level, formalises the expectation that all staff have a role in health promotion and allocates resources for the employment of a health promotion coordinator to support staff (Swaby and Biesot 2001). Workforce development is thus viewed as one strategy, among many required to reorient the health care system to achieve more effective use of resources and sustainability.

**Implications**

A large number of benefits have been identified from investing in workforce development. These can be summarised as the need to have a workforce able to respond to changing needs and policy development within the health system and increasing worker and organisational capacity to improve services and outcomes for the population.

**D.2 Workforce development needs**

Haughton, Story et al. (1998) report on a survey of the nutrition workforce in US, (n=7,550). They found conflicting results when comparing the major health problems identified by nutrition units and the training needs most valued by the nutrition workforce.

**Table D.1 Major health problems and training needs**

<table>
<thead>
<tr>
<th>Top health problems (nutrition units)</th>
<th>Top training needs (nutrition workforce)</th>
<th>Least mentioned training needs (nutrition workforce)</th>
</tr>
</thead>
<tbody>
<tr>
<td>diet/nutrition to prevent chronic disease</td>
<td>nutrition for children with special health care needs (40%)</td>
<td>home-based health care (6%)</td>
</tr>
<tr>
<td>low birth weight</td>
<td>prenatal nutrition (22%)</td>
<td>coalition building and developing partnerships (9%)</td>
</tr>
<tr>
<td>iron deficiency anemia</td>
<td>breast feeding (22%)</td>
<td></td>
</tr>
<tr>
<td>obesity/overweight</td>
<td>infant and child nutrition (28%)</td>
<td>nutrition and health promotion for the elderly (7%)</td>
</tr>
<tr>
<td>low breast feeding rates</td>
<td>nutrition for children with special health care needs (40%)</td>
<td>home-based health care (6%)</td>
</tr>
</tbody>
</table>

4 78% of funding is from Women, Infants and Children program
The importance of breast feeding and infant nutrition was agreed upon by nutrition units and workers. However, it is clear that issues of ageing and chronic disease (both of which require a multi-disciplinary response) were not rated as highly by the workforce. Top emerging issues for nutrition units were also identified as: health care reform, funding and scarce resources, chronic disease/health promotion issues, and staff retention and recruitment (Haughton, Story et al. 1998).

Haughton, Story et al. (1998) note that competencies for entry-level dietitians focuses on population groups and community based programs and research. However, 66% of survey respondents classed their position as having client-focused responsibilities. In Australia, however, Scott (1991) found graduates were satisfied with the clinical nutrition, food science, and food service and catering components of their academic training. They were less satisfied with organisation and management, communication skills, behavioral science and nutrition education and dissatisfied with community nutrition and research skills.

**Implications**

In the United States, there are differences between the top health problems identified by health services and the topics nominated for workforce development by practitioners. There also appears to be a mismatch between a population and community focus in competences and the individual client work actually undertaken in practice. It appears that preparation and training for dietetic work in the United States has developed faster towards a population approach than work in the field, which is still focused on individual clients. In Australia, the opposite has been suggested, with students wanting more training in non-clinical aspects of their practice. This raises a question in terms of the timing of changes to the curriculum. In looking to produce cultural change towards public health and health promotion in organisations, should the focus be on changing the education and training of new professionals so that they can bring new ideas to the workplace or should organisational change be tackled from within? Either way there is the potential for a period of misfit.

**D.3 Training methods**

Workforce development may involve formal or informal education and training. The National Centre for Health Promotion (1998) suggests that a range of methods is valuable including:

- access to formal education
- on the job training
- regular supervision linked with performance appraisal
- access to short courses for knowledge update
- access to technical knowledge and skills.

**Formal education**

Formal education includes undergraduate and postgraduate courses. Rogers (2001) recommends post-graduate courses for research and academic staff; entry level/mid career training for practitioners; in-service training for the field and short courses for policy makers. Rogers argues for interaction between classroom and field and states that field experience is essential. This appears to need further resources and
Electronic resources and distance education methods are important in addressing training needs, particularly for part time students and those working or residing in rural localities. The results of Hughes’ (1998) survey demonstrated a demand for distance based and flexible continuing education and professional development for rural dietitians. Access to e-mail and internet resources may reduce isolation and increase opportunities for continuing education. A choice of on-campus and distance learning formats are important to address the needs of full time and part time students (Haughton, Story et al. 1998). Short intensive courses may also be convenient for students in employment.

**On-the-job training**

Workforce capacity can also be improved by on-the-job training. This should not be seen to replace graduate level course work but as an opportunity to enhance competencies for those unable to leave the workplace (Haughton, Story et al. 1998).

It has been suggested by the GHR (2002) that on-the-job training can be provided at little or no additional expense and that there should be stronger emphasis on learning in the workplace through coaching, mentoring and structured on-the-job opportunities.

Swaby and Biesot (2001) describe the support played by the Health Promotion Officer employed by a community health organisation. This position played a vital role in educating and supporting staff, driving initiatives and liaising with community agencies. Organisations that have adopted new interventions can act as consultant trainers to other organisations (Kelly, Sogolow et al. 2000).

**Informal education and training**

Other resources for workforce development are provided by professional associations, seminars, interactive workshops and network meetings. According to Haughton, Story et al. (1998) professional organisations should make continuing education a priority. This view is confirmed in the Canadian approach:

> Some distinct progress has been made in enhancing preventive practices among health professionals, spearheaded by professional associations (Health Canada 1997).

There appears to be room for improvement in support provided by the DAA at least for rural based nutrition workers. Hughes (1998) used a self administered questionnaire to rural DAA members (n= 140, response rate~30%) to assess professional development initiatives that would be welcomed by members.
Table D.2 Workforce Development Needs

<table>
<thead>
<tr>
<th>Proposed DAA initiative</th>
<th>Respondents agreeing (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>support for distance education</td>
<td>84</td>
</tr>
<tr>
<td>bursaries for conferences</td>
<td>64</td>
</tr>
<tr>
<td>support networks</td>
<td>45</td>
</tr>
</tbody>
</table>

In the same survey, current professional development support from the DAA was rated at average or below by 85% of respondents (Hughes 1998). It would be useful for this survey to be repeated in order to obtain more up-to-date information.

**Information exchange and networks**

Information exchange and networks are an important component of workforce development. These links need to be within a profession and, particularly to facilitate a primary health care approach, between professions.

To encourage professional identity, the workforce needs exposure to:

- interaction between research and policy/practitioners
- e-mail networks
- peer reviewed journals
- professional associations
- professional meetings (Rogers 2001).

Cross-profession links and information exchange between organisations can be achieved through multidisciplinary international workshops (Brunner, Rayner et al. 2001). Journals and other ways to link research and policy are recommended (Kelly, Sogolow et al. 2000) Participation in research can be a useful antidote to limited professional development opportunities (Hughes 1998).

The SIGNAL report identifies a debate about the relative benefits of specialist versus multi-disciplinary public health nutrition training. The report argues for an expansion of tertiary education and in-service training in public health, including special training for the public health nutrition workforce and for the inclusion of public health nutrition modules in existing public health coursework (SIGNAL 2001).

There is a need to assess what nutrition knowledge and resources different professional groups need and to develop appropriate training strategies and resources. Activities must be linked to community and environmental activities and supported by infrastructure and specialists. Professional associations can help to reduce structural and policy barriers (SIGNAL 2001).

Public health nutrition staff recognise and already work in partnership with many of these groups. Workers need access to education and training on nutrition and Eat Well Australia initiatives. There is also a need to identify key groups to facilitate collaborative approaches to training, funding and information and to assess relevant course work and on-the-job training for the non-health workforce (SIGNAL 2001).
Implications

A mix of formal and informal education and training is required to meet different needs. There is room for the DAA to play a major role in workforce development. The growth of electronic resources and information technology will help in the delivery of training and will encourage networking and information exchange within and between professional groups and other stakeholders. State departments of health can also contribute to this. For example, in South Australia, a state public health nutrition network has recently been established. The group communicates through email and meetings. Rural people receive support to attend these.

D.4 Training topics

In thinking broadly about training needs for health promotion the National Centre for Health Promotion (1998) identifies three main categories of topics to be included:

- content issues
- design, delivery and evaluation of health education and promotion programs
- research and evaluation skills.

Swaby and Biesot (2001) report that regular education sessions by a health promotion officer in the health service created wider acceptance of the importance and spectrum of health promotion. The sessions, supported by management, provided training focused on health promotion principles, program planning, implementation, and evaluation and community consultation (Swaby and Biesot 2001).

Rada and colleagues note that the process and practice of evidence-based health promotion requires skills that are not traditionally part of health promotion/health education training: extensive cross-disciplinary literature searches, selection of most effective of the relevant programs, and applying rules of evidence and appraisal of study quality (Rada, Ratima et al. 1999). Research and evaluation skills are needed in order to undertake or understand research findings and so advance based-based practice. For example, Brunner, Rayner et al. (2001) argue that nutrition undergraduate and postgraduate courses should include 'data synthesis' as a component of research skills.

Management, working in partnership and communication skills have also been identified as important. For example, SIGNAL consultation respondents identified the need for more training in management areas such as nutrition monitoring and surveillance, data analysis and evaluation, managing committees and partnerships and health promotion (SIGNAL 2001). Specialist education should include teaching, management and negotiation skills (Lester 1994). This will enable the nutrition workforce to undertake training and support for other professionals involved in food and nutrition services. Primary Health Care professionals and the non-health workforce need training in communication with the public to ensure readily understood, clear, concise and consistent nutrition information (SIGNAL 2001).

Implications

An exclusive focus on clinical human nutrition is clearly not appropriate in the education and training of the specialist nutrition workforce. For dietitians and nutritionists to be involved in broader health promotion work their training needs to
incorporate all aspects of planning, design, implementation and evaluation of health promotion work. Working in a collaborative, multidisciplinary and participatory manner requires particular skills and aptitudes that need to be addressed in the preparation for work.

The specialist workforce is also called upon to provide management, training and support to others in the health and non-health fields who have an interest in food and nutrition, and undertake research. These aspects of education and training need to complement the clinical skills and content knowledge components of courses.

Finally, to contribute to the promotion of an understanding of primary health care and public health principles, the workforce will need skills in working in partnership with communities, food industries, government funders and policy makers in order to advocate for changes at the highest structural levels to improve nutritional health in Australia.
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Identifies workforce development needs

Evidence
(Health status/outcome)

Program or Policy

Action Research
Identifies workforce development needs

Reflection, evaluation

Competencies

Capacity Building
(System/organisational support)

Specific workforce methods/strategies
Resources