

PUBLIC HEALTH WORKFORCE  
DEVELOPMENT  
AUSTRALIA, ENGLAND AND THE UNITED  
STATES

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A NEVIS CONSULTING GROUP STUDY



FEBRUARY, 2004

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# CHAPTER ONE: INTRODUCTION



"There has probably been no time in the history of this country when trained, competent and efficient health officers were needed so much as they are now. It is unfortunate that in the absence of epidemics and pestilence too little attention is paid ... to those whose duties require them to guard the public health"

*Journal of the American Medical Association - 1893*

Over the years public health has tended to be the Cinderella of the health care world - not just in Canada, but almost everywhere. It has been largely neglected and left alone to deal with unglamorous tasks like vaccination, nutrition, occupational safety, health visiting and well water sample analysis. Meanwhile, doctors and surgeons have enjoyed growing public esteem for their efforts in saving individual patients from a wide variety of medical conditions.

However, there are times when the spotlight of public attention is drawn forcibly to public health matters and when the services provided by the public health workforce become critical to the defence of major population centres from the ravages of communicable disease attack or the widespread presence of harmful substances in the water we drink or the air we breathe. One such time was when John Snow successfully contained the 1854 cholera outbreak in London at the very outset of public health as a specialist field of practice<sup>1</sup>. Today is another of those moments in history when epidemiology thrives and public health is beginning to receive much more of the attention and funding that it rightly deserves in Canada and elsewhere.

Justice Horace Krever pointed out in his 1997 report that "public health departments in many parts of Canada do not have sufficient resources to carry out their duties ... continued chronic underfunding of public health departments is a disservice to the Canadian public". Those resources have come under increasing pressure in the intervening years and public health staffing continues to be a serious issue today in the wake of the SARS outbreak. As the Naylor Report puts it - "existing human resources are insufficient to meet current and future public health challenges". And the Auditor General of Canada goes on to add "great weaknesses in national surveillance of diseases and injuries that, taken together, have clear national implications for public health ...[they] compromise the ability to plan, carry out and evaluate public health programs and other programs that deal with the causes and treatment of diseases."

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<sup>1</sup> See photograph at the top of this page showing a handle-less replica pump close to the site of the original one in the Soho district of London today.

The current pressure for action may be such that the routine and wasteful feuding between federal and provincial governments over the funding of the health system may be set aside long enough to achieve real gains in the development of the workforce tasked with delivering effective public health across Canada's widely spread population.

The Public Health Infrastructure Task Group is certainly concerned about the workforce management aspects of the problem. It has pointed out that previous work has been unable to quantify the gap between existing staffing levels and those that are actually needed to meet public health demands in Canada. The Task Group is working in sub-committee with the Advisory Committee on Health Delivery and Human Resources (ACHDHR) at present to address these workforce issues.

This report is designed to provide the Task Group with a synthesized picture of public health workforce approaches already deployed or in the planning stage in the U.S., UK and Australia, in support of the ACHDHR sessions.

It examines key factors in workforce development such as existing national development plans, the barriers to achieving an effective workforce, progress on certification/ registration, strategies for recruitment and retention and pre-service/in-service training initiatives. It goes on to establish ways in which the international public health agencies involved have successfully brought their public health workforce levels and skills in line with their operational needs - or not. The related changes made in defining a successful national approach to the planning and implementation process are established and those that may be applicable in Canada are identified. Interviews with public health experts in the U.S., UK and Australia <sup>2</sup> have also allowed Nevis to explore what public health workforce strengthening initiatives they may have in mind for the future.

#### **WHAT IS PUBLIC HEALTH?**

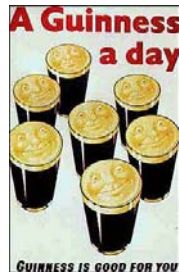
A number of definitions are used by national and international agencies to define public health. For example, the UK likes the nicely balanced "the art and science of preventing disease, promoting health and prolonging life through the organized efforts of society"<sup>3</sup>, while the U.S. Institute of Medicine prefers a more pithy "public health is what society does collectively to assure the conditions for people to be healthy".

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<sup>2</sup> See Annex F for a list of medical and non-medical experts who kindly agreed to be interviewed by Nevis for this study.

<sup>3</sup> Sir Donald Acheson: *Public Health in England* - 1988

# CHAPTER TWO: PUBLIC HEALTH WORKFORCE PLANNING METHODS

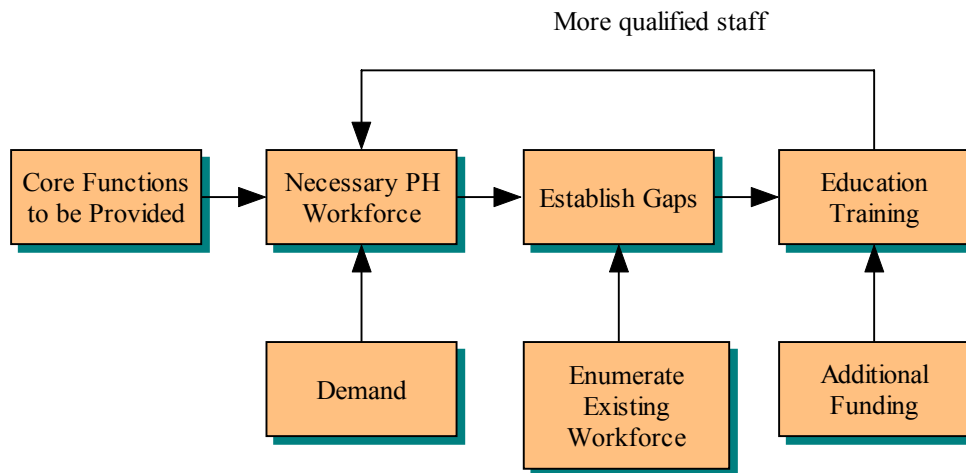


Health Canada should engage provincial/territorial departments and ministries of health in immediate discussions around the initiation of a **national strategy** for the renewal of human resources in public health.

*Report of the National Advisory Committee on SARS and Public Health - October 2000. Dr. David Naylor, Chair*

## 1. SUPPLY AND DEMAND

Planning the number of people and necessary skills required to deliver an agreed range of public health services to a national population seems a reasonably straight forward exercise. Ministries of Health around the world have traditionally used supply and demand evaluation to come up with the answers. The diagram below shows in a simplified way the main steps involved.



The process starts with the definition of the range of public health services to be provided to the target population. This list can then be used to identify a number of core public health functions or activities that are necessary to deliver those services. It should then be quite a simple matter to determine how many public health doctors, nurses, epidemiologists, sociologists, etc. would be required to perform the services across the geographical area under consideration. Just like how many assembly workers are needed to produce cars on a production line at Ford or GM, perhaps.

The derived number of public health staff required to do the job is usually found to be more than that available at the time in question from the existing public health workforce in the area concerned. Any forecasts of future staffing needs frequently show the gap between supply and demand widening over time.

At this point, the staffing gaps in each specialist area are established, which demands funding from government resources to increase education and training of the required individuals, in order to eliminate the identified shortfalls. In the best of all possible worlds, trend analysis will then show how long production of increased numbers of specific types of public health workers should be continued to fill the revealed gaps on a medium to long term basis, without overshoot that could lead to unemployment of freshly qualified staff in these sectors.

It may well be that it can take 5 years or more to start filling some of the more technically demanding gapped positions from a standing start. So the algorithm used to control the turning on and off of the education supercharger will need to be quite sophisticated, especially as the staff requirements will likely change from year to year in any particular region, requiring constant data gathering to reflect selective changes in the supply/demand balance and to assess the success or failure of the measures being applied.

Allowance will also need to be made for inherent wastage in the system due to newly qualified individuals being lured away from public health careers by academia or the pharmaceutical industry, for example. In addition, the ramp-up time for the supply of additional experienced staff to teach public health related topics at universities and colleges may well introduce further latency into the response of the system.

So the key elements in supply/demand planning are:

**- Measure supply**

Current and projected workforce numbers.

**- Identify demand or needs**

Workforce/population ratios (if established), use of services, economic demand.

**- Match supply and demand**

Make appropriate adjustments to training courses and throughput.

This approach may well yield useful information, but it is not the easiest tool for public health workforce planning, because supply and demand are both hard to measure and are not directly related to simple metrics like population size. Collection of workforce statistics seems to be universally neglected by the world's departments of health and what numbers are available tend to be contaminated by the fuzzy edges to the public health workforce, as well as unmeasured part-time working, job sharing, etc. Significant changes in health service infrastructure, adjustments in services provided and who provides them can readily distort demand measurement, as well as making it hard to track trends.

## **2. COMPETENCY AND TASK PLANNING**

The National Public Health Partnership (NPHP) in Australia has been actively involved in developing a competency/task-based method for workforce planning in recent years. This approach is reviewed in Chapter 5 of this report, so it will suffice to note basically how it works here and to outline the benefits it may offer to public health workforce development. The plan works at the organization level within public health and is carried out as follows:

- Define the services the public needs
- Identify core functions relevant to these objectives
- Determine the skills and competences needed to deliver the services
- Establish how organizational competency needs and individual competency sets fit together
- Derive both numbers and types of staff required to deliver competences that will provide services at the organizational or program level
- Match actual positions with competences and identify gaps
- Use gap information to establish hiring, training and education policies

The Australian model has recently completed preliminary trials in a health district in the Sydney, New South Wales area. They hope that a system that identifies the tasks required to meet public needs and the competences needed to carry out those tasks will allow public health agencies to work out the number and type of public health workers required to do the job, without getting hung up on existing job titles or job descriptions. This approach also seems to lend itself well to constructing effective teams with well-blended competences to work on the front-line in local public health.

So it is clear that the competency/task planning method differs from the supply/demand model in that it measures the actual competences involved in providing the necessary services, which forces health services to determine who works in public health across the board. This very broad topic has been almost totally neglected until recently. By comparison, the supply/demand weakness is that it takes the status quo and strives to add warm bodies with about the right level of qualifications on top of an existing heap of bodies with little known competences.

It should be pointed out that the competency approach is also being adopted at certain levels in the public health systems of the UK and the U.S. - see Chapters 3 and 4 below.

## **3. WHAT HAS BEEN HAPPENING IN CANADA?**

Canada has actually carried out very little public health workforce planning over the years. What work has been done has traditionally relied on the supply and demand approach. This method has proved difficult to operate in practice, as noted above. Even ignoring the latency issues, a number of serious obstacles lie in the way of successful public health workforce planning, especially when using a "people-based" model of this kind.

The most serious stumbling block in Canada has been a lack of reliable data about most parts of the system. Considering that the public health workforce is absolutely central to the performance of the health system, surprisingly little is known about its composition, training or performance. Practically all recent surveys, for example, have pointed out that even the amount of money spent on the public health system in this country is unknown<sup>4</sup>. The CHIR report points out that CIHI's most recent report on the subject (2000) says that 6% of Canada's health system expenditures were spent on public health and administration. The mainly provincial administration costs are not specified, however, so the amount flowing to actual service delivery is not clear. In Ontario, the overall public health budget is estimated to be in the region of 2.8% of the province's overall health system budget (2002/03) - assuming 50:50 municipal funding.

The Naylor Report also drew attention to the financial issue, noting that "the 2003 federal budget allotted \$90 million over five years for human health resources, but no funds were earmarked specifically for the public health workforce".

At present, there is no agreed list of the core functions to be performed by Canada's public health service, so there is no reliable way of beginning to assess how well the system is doing. Enumerating the existing public health workforce has been another challenge. The edges of public health employment are porous and resistant to evaluation, both here and overseas, because a large number of both senior and working level staff are involved with public health activities for only part of their working day. Even counting the individuals who devote all their time to public health seems to have been largely overlooked so far. A recent high level Canadian report<sup>5</sup> recommended that an inventory of current public health human resources be carried out, together with a plan for ongoing monitoring of and adjustments to the inventory. It went on to add that CIHI has overall data for MDs and RNs, but observed that, unfortunately, this information is not segregated to show who is working in public health.

In spite of a lack of up-to-date, consistently gathered data on gaps between supply and demand in Canada's public health workforce, the Naylor Report was able to identify some areas of weakness in the current supply of health professionals:

Public Health Physicians	8 out of 37 health units in Ontario do not currently employ a full-time medical officer of health <sup>6</sup> . Only a handful of Canadian-trained physicians enter the public health workforce each year. No improvement in sight.
Public Health Nurses	Largest group in public health workforce. No reliable enumeration today Could be short 7,000 RNs by 2011 and 113,000 by 2016 <sup>7</sup> .

<sup>4</sup> CHIR: *Future of Public Health in Canada - Developing a System for the 21st Century* - June 2003

<sup>5</sup> *Final Report of the Public Health Human Resources Task Group* - June, 2003

<sup>6</sup> Naylor source: National Specialty Society for Community Medicine

<sup>7</sup> All nurses - not only public health. Canadian Nurses Association estimates.

Laboratory Personnel

Medical microbiologists in high demand everywhere.  
Poor pay in public health compared with private sector.  
Not enough PhD-trained microbiologists in the pipeline.  
Lab technologists okay for now, except rural postings.

Infection Control  
Practitioners

80% of Canadian hospitals cannot achieve the one  
ICP per 175 active care beds benchmark set by the  
Infection Control Alliance - a substantial shortfall.  
Only one formal training course in Canada.

Other PH Workers

Little or no data available.

# CHAPTER THREE: WORKFORCE DEVELOPMENT IN ENGLAND

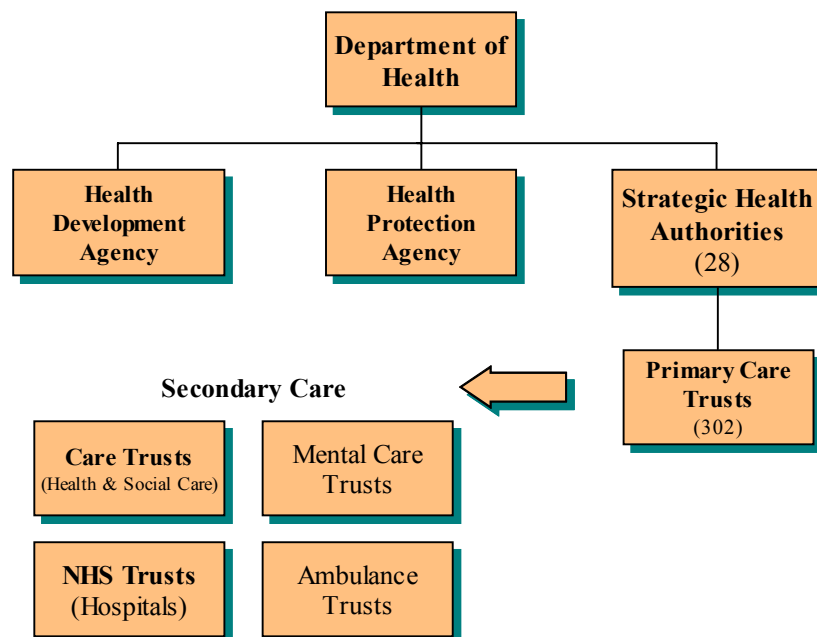


## 1. THE ENGLISH PUBLIC HEALTH SYSTEM

The English health system has been subject to serious and repeated reorganization over recent years. Current government policy calls for a strong public health function within health and local authority services. However, recent measures have drastically fragmented the organizational structure of public health and have resulted in concerns over the capacity and capabilities of the public health workforce.

At the same time, it is widely recognized that there is insufficient multi-disciplinary working across organizational boundaries. Today's public health workforce is made up of people with a wide range of professional capabilities, a large number of whom have non-medical backgrounds. The relatively low status and poor recognition of their expertise experienced by some professional experts without medical qualifications has done little to promote harmonious lateral relationships within the system.

The National Health Service (NHS) used to be UK-wide in scope. It was split into independent English, Scottish, Welsh and Northern Ireland operations, when UK government devolution took place in 1999. The diagram below shows the elements of the NHS that contribute to the delivery of public health services in England.



The **Department of Health** has a similar role to Health Canada in that it carries the overall responsibility for improving the health and well-being of the population. It sets the overall direction for the NHS while establishing national standards for service delivery. It is also responsible for securing resources and providing funding to ensure that the NHS is able to deliver those services.

As noted above, the Department of Health is very much involved at the moment in implementing a program of change called *Shifting the Balance of Power*. The stated objective here is to design a service centred around patients, one that puts them first. The service provided is supposed to be faster, more convenient and able to offer punters more choice. The first step along this road saw the establishment of 28 new **Strategic Health Authorities** (SHAs) covering all parts of England - a typical SHA might be responsible for health care within two or three counties, depending on the population density involved. SHAs are looked upon as strategic operations that also dispense "performance-based management". Rather than delivering health services to the public, they look after planning better health services for their local area, evaluating how well primary and secondary care are being delivered, integrating national programs (like those for improving cancer outcomes, for example) into the region and - most relevantly - providing public health expertise and management skills, not available at the local level. Each SHA has a Director of Public Health supported by a small high-level team, to manage local public health activities. The Director is also responsible for managing a public health network within the SHA area that will allow Primary Care Trusts (PCTs) to access specialist expertise and interventions where it is not economical to provide them separately.

As an example, the Surrey and Sussex SHA is one of the largest of these groups serving a population of approximately 2.5 million and a geographical area which stretches from London to the Sussex coast and from Chichester in the west to Camber Sands (an unfamiliar landmark near Hastings) in the east. This SHA works with 15 **Primary Care Trusts**, eight acute hospital trusts, two ambulance trusts and six trusts providing mental health and specialist services located in Surrey and Sussex.

Primary Care Trusts are also new organizations set up under the *Shifting the Balance of Power* program. Their job is to provide health services at the local level and to act as the first point of patient contact for the National Health Service in their area. PCTs are now treated as the centre of the NHS and receive 75 percent of the national budget. They have become the main delivery vehicle for public health locally, working with emergent managed public health networks<sup>8</sup> across SHA areas.

In addition, PCTs must make sure that all other health services are provided including hospitals, dentists, mental health services, National Health Service Walk-In Centres, NHS Direct - a phone-in help line, patient transport (including accident and emergency), population screening, pharmacies and opticians. They also responsible for the tough task of making health and social care systems work together for the benefit of patients. Small wonder perhaps that public health issues can become

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<sup>8</sup> Locally managed and coordinated functions made up of Specialists and practitioners across agencies that work together formally to deliver public health.

increasingly side-lined in the face of the massive demands made by individual care delivery on each PCT under the new system.

Moreover, those responsible for making *Shifting the Balance of Power* work in public health practice have been concerned at the lack of real clarity about accountability, responsibilities and how decisions should be made. They find that they are now tackling difficulties involved in defining, locating and quantifying public health at the community level<sup>9</sup>. These issues are dealt with in more detail later on in this chapter.

There are two fairly recently established Special Health Agencies involved in public health that report directly to the Department of Health. The **Health Development Agency** (HDA) opened its doors in January 2001 with a mandate to assess what works in public health and to establish a clear evidence base so that organizations and individuals will have the latest information on which to base their work. A key task of the HDA has been to work with a range of organizations to set up networks so they can share knowledge and good practice, as well as improving communications between local, regional and national public health services. The HDA has staff in each of the DoH's regional offices around England. These offices work closely with **Public Health Observatories** which are based in the same facilities.

The other organization is the **Health Protection Agency** (HPA), which only came into being in April, 2003 and operates in both England and Wales. This outfit brings together more than 2,700 staff working in variety of government establishments involved in public health protection and combating the impact of infections, chemicals, poisons and radiation hazards on human health. The idea is to bring together the skills and expertise from a number of organizations to work in a more co-coordinated way to reduce the burden and consequences of health protection threats or disease. Under this scheme, 32 of the Public Health Laboratory Service's 46 laboratories are now being run by NHS Trusts.

The HPA reports that "much work still needs to be done to create a single organization" including filling key vacancies, providing adequate accommodation for everyone, getting a unified IT system working properly and sorting out a variety of cultural issues that affect their style of working and approach<sup>10</sup>. Critics worry that huge structural reorganizations of this kind at a time of high level bioterrorism threat is a hazardous undertaking. HPA management, however, is convinced that bringing together the key elements of public health protection into a single organization will "provide more effective services for health protection and health emergency planning".

Some of the organizations absorbed into the new HPA are:

Public Health Laboratory Service (including the Communicable Disease Surveillance Centre).  
Centre for Applied Microbiology and Research.  
National Focus for Chemical Incidents.  
National Poisons Information Service.

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<sup>9</sup> David Woodhead et al: *Public Health in the Balance* - March 2002

<sup>10</sup> The Guardian: *Bioterrorism agency to be reorganized* - Nov 28, 2003

NHS public health staff responsible for control of infectious disease, emergency planning and other health protection support.  
National Radiological Protection Board

## 2. PUBLIC HEALTH WORKFORCE PLANNING

### 2.1 THE WORKFORCE

The UK public health workforce has been divided into three basic groups for planning purposes:

**Public Health Specialists:** Professionally qualified individuals whose main role is maintaining and improving the public's health. They come from a variety of backgrounds and experience including social sciences, statistics, environmental health, communicable disease control, nursing and various areas of health promotion. This category is made up of both medically-qualified people and those with qualifications in other disciplines, all operating at a strategic or senior management level. However, since the management of public health in Britain has traditionally been in the hands of medical doctors, non-medical specialists have on the whole enjoyed lower status, lower salaries and fewer managerial opportunities than their medical counterparts - sometimes when carrying out identical work responsibilities. These inequalities have been the source of a good deal of friction in the UK public health system over the years. Public health is now clearly acknowledged as a multi-disciplinary enterprise requiring the contributions of a wide variety of individuals from unrelated as well as complimentary backgrounds. Approximately 50 percent of the specialist public health workforce in the UK are medically qualified, although there are marked variations across SHAs (22% to 90%). Efforts are being made to level this playing field at present - and as a result some doctors are now beginning to question their role in public health.

**Public Health Practitioners:** Public health professionals who spend a major part of their time, or perhaps all their time, furthering public health by working with communities or groups. They include public health nurses, health promotion specialists, health visitors, community development workers and environmental health officers. This group puts public health programs into practice by using their skills in research, information analysis, public health science, health promotion to help achieve public health objectives.

**The Wider Workforce:** Individuals whose role would benefit from an awareness of public health issues. These could include managers in the NHS and local authorities, teachers, local business leaders, social workers, housing officers, the voluntary sector as well as general practitioners.

"We need to make sure that we keep collective knowledge in the system. Otherwise we will forget what we have done and what worked and so face each new situation from scratch"  
*UK local government emergency planner*

## 2.2 THE PLAN THAT NEVER WAS

About four years ago, the Public Health Resource Unit (PHRU) of the NHS<sup>11</sup> was tasked by the Health Development Agency with developing a plan for the public health workforce in England, that would "identify the people needed, the skills and knowledge required and the education and training necessary for the future delivery of a full public health service".

Individuals involved in preparing the plan reported that obtaining data on medically-qualified specialists in public health was no problem, since the numbers and job descriptions are well known, as well as being tracked on an annual basis. Apparently they had "a hell of a job" getting agreement on the job descriptions in the Practitioner category while doing what they could to draw these less reliable numbers together. Securing worthwhile data on the Wider Workforce proved to be out of the question at the time.

A good deal of work was carried out to identify and measure the current NHS workforce, to project future demand, determine where the major gaps were and to recommend how to fill them. Some benchmarks were developed to determine how many public health workers would be needed in each category to provide effective service down to the local level across the country. Although required skill levels were addressed, this plan is essentially a straightforward demand and supply analysis. The basic approach adopted is outlined below:

**Establish the Core Elements of Public Health**  
**Consider the public health function at different levels**  
**Enumerate the current public health workforce**  
**Forecast demand (2000-2005) - three scenarios**  
**Propose how to deliver the required supply**

### 1. What were the core elements selected?

\* *The science of public health: ensuring high quality practice and services*

- Surveillance and assessment of population health & well-being
- Developing quality and risk management
- Research and development

\* *Health protection, health promotion and community health development*

\* *Health policy, leadership and management*

### 2. Which population levels?

The plan recognized that the selected core elements would be deployed in different proportions at each population level in the NHS. The levels chosen were:

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<sup>11</sup> Based at the University of Oxford's Institute of Health Sciences

National - 51 million (was 4 million in 1600)  
 Regional - 6.4 million  
 SHA - 1.5 million  
 PCT - 200k  
 Neighbourhood - 12.5k

### 3. How was the current workforce enumerated?

Since there was (and still is) very little coherent workforce data available on the wider workforce, the plan only addressed specialists and practitioners. Specialist numbers came mainly from the UK Faculty of Public Health (FPH) database. As noted above, gathering up-to-date and reliable figures for practitioners was more challenging. Statistics were gathered predominantly from NHS resources, local authority records and professional organizations, such as the Nursing and Midwifery Council. The results are shown below:

<b>CURRENT PUBLIC HEALTH WORKFORCE (YEAR 2000: ENGLAND)</b>				
		<b>Overall wte</b>	<b>% Time PH</b>	<b>PH wte<sup>12</sup></b>
<b>SPECIALISTS</b>				
	PH Consultants - Medical	650		
	Other career grade PH Medical Staff	63		
	PH Consultants - Dental	41		
	Non-medical PH specialists	100		
	<b>Total Specialists</b>	<b>854</b>		<b>854</b>
<b>Academic</b>	Academic PH Staff - Medical	124		
<b>Academic</b>	Academic PH Staff - Non-medical	584		
	<b>Total Academic</b>	<b>708</b>	<b>100</b>	<b>708</b>
<b>PRACTITIONERS</b>				
LA	Environmental Health Officers	3,867	90	3,480
	<i>LA Sub-Total</i>	<i>3,867</i>		<i>3,480</i>
NHS	PH Laboratory Staff	87	100	87
NHS	PH Practitioners(in SHA PH Depts.)	230	100	230
NHS	Health Promotion	1,625	100	1,625
NHS	Infection Control	847	90	762
NHS	Health Visitors	10,046	10	1,005
NHS	School Nurses	2,400	10	240
	<i>NHS Sub-Total</i>	<i>15,235</i>		<i>3,949</i>
	<b>Total Practitioners</b>	<b>19,102</b>	<b>39</b>	<b>7,429</b>
<b>GRAND TOTAL - CURRENT WORKFORCE</b>		<b>20,664</b>		<b>8,991</b>

<sup>12</sup> Whole Time Equivalent. Same as Full Time Equivalent (FTE)

#### 4. What were the demand forecast scenarios?

Accelerated development - projected growth achieved in 5 years

Gradual development - projected growth achieved in 10 years

Slow partial development - partial growth achieved in 10 years

Note: In practice, only the PCT and Neighbourhood levels actually show specialist and practitioner workforce changes in response to the more aggressive demand scenarios. National and regional staffing forecasts remain the same.

#### 5. How about supply?

As with workforce enumeration, the model only addresses specialist and practitioner categories. However, a major finding of the plan's analysis was that the supply of public health practitioners is clearly insufficient to meet even the partial growth scenario. This is serious, in that delivery of public health services in England and elsewhere is critically dependent on the frontline practitioner workforce.

A number of suggestions are offered in the plan to help meet this shortfall, including:

- Educate/train suitable candidates from the wider workforce in practitioner functions
- Encourage NHS health visitors and school nurses, who currently average 10% of their time on public health activities, to up that figure to 50%, say <sup>13</sup>.

The plan requires some scientific and leadership gap-filling in the specialist ranks as well. It calls for fast-tracking of selected senior public health practitioners as a short-term measure and for providing high quality training programs for specialists from backgrounds other than medicine in the longer term.

This *Marie Celeste* of a plan was submitted to the NHS in August, 2002 and it promptly disappeared without trace. One day its publication was being eagerly heralded in the press and in NHS communications, the next there was silence. Sources close to the project suggest that the Department of Health was unwilling to accept the staffing benchmarks outlined in the report as they might conflict with their overall planning for the NHS. Or perhaps they were unwilling to see substantial gaps in the public health workforce exposed to public view in an official publication. It is also thought likely that the DoH felt it should lead on initiatives involving public health specialists and that other agencies should back off. One official interviewed even thought the plan might have been rejected because it was rubbish. Fortunately, Nevis has been able to obtain a copy of the missing document, which has proved useful background in the preparation of this study for Health Canada.

It has certainly provided some valuable insights into the workforce planning approach that England was looking to deploy two years ago. It is probably fair to say that it falls short by not using the competences yardstick to drive a close match between workforce

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<sup>13</sup> See workforce table above

skills, service requirements and education/training needs. It also uses a simple population-based demand model which would likely be less responsive to reality in the Canadian environment.

Anyway, time moves on and efforts continue in England to get another version of the plan up and running. Latest reports indicate that HDA regional offices have now been charged with developing regional workforce development plans. It is possible that these will be operated locally to start with and, if found to be reasonably valid, they may be rolled up into a national plan at a later date. So the influence of the original PHRU plan may be felt - but it won't necessarily be recognized. On the other hand, some feel that regionalization of workforce development planning may only serve to further fragment the implementation of public health in England.

"The government's obsession with hospitals and waiting lists is deeply depressing to those of us who work in primary and community care. Why do they go on endlessly about hospitals, when they must know that the majority of NHS care takes place within community and primary (GP) services, in order to stop people going into hospital in the first place?

Why is any extra money always spent on hospitals and waiting lists? This is shutting the stable door after the horse has bolted."

*A Manager of Community Nursing Services, South London*

### **2.3 Public Health Workforce Data**

Work is proceeding at present to nail down more reliable public health workforce data. So far, practically all studies in the UK aimed at measuring the existing size of the public health workforce (including the vanishing plan) - have taken a run at enumerating the specialists. Some have looked at the practitioner level as well, but with less success due to quality of data available on this tier.

Senior academics interviewed for this study say that workforce planning in the UK remains "pretty ad hoc" just now. Clearly there are vacancies for a good number of Directors of Public Health (DPH) across the NHS today, so universities are just going ahead with producing as many MPH graduates as they reasonably can. The feeling is that it will always be possible to cut back should the market for public health graduates become saturated - an example of open-loop supply/demand planning.

Meanwhile, data from the UK Faculty of Public Health database of members has been mined recently to come up with the number of public health specialists and consultants in public health medicine by employer. Although the Faculty can be reasonably confident that it is in contact with most of the public health medicine consultants in UK, it is less confident that the databases are accurate when it comes to specialists in Public Health from a background other than medicine. Also, the FPH database does not contain FTE information, although this is being added now as it is very helpful to know for workforce planning.

<b>Employer</b>	<b>Number</b>
NHS	684
Government Bodies	85
CCDCs, PHLS <sup>14</sup>	107
Universities	292
NHS Acute Trusts	32
Private Sector/self employed	40
Military	23
Other	49
Dental	19
<b>TOTAL</b>	<b>1336</b>

Source: UK Faculty of Public Health internal database

## 2.4 Skills Gap Assessment

There's not much doubt that the recent reorganization of the NHS has aggravated the capacity problem for public health in England. Not many specialists have been lost as a direct result of this restructuring, but the workforce has undoubtedly been fragmented as a result of an expanding public health system and new Board level responsibilities for PCT Directors of Public Health.

There are still a number of DPH vacancies around the country and it appears that a small number of DPHs (and specialists) who were appointed in the last 18 months are now leaving. Furthermore, some public health teams in PCTs are suffering from a lack of critical mass and many DPHs are actually single-handed. In places where DPHs have not yet being recruited, there is often one specialist also working single-handed. The lack of posts below the DPH level is particularly nerve-racking for trainees and specialist registrars (SpRs), who will be forced to consider director-level posts immediately after they finish their training.

A worthwhile UK study<sup>15</sup> recently set out to establish the seriousness of specialist<sup>16</sup> capacity gaps in England using a combination of semi-structured interviews and an emailed questionnaire. It reported a high degree of competency among the specialist workforce together with a very wide supplementary skill set accessible from nearby universities, Workforce Development Confederations and Public Health Observatories. They asserted that the specialist capacity issue is in fact, a numbers problem and not a global skills deficit - although they might be accused of jumping too quickly to that conclusion on the basis of the data provided. A wealth of relevant skills available in the wrong places may still give rise to capacity gaps even in a system unstressed by a terrorist event or a SARS outbreak. However, the report did identify a number of actual skill gaps:

<sup>14</sup> Centres for Communicable Disease Control, Public Health Laboratory Service

<sup>15</sup> Barts and The London/City University, London: *Capacity and Development Needs of Primary Care Trust and Strategic Health Authority Specialists in Public Health*. September, 2003

<sup>16</sup> Note that this report, like many others in UK and elsewhere targets the specialist workforce, since this is the only sector for which reliable numerical data is available.

Medically qualified specialists were found to be weaker on community development, leadership and management, while non-medically qualified individuals were (unsurprisingly) less able to perform tasks that required epidemiological or clinical input.

There was a general skill/capacity gap in information analysis and serious concerns about how hard it was to recruit information analysts.

Specialists also admitted to skill gaps among the ten key areas of competency<sup>17</sup>, particularly in media communication, data management, budget management, computer skills, leadership and staff management. Respondents said they were most anxious to learn quality and risk management skills.

A new on-line tool that allows instant analysis of a public health professional's skills was launched in UK in November 2003. It was developed by the North West Public Health Observatory in association with the HDA. The **National Online Public Health Skills Audit Tool** (NOPHSAT) is said to be quick and easy to use, and it is intended to allow organizations, teams and individuals to obtain on-the-spot evaluation of their skills, highlighting strengths and weaknesses. The tool can also be helpful in carrying out personal development reviews and can be deployed by individuals to identify their own training needs. The interactive system and its built-in analysis functions can be checked out at [www.phskills.net](http://www.phskills.net).

The NOPHSAT builds on the strengths of an original paper-based audit tool developed by the HDA at the request of the Chief Medical Officer. Designed to provide a clearer overview of staff abilities, manage development and promote learning, proponents maintain that the tool will enable a national database to be developed, which in turn will allow public health skills to be assessed nationally. An individual analysis takes around 20 minutes or a full skills audit for a team can be produced in only a couple of hours.

The National Online Public Health Skills Audit Tool is designed to capture information from all individuals and organizations working within the public health arena, such as, Directors of Public Health, public health specialists, environmental health teams, nurses, midwives, health visitors, health promotion specialists, and staff working in public health surveillance and intelligence. It is now being promoted throughout the UK with demonstrations within each region to encourage its wider use.

## 2.5 Competencies and Registration of Public Health Specialists

In the course of researching the now invisible UK Public Health Workforce Plan in the late 1990s, CPRU staff were alarmed to find that Directors of Public Health in some parts of the country were by and large inexperienced with little or no public health training. Often they had been hired directly from university on the basis a medical degree. It was apparent that there was an urgent need to establish a registration system for public health specialists based on clear competency guidelines.

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<sup>17</sup> See p.20, below.

The Tripartite Group<sup>18</sup> in the UK has established a **Voluntary Register** of public health Specialists designed to boost public confidence in public health practice at senior levels within the NHS by means of independent regulation. It is being pitched at the Director of Public Health level. It will operate in a similar way to the General Medical Council (GMC), in that it will publish its register of competent specialists in public health, it will revalidate these individuals periodically to make sure they remain up-to-date and competent and it will "deal with" those who fail to meet the necessary standards.

Although registration is voluntary at present, the objective is that it will eventually become a statutory register. The objective here is to make sure that multi-disciplinary specialists in public health are appropriately qualified and competent. So, after the transitional period of voluntary registration, it is expected that the NHS will normally employ only specialists in public health who are on the register. The register is open to specialists in all four UK countries<sup>19</sup>.

In principle, the register is a key step in the development of the new multi-disciplinary work force in UK public health because it creates a formalized method of accreditation for non-medical specialists that did not exist before. Individuals who are not medically qualified are now able to seek specialist status through the voluntary register. There is some confusion surrounding who is eligible for accreditation through this mechanism which reflects the lack of clarity around the definition and the public health function as a whole. Some friction is apparent between medically qualified and non-medically qualified specialists about the accreditation processes. Some individuals are having difficulty accepting that the process for accreditation on the voluntary register is equivalent to the five-year training program in public health medicine.

The basic idea is that although the non-medical specialists will come from a variety of backgrounds, they will share a common core of knowledge, skills and experience. So as part of the registration process, they must show competence across all ten key areas of public health<sup>20</sup> listed below by submitting a portfolio of their work for assessment:

- Surveillance and assessment of the population's health and well-being
- Promoting and protecting the population's health and well-being
- Developing quality and risk management within an evaluative culture
- Collaborative working for health
- Developing health programs and services and reducing inequalities
- Policy and strategy development and implementation
- Working with and for communities
- Strategic leadership for health
- Research and development
- Ethically managing self, people and resources

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<sup>18</sup> The Multidisciplinary Public Health Forum, the Faculty of Public Health Medicine (FPHM) and the Royal Institute of Public Health

<sup>19</sup> See the specialist competence self-assessment form in Annex A.

<sup>20</sup> Developed by the UK Faculty of Public Health

The Department of Health has set up schemes in the regions for "top up" training for medical and non-medical specialists and for regional assessment centres where applicants can get their competency checked. These centres will operate for the next two to three years, while the window remains open for portfolio submission and registration. The majority of non-medical specialists selected for this route should only have deficits in one or two categories on the competency list - three at the most. The prime areas of shortfall among non-medical applicants are in epidemiology, health protection, and communicable diseases. So there is naturally big demand for these particular "top up" courses.

Non-medical people on this route are concerned at the high level of expectation of hands-on experience in health protection which is not very likely to have been acquired by a senior health data analysis specialists, for example. Moreover, senior non-medical executives in the NHS report that they really have no time to carry out the courses necessary to fill these gaps. It might be possible to take a week off to do an epidemiology refresher course, but the months needed to acquire new competences are out of the question.

Some UK non-medics believe the required competences are deliberately obstructive and designed to ensure that medics hold down the majority of Director of Public Health jobs in the future. This may or may not be the case, but the Register is now moving to introduce separate registration for "Defined Specialists" who are in senior management positions, but are not competent in all ten key areas and have no immediate interest in being so. Six professional groups are under consideration at present:

- Health promotion
- Health protection
- Public health pharmacy
- Public health information
- Health economics
- Possibly epidemiology/statistics in academic public health

NHS insiders believe this initiative will result in a "fine old mess" and will collapse under its own weight.

## **2.6 Standards for Practitioner Groups**

Back in 2002, HDA started to look at competency standards for "public health practice". Many felt they should have been putting together "Public Health Practitioner" standards so as to create a professional group similar to the Public Health Specialists emerging via the Voluntary Register.

With typical forward-thinking, Scotland has already created Public Health Practitioner groups, established the competences needed in a variety of fields and has put in place the necessary training courses to allow practitioners to develop compliant portfolios.

In England, however, there is substantial resistance to defining an overall professional group of public health practitioners. As a result, there is no affiliation available for practitioners who are not already in a professional group or association, such as those that exist for nurses and health visitors. Health promotion people in England, for example, must now decide if they should register as non-medical specialists on the basis of their senior management or strategic planning role, or remain part of the ground level delivery system. This issue is being slightly fudged at the moment by the notion that these individuals could register as Defined Specialists (as described above) and be accepted as equivalent to non-medical specialists. Senior NHS managers believe this is an unlikely outcome.

Meanwhile, the Sector Skills Council for the Health Sector<sup>21</sup> has finished its public health practice standards and has also managed a skillful language slip so that they are now called "practitioner standards". They are based the same ten key areas of public health defined for specialists, but they have been adapted to reflect practice level competencies. The standards will be piloted later in 2004.

HDA planners believe someone entering the workforce in England in the future should be able to acquire the relevant public health skills for the job they are doing at the time and then be able to bank these as a credit with the registration authority. If they later chose to become a more consolidated public health practitioner, these credits could be drawn down into the portfolio. It is clear that England is not close to this stage yet, although a number of building blocks are being put in place. For example, a task force has been established to determine the workforce competencies required in the coronary heart disease (CHD) sector - looking at prevention and rehabilitation, as well as simply aspects of treatment. This process allowed the task force to draw on the public health specialist practice standards and those in related fields, like drugs, alcohol and mental health and to look across them all and assemble them. This shows the type of competences you might want to acquire, which leads to a basis for training and capacity assessment. The planners say that on a good day they can believe this approach looks quite promising.

## **2.7 More on Medical v. Non-Medical Specialists**

When PCTs were created with a vision of providing primary health care and commissioning secondary care close to the communities being served, public health in England got squeezed and marginalized. Also public health resources were dissipated as the system went from about 100 health authorities to 302 PCTs. In practice, this turned out to be a big step forward for non-medical public health specialists, because there was an increased demand for Directors of Public Health. As noted earlier, some regions have not recruited so far, others have actively hired unregistered non-medical specialists - partly because they were cheaper and partly because they could bring a wider variety of skills to the job. So there is some variation across the country.

Non-medically qualified Specialists in public health are becoming increasingly recognized as fully- fledged contributors to the public health program, with equal rights and responsibilities. However, there appears to be some anxiety among

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<sup>21</sup> Responsible for producing national occupational standards - including the NHS specialist standards

specialists in public health medicine about equivalence between the two groups (medical and non-medical).

It is still proving difficult to achieve a strong multidisciplinary approach to public health in the UK. The main problem is that in the NHS, public health is a medically dominated sector. Specialists are registered so they are the right people and they become consultants and therefore they are the leaders within the National Health Service. Non-medical experts are less likely to be in senior public health positions around the country.

The biggest opposition to non-medical management in public health is said to come from the epidemiology people. In fact, they will not train non-medical graduates in communicable diseases. As a result, it can be very hard to scope a disease outbreak that occurs in Britain because the necessary epidemiological skills are not available where they are needed at the local level.

Another public health weakness within the National Health Service is said to be a tendency to overvalue some people, especially long-term employees, who are good managers, but who lack public health experience. There is a growing feeling, particularly on the academic side in the UK, that public health training absolutely must be part of the background of all managers within the system.

## **2.8 Benchmarks**

Benchmarks are seldom used in the UK in public health workforce planning at the moment and certainly not on the non-medical side, in spite of having been proposed in the vanishing plan. So the current workforce capacity measurement work is now being carried out down the standards route which defines the competences required without counting the people required on site to deliver them in any given part of the NHS. As one experienced planner remarked in an interview for this study, "... what really matters now is not how many people are doing the job, but whether the job's actually getting done".

Benchmarks refuse to go away altogether, however. Back in 1988, Sir Donald Acheson's report *Public Health in England* stated that 16 public health consultants per 1 million of population was a good benchmark. More recent studies looking at Scotland and the south-west of England suggest 13 per million and 7.5 per million, respectively.

Actually, the overall "public health planning by benchmarking" method is not dead either. The fact is that public health specialists throughout the country must have access to all the required public health skills. This means (since the specialists themselves are not skilled in all disciplines) that each must manage and direct a team that has all the necessary skills between them. A ratio of one specialist/consultant to four/five supporting public health people (plus clerical and administrative support) is thought to be about the right ratio, empirically speaking. Case studies are being carried out at the moment at local health authorities in southern England to identify public health teams where the capacity feels "fine" and others where the capacity feels "terrible". In both cases, investigators will count the number of team members and seek

to establish a benchmark corresponding to the smallest teams that seem able to deliver the goods.

This seems a rather subjective method, but researchers in the UK rightly point out how hard it is to quantify both skills and capacity in order to arrive at harder determinants for decision making. Some believe that public health workforce measurement and planning should actually be based on teams of this kind. A typical front line team might consist of a specialist, a business manager to handle day-to-day task management and staff scheduling, a public health information support worker, a public health nurse, a health promotion specialist and maybe a public health coordinator/partnership working officer. The Voluntary Register is starting to show where a lot of the skills are in the system, which many now think will prove a useful tool for helping to put effective public health teams together across the country.

**Note:** Teaming has not been adopted much in UK to date, so it represents a novel idea operationally, as well as providing a technique for measuring the workforce resources needed to carry out public health tasks properly. The existing public health set-up at many PCTs consists of a single consultant with a secretary/PA which is said to be pretty inadequate for effective public health management and direction.

## 2.9 EDUCATION AND TRAINING

Senior NHS executives admit that its hard to recruit medics into public health in the England. The salaries offered, the available career path options and the status within the system are all significantly less than those offered down the clinical medicine path. There are actually many more applicants for the non-medical posts - which are far fewer in number and less well-paid. The non-medical positions could be filled many times over.

In this situation, it quite often happens that funds earmarked for training medics in public health are not used in some regions. If this is the case, they cannot be used to help train non-medical people in public health. The cash must instead be transferred for the use of medics in another region.

The approaches adopted by UK universities and colleges to public health education is quite varied and stratified. The more prestigious organizations go for turning out specialists with Masters of Public Health degrees. Training for practitioners however is altogether more ad hoc. Cambridge University, for example, offers minimal public health courses for practitioners. Some other colleges deal with the practitioner side of the public health workforce offering undergraduate courses for nurses, environmental specialists, etc.

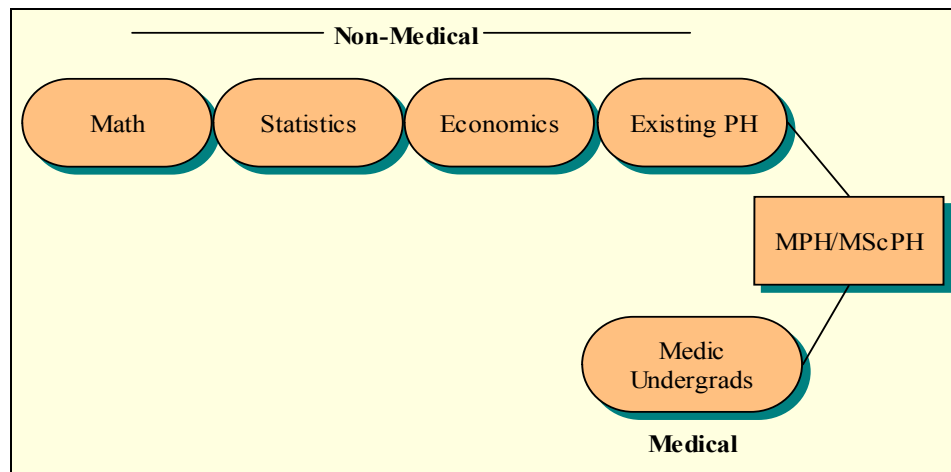
### **Challenges to Public Health Courses at Universities**

Back in 1992, a Medical Research Council report entitled "*Tomorrow's Doctors*" provided a needed boost for public health (and the universities) in Britain by urging much increased funding for public health training. Unfortunately, the universities chose not

to invest in their public health departments, resulting in increased teaching loads as the number of students increased without a corresponding increase in teaching staff.

Public health is a less attractive area for universities since very little lab-based research is carried out. So public health scores low under the UK's Research Assessment Exercise<sup>22</sup>. In any event, public health is not a very high kudos academic pursuit and, worst of all in a medical faculty, it fails to attract sponsorship from pharmaceutical companies.

There are two routes into post-graduate public health education in UK:



The non-medical courses shown are just examples, there are numerous other undergraduate paths that may be followed in order to qualify for admission to the MPH degree course at a UK university. It should be noted that non-medics are not greatly disadvantaged compared to the medics on the course who - apart from epidemiology - are said to be exposed to little public health material during their undergraduate studies. The MPH degree is usually a taught course with a strong project theme based on research, evaluation and statistics teaching. Most students can complete it in 12 months of full-time study.

An interview with one UK university during the research for this study, led to discussion about why there was no **public health first degree** being offered for non-medics in the UK at present. It was agreed that this was a great idea and that they would consider seriously offering a BSc.PH in the future

It remains quite difficult to build and retain public health faculties at British universities, mainly because there is not a big pool of public health academics to draw upon. This is especially true of medical sociology and health economics/statistics where much better salaries are available elsewhere. Although only one good person is required for each position, there are not many applicants and this can lead to poaching between universities. The pharmaceutical companies are the biggest poachers, however, with the help of deep pockets, attractive facilities and worthwhile career

<sup>22</sup> [www.hero.ac.uk/rae/AboutUs](http://www.hero.ac.uk/rae/AboutUs)

paths. This means that fast ramp-up of public health training to meet a perceived need has not proved easy in the past and is unlikely to become easier in the future.

Then there is the PhD problem, where most of the blame seems to fall on the shoulders of the NHS. The NHS funds public health in UK and wants to get graduates out in the system as soon as possible after qualification - not messing around doing PhDs. This is not just a public health problem either, as the NHS takes the same view in all other areas of health delivery. This leads to a seriously under-qualified public health service in Britain, in the view of the universities.

Even on the regular medical workforce side, the Department of Health's plan regards qualified medics in universities as a waste to the system, when they could be out there taking temperatures and looking down British throats.

### **The National Health Service University (NHSU)**

The NHS spends more than any other employer in Europe on the education and training of its staff - amounting to an impressive £3 billion (C\$7 billion) a year. In spite of this, a significant number of NHS staff feel they do not have access to good quality learning - so the NHSU has been created to fill the gap. The objective is for the NHSU to gain full university status as quickly as possible and to offer courses ranging from return-to-learn programs and courses in literacy, numeracy and IT skills, up to and including postgraduate studies.

The NHSU accepted its first students on December 11, 2003 on a limited portfolio of initial programs. These include: a new employee induction program, *Working for the NHS; First Contact Care*, a masters level program that equips nurses and other health professionals to act as an effective first point of contact for patients; and *Health Learning Works*, which is helping people get off social security benefits and into careers in health and social care. The idea is to allow NHS people to learn at work, in tutorials, over the Internet and face-to-face at regional learning centres across the country.

Although these are clearly early days for the NHSU, this looks a decidedly tentative start for what is actually a bold and stimulating venture on paper. This may reflect cautious funding levels until it finds its feet and begins to attract a heavyweight faculty for delivery of higher level courses. If it really gets going, it could become a powerful tool for public health workforce planning and management. At some point they are looking to establish a "Learning Needs Observatory" to collect data (at last) and establish what training and workforce development is needed.

It seems that regular UK universities with medical schools are hoping the NHSU will remain inside its own backyard or, ideally, that it will fade away altogether.

### **Recruitment and retention in public health workforce in the UK**

The difficulties in recruitment and retention have been noted in previous sections including the "wastage" of public health specialist registrars and the numbers of specialists planning to leave public health before retirement (3-9%).

A Queen Mary/City University survey for the Department of Health (Chapman et al.)<sup>23</sup> found that 9% of public health specialists plan to leave public health, and that a much higher proportion (40%) felt that their career aspirations were not being met. Only 67% of respondents thought their skills were adequately utilized. Several factors were identified that could influence recruitment and retention. 30% of respondents said they felt professionally isolated, 21% complained of poor teamwork and 12% both. Informal and formal networks could prevent isolation, but were often limited by time pressures and logistical issues. Organizational culture and style were important influences on job satisfaction, especially in relation to reorganization and professional isolation, role uncertainty and lack of capacity.

### 3. FUTURE INITIATIVES AND PRIORITIES

Derek Wanless, a former chief executive of the NatWest bank in 1999<sup>24</sup>, was hired by the Department of Health to carry out a study on long term funding problems for the NHS. His interim report was published in 2002 and has been claimed by HDA and others as a real blow in favour of much increased public health expenditure. His recently issued update on progress has certainly revealed Wanless as an unexpected champion of public health and a proactive critic of the government's short-term preoccupation with acute care and hospital beds<sup>25</sup>.

The BMJ believe Wanless is offering the public health community a unique chance to influence and shape the future of health policy in UK. He is apparently keen to talk seriously with public health practitioners and others who have cogent views to offer on the subject. Whether those working in public health are up to the challenge is thought to be more of a problem. Public health practitioners are still coming to terms with the latest NHS reorganization. Dispersed over regional government offices, strategic health authorities, and primary care trusts, with inadequate communications and inconsistent networking facilities, the BMJ feels they are sorely stretched to maintain an effective public health service.

Whether the Department of Health is actually best equipped to provide leadership on public health is another question that Wanless will be wishing to explore in the months ahead. In his first review he felt hindered by the poor state of evidence in the public health arena and he wants to be sure now that the evidence for public health interventions actually exists and will stand up to political scrutiny.

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<sup>23</sup> Chapman et al.: *Capacity and Development Needs of PCT and SHA Specialists in Public Health* - September 2003

<sup>24</sup> He received a record (at the time) golden parachute of £3.0 million.

<sup>25</sup> Editorial: *The Wanless Report and public health* - British Medical Journal (BMJ), September 13, 2003

#### 4. SOME UK INSIGHTS

1. The HDA 2002 Public Health Workforce Development Plan was thrown out by the Department of Health. The reasons are unclear, but it is possible that management did not want to see substantial gaps in the workforce published in an official document. Equally they may have thought the population-based supply and demand approach was invalid.
2. The UK needs a structured approach to workforce planning. No rational approach is visible at present, but the NHS is moving towards a more skills/competency-based line of attack, while tackling future planning on a regional basis.
3. The UK is also looking at teaming as a way of creating effective multi-disciplinary groups for front-line public health delivery. A ratio of one specialist/consultant to four/five supporting public health people (plus clerical and administrative support) is thought to be about the right ratio. Pilot studies are being carried out at the moment at local health authorities in southern England to identify public health teams where the capacity feels "fine" and others where the capacity feels "terrible". Efforts will be made to capture the key ingredients of the "fine" category.
4. Comprehensive, reliable public health workforce data remains hard to find. Even at the specialist level, non-medical workers are still difficult to count since only 70% plan join the voluntary registry (see #5 below) and because of "substitute labour"<sup>26</sup>. Practitioner enumeration is more recondite still, since the numbers are far larger, the work categories more numerous and the sources of data more fragmented. The NHS has not attempted a detailed analysis of the Wider Workforce category.
5. Non-medical multi-disciplinary specialists are being encouraged to join a Voluntary Register, which will probably become statutory in the future. They can qualify by submitting a portfolio for assessment that addresses their competence in ten key areas of public health practice.
6. Non-medical specialists are still thought to be less valuable than medical specialists. There are significant differences in their salaries. PCTs are hiring people to do the same jobs, but at different salaries - because one is a medic and the other is not. NHS non-medical public health specialists are determined to end this. They say it is inequitable and that it downgrades the public health professional in medical eyes.
7. Insiders say the NHS needs to start valuing postgraduate training:
  - UK now has an under-specialized public health system.
  - Training time for public health consultants is 6/7 years - the NHS wants them out in the field, not doing PhDs.
  - As a result, public health research and practice are drifting apart.
8. A real challenge has arisen because the public health system has been fragmented into PCTs across the country, which in turn has broken up the long-established public

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<sup>26</sup> Occasions when managers or generalists do the same tasks as specialists

health relationships between large hospitals and the cities they serve. Canada should seek to avoid this, they say.

9. Public health is multi-disciplinary and both training and development need to reflect this.

10. The new National Health Service University is off to a rather wimpy start, although it has the potential to be a powerful tool for public health workforce development in the future.

11. Increasing the supply of public health specialists by cranking up training capacity is a relatively slow way of increasing supply. In the short term, recruitment and on-the-job-training work best in UK.

# CHAPTER FOUR: THE U.S. APPROACH



Americans can always be counted on to do the right thing,  
after they have exhausted all other possibilities.

*Winston Churchill*

## 1. THE U.S. PUBLIC HEALTH SYSTEM

Even in the days before 9/11 and the anthrax attacks, there were serious concerns about the U.S. public health system. Critics pointed to an inflexible workforce that was poorly trained to respond to new threats, weak information systems, lack of communication between agencies and their management and a need for increased laboratory resources to handle major public health threats<sup>27</sup>.

The system is considerably fragmented with major elements of public health being provided by federal, state, city and regional government agencies. As a result, it also suffers from erratic funding. For example, the state of Washington has 34 independent local boards of health that govern local funding decisions. There is no established norm for board investment in public health, so considerable disparities can build up over time. In 2001, the county tax support for public health varied from 94 cents to \$26.05 per person per year<sup>28</sup>.

Senior CDC staff interviewed for this project believe that much of the difficulty in running effective public health in the U.S. has come about because of the amount of "independent governing" going on at the state and municipal levels in the system. They believe that Health Canada and the federal government are able to call the shots far more effectively up here and so are much better placed to manage a more cohesive public health system. They also claim to have been faced with eroding budgets over the years caused mainly by the focus of public investment in health shifting towards individual medical care, in the absence of serious epidemics and other public health threats until 9/11.

In the U.S., the objective of public health was characterized in 1995 by the awkwardly-named Public Health Functions Steering Committee as "to promote physical and

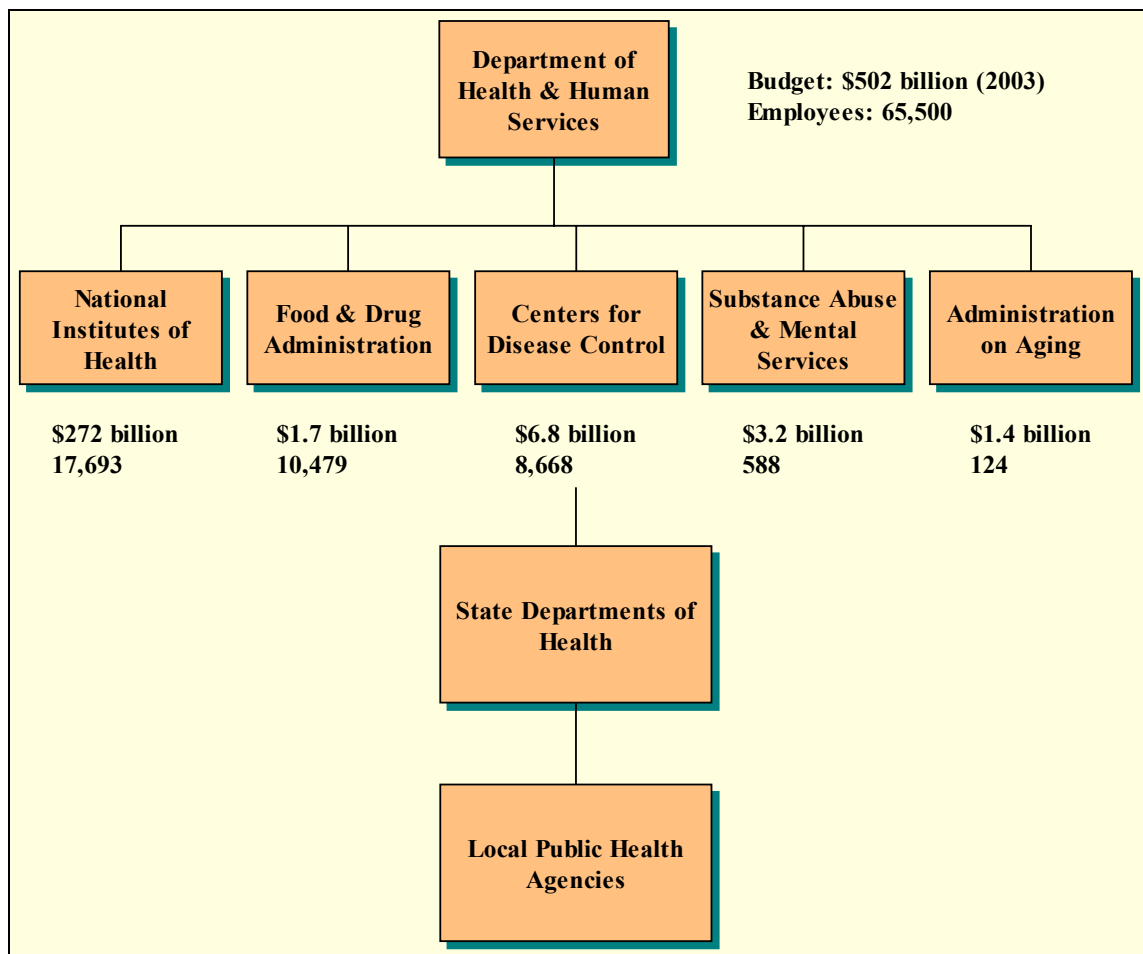
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<sup>27</sup> GAO: *Emerging Infectious diseases - Consensus on Needed Laboratory Capacity Could Strengthen Surveillance* GOA/HEHS-99-26, Feb 1999.

<sup>28</sup> Public Health Improvement Partnership (PHIP): *Financing Public Health: Investment that works for Better Health Solutions* - 2001

mental health and prevent disease, injury and disability". Public health is delivered by a bewildering array of organizations ranging from major parts of federal government departments, 160,000 public and private laboratories, 59 state and territorial health departments to over 3,000 county and city health departments and local boards of health.

The U.S. Department of Health and Human Services (DHHS) carries the main federal burden for public health. It is also largest grant-making agency in the federal government, providing more than 60,000 grants per year - mainly to state and municipal health agencies. A more detailed departmental organization chart is shown in Annex B, however the simple block schematic below will give an impression of the resources available within DHSS.



### National Institutes of Health (NIH).

The NIH was established in 1887 as the Hygienic Laboratory. Today, although no less hygienic, it has grown to become world's largest medical research organization, conducting and supporting wide-ranging biomedical research involving some 40,000 projects across the U.S. into diseases such as cancer, diabetes, arthritis, heart disease and AIDS. Although the bulk of NIH expenditure is used to fund external research

projects, it also carries out a substantial in-house research program. A good share of its internal effort is now directed towards projects to help counter bioterrorism, including the development of rapid diagnostics together with new and more effective vaccines and antimicrobial therapies.

#### **Food and Drug Administration (FDA).**

The FDA is responsible for the availability of safe and effective drugs, vaccines, blood products, medical devices, radiological products and animal health products. The FDA also looks after the safety of the food supply, in partnership with the Department of Agriculture which is responsible for the safety of meat, poultry and processed egg products. It establishes guidance and regulatory requirements for assuring that food is not adulterated and ensures the safety and efficacy of all drugs used in food animals and feeds.

The FDA is also tasked with ensuring that these products are honestly, accurately and informatively represented to the public. The agency is supported by 3,000 state and local offices responsible for monitoring retail food establishments and their employees.

#### **Centers for Disease Control and Prevention (CDC).**

The CDC, which first became operational in 1946, carries the main burden of federal public health activities. The CDC works with states, localities and other countries around the world to monitor and prevent disease outbreaks and to examine the effect of environmental conditions on health. State and local public health agencies receive support from the CDC in a variety of ways, including financial assistance, training programs, technical assistance and expert consultation, advanced laboratory services, research activities, and standards development.

One of the key vehicles for support of state and local public health agencies is the state and local preparedness grant program established in 1999 and greatly expanded by the FY2002 supplemental grant of \$940 million. This program provides funding and guidance to states to assist them in upgrading state and local public health jurisdictions' capacity to prepare for and respond to bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies. These funds have been a major boost to public health programs in many state and local jurisdictions. They have been used to fill long-standing gaps in epidemiology, disease surveillance, laboratory capacity and training. Unfortunately, some state administrations have chosen to reduce their existing public health funding by a similar amount to the incoming federal preparedness grants, resulting in status quo money in the face of increased expectations on bioterrorism capacity both locally and on the part of federal lawmakers.

#### **Substance Abuse and Mental Health Administration (SAMSHA).**

SAMSHA is responsible for improving U.S. health care capacity to provide prevention, diagnosis, and treatment services for substance abuse and mental illness. It provides funding through formula block grants to states for direct substance abuse and mental

health services, including treatment of over 340,000 Americans with serious substance abuse problems.

Symptomatic of changes in other areas of federally-funded public health care, SAMHSA is changing the nature of the formula grant program to focus on Performance Partnership Grants (PPGs). Instead of accountability based on documentary compliance, PPGs rely on actual evidence of performance. Through PPGs, states will have greater flexibility in how they use block grant funds to meet state needs, but this is now balanced by increased accountability.

### **Administration on Aging (AoA)**

The AoA is the federal focal point and advocacy agency for older Americans and their concerns. Through the Aging Network, it reaches communities throughout the U.S., providing services and support such as information and referral, adult day care, elder abuse prevention, home-delivered meals, in-home care, transportation and services for caregivers.

### **State Departments of Health**

The U.S. Constitution gives states primary responsibility when it comes to protecting the health of their citizens. In general, all states have public health legislation that provides public health authorities with the power to collect data, contract health care delivery facilities, physicians and other providers, conduct inspections, and engage in related enforcement activities. However, states differ a great deal in size, population, needs and capabilities and in how they organize their public health services.

Many states deliver public health services through multiple state agencies. Thirty-five states have free-standing state health agencies, while in other states public health is part of a larger agency that is responsible for a wide range of activities, such as human services. Important aspects of public health, such as environmental health and emergency medical services (EMS), may be housed outside the state's primary public health agency. In 36 states, the environmental health agency is separate from the state health agency. Emergency medical services are commonly found in the public safety department or governed by a separate EMS authority or board when they are not housed in the state public health agency.

States differ in the amount of authority they delegate to local governments. Some states download very little authority to local governments, while others offer local jurisdictions carte blanche on public health. Delegation of public health authority can come in three possible flavours. A **state-run approach** when local public health agencies (LPHAs) are run directly by the state or when there are no LPHAs; a **locally-run system** in which local governments are delegated significant control; or a **mixed implementation** in which some public health services are provided directly by the state, while others are assumed by the local authorities. The table below<sup>29</sup> shows that

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<sup>29</sup> Eileen Salinsky: *Public Health Emergency Preparedness - Fundamentals of the "System"*, National Health Policy Forum Background Paper, April 3, 2002.

the largest number of states have chosen a mixed approach while the state-run model (historically the most common) continues to decline.

State-Run	11
Locally-Run	17
Mixed	22

While state governments vary in both the breadth and depth of services they cover and the degree to which they delegate to local governments, they tend to play certain key roles in public health response. Except in the largest metropolitan local public health departments, local public health officials will generally turn to state personnel and capacity for providing advanced laboratory capacity and epidemiological expertise and serving as a conduit for federal assistance.

It is pretty clear from the widely different ways in which various states handle their health duties that there is no standard approach to public health adopted from one state to another. For example, only 20 percent of states have enabling legislation that includes even the majority of the *Essential Public Health Services* (see table below) defined by the Public Health Functions Steering Committee back in 1995 <sup>30</sup>.

#### **Ten Essential Public Health Services**

- Monitor health status to identify community health problems
- Diagnose and investigate health problems and health hazards in the community
- Inform, educate, and empower people about health issues
- Mobilize community partnerships to identify and solve health problems
- Develop policies and plans that support individual and community health efforts
- Enforce laws and regulations that protect health and ensure safety
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable
- Assure a competent public health and personal health care workforce
- Evaluate effectiveness, accessibility, and quality of personal and population-based health services
- Research for new insights and innovative solutions to health problems

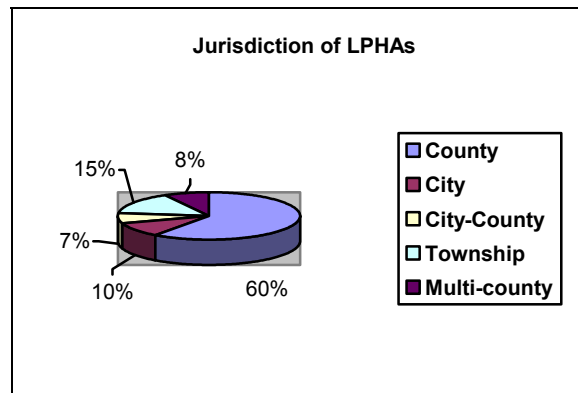
Public Health Functions Steering Committee, July 1995

#### **Local Public Health Agencies (LPHAs)**

As noted in the section above, the way states handle their public health mandates can result in the big variations in role and set-up of LPHAs - which are branches of local government. However, in general, LPHAs are on the front line in responding to public health challenges and can critically influence how well the whole U.S. public health system can react in times of stress. The diversity in local public health delivery can be illustrated with a few statistics from a 2001 survey of local public health infrastructure

<sup>30</sup> Bernard Turnock: *Public Health - What It Is and How It Works*, Jones & Bartlet, 2nd Edition 2004

conducted by the National Association of City and County Health Officers (NACCHO). The figure below shows the distribution of LPHAs by type of jurisdiction:



Source: NACCHO Chartbook. October 2001

The most common arrangement is an LPHA serving a single county, but 40% of LPHAs serve other types of jurisdictions. County LPHAs range in size from small rural counties to large metropolitan areas such as Los Angeles County. County LPHAs may not serve all geographic areas within the county, as larger cities will often have their own municipal LPHA. In some cases, a city and its surrounding county join together to form one city-county LPHA. Township health departments are usually located in states with strong "town hall" political systems like those in Massachusetts, and Vermont. In addition, multi-county health departments serve more than one county and often span large geographic areas in the western United States.

Over two-thirds of LPHAs serve jurisdictions with fewer than 50,000 people. By contrast, 4% of LPHAs serve jurisdictions with populations of 500,000 or more. Not surprisingly, the number of workers employed by LPHAs also varies considerably. The table below shows both the average and median number of full-time equivalent (FTE) staff in metropolitan and non-metropolitan LPHAs.

The average staff of a metropolitan LPHA is 108 FTEs. However, half of metropolitan LPHAs have 28 or fewer FTEs. In non-metropolitan areas, the average number of FTEs is 31, but half of the LPHAs have 13 or fewer FTEs. Administrative and clerical staff, environmental health specialists and public health nurses are the occupational categories most commonly found in LPHAs. The training and education of workers in these positions varies tremendously and occupational titles do not always indicate professional public health training or degrees in a particular discipline.

#### Full-time Equivalent (FTE) LPHA Staffing

	Metro LPHAs	Non-Metro LPHAs
<b>Mean FTEs</b>	108	31
<b>Median FTEs</b>	28	13

Source: NACCHO Chartbook - Oct 2001

The scope of services that LPHAs are responsible for also varies. In some areas, LPHAs run county hospitals, while in others, the LPHA is only responsible for septic systems

and restaurant inspections. Some LPHAs are equipped to contribute to major accident and bioterrorism-related emergencies by providing epidemiology and surveillance, communicable disease control measures, and food safety inspections. The NACCHO survey shows that over 70% of LPHAs provide: adult and child immunizations, tuberculosis testing, community assessment, community outreach and education, environmental health services, and health education.



## 2. PUBLIC HEALTH WORKFORCE PLANNING

### 2.1 THE WORKFORCE

The U.S. public health workforce was estimated<sup>31</sup> in 2000 to consist of 448,254 staff in salaried positions or one public health worker for every 635 people, supplemented by close on 3 million volunteers. This study was carried out using secondary sources and identified 55 job titles and eight broad occupational categories. It reports on federal, state, local and a small number of NGOs involved in essential public health services, where the salaried worker total included administrative, professional, technical and support staff. Observers point out, however, that these figures are only estimates and that the staff total arrived at is likely to be seriously understated.

The fact is that regular and comprehensive enumeration of the U.S. public health system is still not a reality today. Moreover, the individual studies conducted in recent years that addressed enumeration have tackled the issue in different ways, making trend analysis almost impossible.

As noted when looking at the UK situation, useful planning of workforce development cannot be achieved without a good knowledge of how many public health workers are out there, what they are doing and where they are located.

### 2.2 THE U.S. PLAN

It is estimated that only 20% of the U.S. front line public health workforce have received the education and training needed to do their jobs really effectively<sup>32</sup>. At the same time, CDC report serious difficulties in moving ahead with public health workforce development. They say that the main problem has been the fragmentation of the U.S. public health system into thickets of entrenched management at multiple levels and diverse funding arrangements that have made it exceptionally hard to plan from the centre.

The situation has been further aggravated by the need to move quickly to meet the challenge of bioterrorism and terrorism-induced major emergencies. These initiatives have certainly provided much-needed additional funding for public workforce development in the U.S.. At the same time, they have drawn human resources away from core public health functions towards the newer imperatives. The skillful balancing act of meeting the anticipated public health challenges posed by terrorist threats while making use of the enhanced funding to press ahead more rapidly on public health workforce planning as a whole, is proving hard to do at the national level. State and municipal players may be doing better since their playing fields are smaller and the personalities involved are often better known and understood.

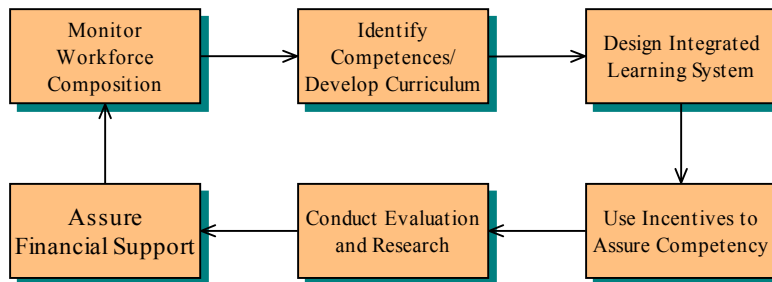
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<sup>31</sup> Dr. Kristine Gebbie, Center for Health Policy, Columbia School of Nursing: *The Public Health Workforce Enumeration, November 2000*

<sup>32</sup> U.S. Department of Health & Human Services, Bureau of Health Professions.

The U.S. national plan is called the **CDC/ATSDR Strategic Plan for Workforce Development**. It was developed by CDC and the Agency for Toxic Substances and Disease Registry in collaboration with a broad range of partners<sup>33</sup> and was published in April 2000. It is based on the six key elements described below that are designed to support a systematic approach to achieving increased workforce capability.

### The Six Strategies for Public Health Workforce Development



Source: CDC - Office of Workforce Policy & Planning

#### Strategy 1: Monitor Workforce Composition and Forecast Needs.

CDC will monitor the existing public health workforce composition using recently-developed standard occupational classifications (SOC) covering public health jobs and a standard set of workplace descriptions. In addition to monitoring composition, CDC is working with the Bureau of Health Professions (BHP) to forecast future needs

When interviewed for this study, CDC management points out that everyone knows there are shortages in many areas of public health delivery today. So why do a five year study to show shortages that are already obvious to all? They would rather do two or three local pilot studies, in cities perhaps, which would provide mutual benefit and a rapid return on the effort involved.

CDC hopes they can come up with clear needs from the pilots, that can be extrapolated to allow national needs forecasting along with BHP data .

#### Strategy 2: Identify Competencies and Develop Related Content/ Curriculum.

CDC is working to achieve national acceptance of standardized, competency-based training with built-in incentives including certification/credentialing. A national system of Centers for Public Health Preparedness are also being put in place to strengthen frontline readiness to deal with emerging threats including bioterrorism.

Public Health Competency sets have been produced for a number of disciplines including: Genomics, Informatics, Emergency Preparedness, Public Health

<sup>33</sup> Partners include Health Resources & Services Administration (HRSA), Association of State and Territorial Health Officials (ASTHO), National Association of County and City Health Officials (NACCHO), Association of Schools of Public Health (ASPH) and the American Association of Health Plans (AAHP). Also partners at the federal, state and local levels, managed care organizations and academia.

Professionals, Law for Public Health Professionals, Environmental Health, Maternal and Child Health, Nursing and for Preventive Medicine Residents.<sup>34</sup>

**Strategy 3: Design an Integrated Learning System.**

CDC/ATSDR are working on a nationwide learning system that is intended to deliver effective training across the fragmented U.S. public health structure. In practical terms there appears to be quite a lot of ground to cover still. CDC report that work has only just started on the design and development of training materials/delivery systems.

**Strategy 4: Provide Incentives to Assure Competency.**

CDC recognizes that public workforce training needs to be stimulated by corresponding incentives and competency certification functioning at the national, state and local levels. These incentives should also be linked to financial compensation and/or to career development.

**Strategy 5: Conduct Evaluation and Research.**

CDC is aware that more research is needed to assess how the quality and quantity of the public health workforce impact on the delivery of core public health services. National workforce shortages in public health are resulting in more active attention being given to workforce recruitment and retention.

**Strategy 6: Assure Financial Support.**

CDC points out that long term strategic funding allocations must be secured for public health workforce development. A national training program, for example, is unlikely to work well unless students are pretty confident that courses will be funded throughout their education program.

**2.3 BARRIERS TO ACHIEVING A COMPETENT PUBLIC HEALTH WORKFORCE**

Despite some advances in parts of the U.S. in understanding the composition and competency needs of the public health workforce, essentially the same major barriers exist to making an effective workforce development plan work that CDC faced in drafting their original plan back in 2000. Critics accuse the federal government of weak leadership in the past four years, although there is an understandable reluctance in Washington (on constitutional grounds) to be over-prescriptive in their dealings with the states on public health issues. A lack of national consensus on workforce development is the overarching problem, while some of the main individual barriers are :

1. An up-to-date **enumeration of the workforce** does not exist.
2. A common national set of deployed and measured **basic and cross-cutting competencies** does not yet exist. Neither have the **curricula/course content elements** needed in public health education been agreed throughout the country.
3. An integrated delivery system for **life-long learning** is not in place. Although current approaches provide useful learning opportunities, the learner in most states

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<sup>34</sup> See Annex C

faces a fragmented as well as a limited array of choices, that may well be of unequal quality or value.

4. There are still inadequate **incentives for participation** in training and continuing education. National competency standards do not exist for the majority of public health workers which could stimulate life-long learning activities. Certification remains patchy and is not national in scope.

5. A uniform national approach and commitment to **evaluation** is absent, whether the object of evaluation is the individual, curricula or the workforce development program itself.

6. **Financing of workforce training** and continuing education is hampered by the absence of a coherent policy and strategies for funding these activities. CDC points out that funding remains low in these areas - although outside observers believe lack of funding is not the problem.

## **2.4 BENCHMARKS**

CDC seems none too keen on benchmarking. They believe it depends on workforce data that is generally unreliable at present, although they do suggest it may be possible to define some relatively straightforward benchmarks, such as how many public health laboratory technicians are required per 100,000 of the population.

## **2.5 IS THERE A PERFECT STATE?**

Federal officials report that Illinois has done exceptionally well in introducing and operating an effective public health workforce training program in partnership with the state university.

The University of Illinois in Chicago (UIC) has the only school of public health in the state. Twenty years of a fairly consistent group of state-owned local health people working together has resulted in a serious effort on public health workforce development. The Illinois public health scene consists of the usual public health practitioners, health departments and local boards of health, but there are really not many people in the system with actual public health training.

The school has created 60 competency-based 100% on-line courses to help educate the state-based public health workforce. Basic competences for all public health workers, cross-cutting competences for frontline and more senior public health professionals and specialized competences in emergency preparedness and response are all addressed in these courses. They are provided free of charge by the Illinois Public Health Preparedness Center and students can register at any time - the training is continuous.

With barriers to self-improvement largely removed, more than 1000 workers have already completed courses. About 500 are in the system at present. The Public Health Administrator and Emergency Response Coordinator programs lead to certification by the Public Health Practitioner Certification Board (PHPCB). Illinois is just about on its

own with this program. They have sold the idea to the public health people in Iowa, Mississippi and Indiana, who are now putting similar programs in place.

## 2.6 EDUCATION AND TRAINING

The U.S. graduates about 6,000 students each year from 32 accredited schools of public health (2002) with MPH, DPH and other doctorate degrees. In addition, it is worth noting that about one-third of the 125 accredited schools of medicine in the U.S. offered a combined MD/MPH degree in 2003. However, well-informed academic observers believe there is really a big disconnect between the academic training that leads to a Master of Public Health degree and the practice of public health in United States. They maintain that an MPH is not really needed to manage public health - quite the reverse. Very little training in public health practice is provided during the course of a university degree of this kind, according to these critics.

Some also wonder why scarce tax dollars are being spent to produce more than 4,000 MPHs a year in the U.S. - compared with a public health workforce of about 500,000 - 80% of whom will go and work somewhere other than in public health.

Do schools of public health have a responsibility to the public health workforce beyond graduating MPHs and PhDs? U.S. observers believe they can do much better than they are doing now in reaching out to a much wider section of that workforce. It is quite possible to help train the public health workforce of the future in ways other than by generating MPHs, but these alternative courses are generally run peripherally to the school's main activity and are often treated as a stepchildren by the university administration.

Bio-terrorism and other CDC funding has increased public health funding to the schools and universities by about 100 times compared with five years ago. However, it is widely believed that this funding bonanza is time-limited and that it is unlikely to continue for more than four or five years.

One of the real problems with a anti-terrorism dollars, is that it is hard to show what they have done to enhance public health workforce readiness, because there are no visible results to justify the expenditure of the \$2.0 billion involved. This is because the program is not conceptualized and everyone is going about it differently.

Some in academia feel that CDC has perhaps allowed itself to become over-anxious with the political imperative to show results on its bioterrorism training. They believe CDC has gone for quick and easy methods, like satellite broadcasts and distribution of videos. The number people who saw the video is then recorded as the number of people trained. Questions are reportedly seldom asked about whether participants understood the material, if they gained skills from it, or even if they needed to see it in the first place.

Public health training, of course, extends beyond colleges, schools and universities. Government agencies at the local, state and federal level naturally have a major interest in educating and training their existing and future public health workforces.

### 3. SOME U.S. INSIGHTS

1. Many believe that the U.S. public health system is in the process of letting a one-shot opportunity to achieve massive workforce development slip through its fingers for want of well-integrated national planning and leadership.
2. Numerous excellent studies and recommendations have been researched and published since 9/11 and ample funding has been provided to boost public health's bioterrorism and emergency response readiness in all parts of the U.S.. A competence-based system is looking to emerge<sup>35</sup> and yet the main obstacles to making it happen remain in place four years after CDC drafted its public health workforce development plan<sup>36</sup>.
3. However, observers at the state level believe CDC in particular is starting to provide clearer direction to academia and the states as preparations for the next grant cycle go forward in Washington. It is anticipated that greater accountability will be attached to this new funding than has been the case in earlier cycles.
4. CDC remains keen to establish standardized certification and credentialing of the public health workforce across the country through constructive dialog with the states.
4. CDC recommends that Health Canada avoids a "federal directives" approach to public health workforce planning. They have found that open and deliberate planning works well, using expert panels and focus groups. Establishing collaboration partners early on has also paid off.
5. The use of templates and similar methods seems to help federal planning methods and objectives to flow down to the state and regional/municipal levels in public health, without making them mandatory.
6. Access to life-long learning is key. Distance learning is an important element in this process. CDC claim to have a good deal of this going on.
7. Avoid going for quick fixes when addressing workforce issues<sup>37</sup>.
8. Don't look for consensus on everything - it won't happen. Take what agreement you can get and be pleased with it. Make time for consultation.
9. Find small, non-controversial areas for initial wins. CDC suggest competences as a mainly non-confrontational area that can help build partnerships across the system.
10. Go on to build academic support by introducing distance learning. Provide some funding, sell coordinated approach at seminars/conventions at local and state levels.

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<sup>35</sup> See Annex C for public health competency sets currently available in the U.S.

<sup>36</sup> In fairness, it should be said that the plan was more in the form of recommendations than a document laying out objectives to be accomplished against an agreed schedule with established funding.

<sup>37</sup> Few would accuse CDC of this.

11. Suggest smallish area approach (not Los Angeles county) to measuring current workforce and demand so as to identify gaps, etc. - rather than trying to measure the whole country. Or alternatively, one could take a look at specific work sectors like epidemiology or nursing perhaps. CDC say they feel handicapped themselves by significant under-funding, especially for their training efforts and their new public health workforce definition work.

12. When it comes to core/cross-cutting skills and core training requirements, CDC believe they can standardize on pilot study data - such as "all nurses must be able to do epidemiological testing". They are strongly in favour of aiming for local solutions that can likely be rolled up into national standards rather than a top down one size fits all policy. They are probably right there.

13. Some U.S. educators wonder why more than 4,000 MPHs are produced in the U.S. each year - 80% of whom will go and work somewhere other than in public health.

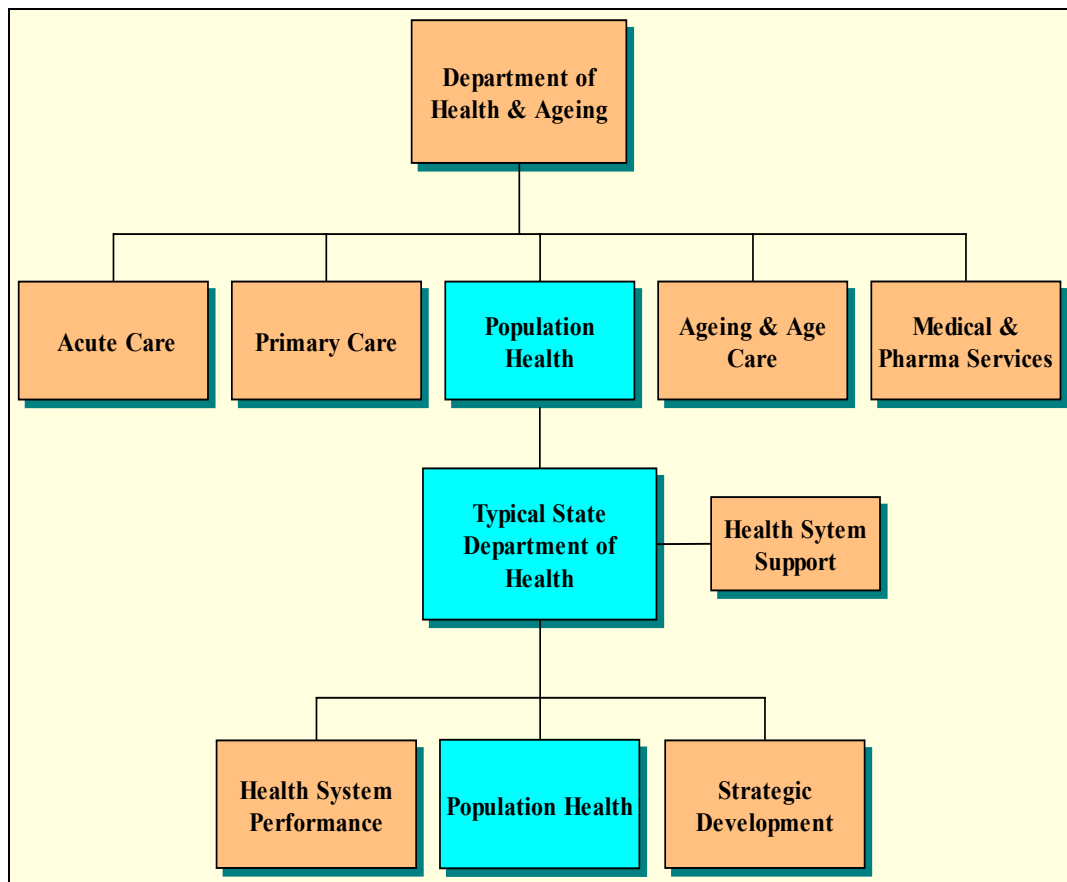
The bottom line is that effective public health workforce development requires strong leadership from the top and cooperation at all levels. This hard to achieve in the U.S. where the individual states have constitutional responsibility for health service delivery to the people and they are defensive of their turf.

# CHAPTER FIVE: THE PUBLIC HEALTH WORKFORCE IN AUSTRALIA



## 1. THE AUSTRALIAN PUBLIC HEALTH SYSTEM

The Australian public health system is quite similar to that in Canada. It looks after about 20 million people, of which 350,000 are indigenous Australians. Australia has a federal government (interchangeably called the Australian government or the Commonwealth of Australia<sup>38</sup>), together with six state and two territorial governments. The federal government provides most of the funding, the states/territories deliver public health and hospital services and the public health legislation is state-based.



<sup>38</sup> According to the Australian High Commission in Ottawa. This report uses Australian government or federal government as appropriate.

The federal Department of Health and Ageing provides funding directly for a number of health programs<sup>39</sup>:

- Health benefits scheme (= pharmaceuticals)
- Aged care/nursing
- General practice
- Education and training (via Education Ministry)
- Some health research (states do some also)
- AIDS (states matching)
- Aboriginal health services
- Women's health

States are federally funded via a formula based on population and a remoteness index for the delivery of state-based health programs:

- Public Health
- Hospitals
- Community-based public health and other services
- Public Health labs
- AIDS (states matching)

The New South Wales Population Health division is typical of front line public health delivery operations in Australia. It is run by a medically-qualified deputy director-general looking after drug and alcohol programs, epidemiology, health promotion and health protection (environmental health, communicable diseases, pharmaceutical services, counter-disaster planning and response, etc.). Less predictably, the division also looks after dental services - referred to as oral health.

Very wisely, Australia's Chief Health Officers and health professionals expressed their concerns in late 1995 about the need for a national approach to public health. Towards the end of 1996 the **National Public Health Partnership**<sup>40</sup> was established and has become a major asset in building a better public health service in Australia, as well as acting as the focus for workforce development. The partnership is specifically structured as a vehicle for national coordination and collaboration rather than one that might inhibit local decision-making or get in the way of worthwhile regional initiatives.

The stated objectives<sup>41</sup> of the NPHP are to:

- Improve the health status of Australians, in particular population groups most at risk.
- Improve collaboration in the national public health effort.

<sup>39</sup> The organization of the federal Population Health Division is shown in Annex D.

<sup>40</sup> Comprises the Chief Health Officers or Directors of Public Health in each State and Territory, along with the Director of the Australian Institute of Health and Welfare (AIHW) and the chair of the Health Advisory Committee of the National Health and Medical Research Council (NHMRC).

<sup>41</sup> National Public Health Partnership: *Final Evaluation Report* - January 2002

- Develop better coordination and increased sustainability of public health strategies.
- Strengthen public health infrastructure and capacity nationally.
- Facilitate the contribution of all providers of public health services, such as local government, public health research and education programs, and relevant agencies from the states/territories and the federal government.
- Establish two-way exchange with key professional, community, consumer, educational, and industry interests on the development of national public health priorities and strategies.
- Enhance the capacity of states/territories to respond to local priorities.

The NPHP work program aims to meet key priorities in public health, as set out in the NPHP Agenda 2002-2004 <sup>42</sup>. The Work Program's priorities are addressed through working groups, which have been set-up to address each priority work area. The NPHP also manages projects to enhance public health practice in Australia.

These projects are guided by time-limited steering committees that include the Public Health Workforce Development Steering Committee. Membership of the Steering Group is drawn from the following organizations:

Federal, state and territory health departments  
 Public Health Association of Australia  
 Australian Institute of Environmental Health  
 National Health and Medical Research Council  
 NPHP Advisory Group (non-government sector)

The official project tasks for the Workforce Development Steering Group are to:

- ◆ Determine the characteristics of the national public health workforce, looking at core public health functions, evolving public health issues and the principles of integrated practice
- ◆ Establish national mechanisms for assessing and reporting on workforce capacity
- ◆ Analyze information about workforce capacity to identify medium and long-term workforce development needs
- ◆ Assess workforce development needs against current education and training opportunities

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<sup>42</sup> See Annex E

- ◆ Develop options for addressing gaps in workforce development and identify the on-going role(s) for the National Public Health Partnership

One has to admit that this looks to be a pretty rigorous approach to workforce planning and one which is well-advanced now in Australia. Progress towards an integrated national plan for public workforce development is discussed below.

The NPHP is subject to peer review at regular intervals. The most recent report (2002) confirmed that the NPHP was proving itself a valuable national forum for raising and considering public issues, sharing information and initiating developmental projects. The NPHP has reportedly been particularly valuable in bringing the smaller jurisdictions into the information loop and into decision-making processes.

On the other hand, the evaluation also found that NPHP has "engaged in an extensive range of developmental activities and projects, but with only limited success to date in translating its work plan into policy and practice across jurisdictions". Steps are being taken to bring NPHP projects "more closely in line with initiatives that have jurisdictional support and are agreed by the Australian Health Ministers' Advisory Council".

The creation of an NPHP equivalent organization in Canada could well be a valuable asset in pulling together FPT resources to achieve well-planned and sustained public health workforce development.

## 2. PUBLIC HEALTH WORKFORCE PLANNING

### 2.1 THE AUSTRALIAN PLAN

Rather like other public health workforce plans, the Australian version tends to come on stage cautiously. Their document is actually called a discussion paper, prepared by the NPHP and entitled "**Planning framework for the Public Health workforce**". It was published in June 2002.

It points out that is particularly hard to define and quantify the public health workforce - identifying the main problems in Australia as:

Wide variety of occupational groups  
No clear boundaries between professional categories in public health  
Absence of professional credentialing requirements  
Most health workers lack public health training

Another hazard is that in Australia - as in the UK and the U.S. - there seems to be a lack of systematically collected data about the knowledge, skills and competence of the public health workforce and whether these are likely to meet current and future needs.

Bearing these problems in mind, the Australian document suggests a four step competency-based approach to allow public health organizations to plan their workforce needs:

- ◆ Identify and measure future goals and activities.
- ◆ Determine what information, priority or program changes generate demand for public health services.
- ◆ Describe the organizational competences required to achieve the goals and implement action.
- ◆ Describe the competency set required by the workforce of the future.

The real benefit of this model is that social needs drive workforce planning rather than the number of staff to deliver services. The actual process should work like this:

- Establish the services needed by the public.
- Work out the skills and competences needed to deliver those services.
- Derive the number and types of staff required to provide the necessary competences to deliver the services at the organizational or program level.
- Match actual positions with needed competences and identify gaps.
- Link gaps to training and education policies.

They maintain that this approach allows public health organizations throughout the system to identify functions that are specific to public health and enables people qualified to carry out these functions to be identified, regardless of their job classification. In principle, the information collected can then be aggregated, program by program and organization by organization into a broader public health workforce plan, that should be both multi-disciplinary and cross-sectoral.

The next step in the Australian plan is to carry out one or more pilot studies in properly controlled locations. These trials have been designed to show what needs to be done to establish a national method for assessing local labour market requirements, which in turn can be rolled up to define Australia's overall public health workforce capacity.

The pilot tests are intended to address some other key questions as well:

- How to obtain agreement on competences associated with the functions of the public health unit under assessment and with already recognized public health skill sets?
- How to quantify competence requirements in full-time equivalent units of labour?
- What methods might be used to build up from the local level a picture of state and national level demand?
- What structural barriers will need to be overcome to enable organizations to meet demands for the specific competence sets defined?

**NPHP has recently completed a three month trial of this method in south-west Sydney. Nevis expects to receive an advance copy of their results shortly.**

## **2.2 DATA AND JOB CLASSIFICATION**

Poor data is certainly a problem in Australian public health as elsewhere, but they say this has had its advantages in the past. For example, it means people have tended not to be pigeon-holed by an overly detailed job description. Classification has been resisted, which results in a multi-skilled workforce able to offer the bonus of flexible capacity. It has also allowed people to float in and out of public health more readily, taking their learning with them.

However, it does make it difficult to count the workforce - specially when titles change from one jurisdiction or organization to another. Like the U.S., they are working with the Australian Bureau of Statistics to try and come up with more helpful workforce classifications for public health occupations without too much loss of inherent flexibility.

## **2.3 ENUMERATION**

Although there have been a number of surveys looking at the health industry workforce in Australia as a whole<sup>43</sup>, national public health worker enumeration does not seem to have happened in Australia. They feel it is hard to apply conventional human resources structures to public health, so establishing a realistic framework for the enumeration seems tough. This approach is, of course, much easier to apply when it comes to assessing a clinical workforce.

State-based officials are filled with admiration for one of the U.S. states (Virginia they think) that has created a 7,000 worker database. However, they wonder how easy it will be to update those records on a regular basis over the years.

## **2.4 CERTIFICATION/VOLUNTARY REGISTRATION**

The Australian situation on certification and registration of the public health workforce was described as "tacky" in an interview carried out for this study. The Faculty of Public Health and Medicine will provide certification, but of doctors only.

Continuous Professional Development has not yet arrived in Australia. It is seen as being a sensitive issue and they are not looking to make it compulsory for registration or certification in NSW.

New South Wales Health has a three-year Public Health Officer<sup>44</sup> multi-disciplinary training program with a post-graduate intake of MDs, epidemiologists and nurses. It has been running for thirteen years now, having become competency-based in 1994.

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<sup>43</sup> For example: Australia's Health 2002 - *Chapter 5: Health resources and use of services*, pp267-279

<sup>44</sup> This is a vocational sector program. NSW Health is now evolving a doctorate level course.

This program is said to be much more flexible than university-based MPH courses. Lecturers are on the front line and so are totally up-to-date. So it is possible to adapt the program to meet new training needs - for example, a "risk assessment" module has been added recently.

## 2.5 DEMAND MEASUREMENT

The main demand assessment methods being used at present in Australia (and elsewhere for that matter) to forecast medical workforce needs are shown below. On the whole, they are poorly adapted to the determine public health workforce needs:

*Service utilization method:* Data on current service utilization within a given region, allows satisfied (or unsatisfied) demand to be measured. Analysis of past trends in service utilization in the same part of the country may allow some projection of likely future changes in utilization patterns and thus of workforce needs. When it comes to public health, however, the use of past trends may turn out be an unreliable guide to future workforce demands, especially when major new public health initiatives are introduced, since the competences present in the existing workforce may not match those needed to address the new challenges very closely.

*Workforce/population ratio method:* A theoretical relationship is established between the population (often segmented into different age categories) and the requirement for health service professionals. This method is popular in the estimation of medical workforce needs and has been used frequently to assess unmet needs for allied health professional services. Experts then review the data and settle on "reasonable" ratios. Future predictions are based on the notional service need per unit of population and forecast population scenarios. This method does not suit public health well, however, since workforce demand is relatively population insensitive.

*Economic demand method:* An assessment is made of the current and future social, political and economic circumstances and how consumers of services, service providers and employers of labour will behave as a result of those circumstances. Assessment is focused on such factors as the availability of government funding, the likely level of private sector investment, the type of technology available (for instance development of new pharmaceuticals), the way work is organized and the influence of price and income. This method involves a lot of independent variables gathered at some distance from the point of delivery of typical public health services and so may not work all that well in practice. It tends to be insensitive to local considerations and other real life factors that can impact significantly on public health delivery.

NPHP is also understood to be working on a workforce demand study that looks at public health "help wanted" advertisements placed in the main newspapers across Australia. The objective here is to identify demand trends and at the same time to see what qualifications and other employee attributes are being sought by employers. It is thought that such a study may also provide some pointers as to the present areas of staffing need.

However, it should be noted that the requirements appearing the advertisements referred to above may not actually represent what the management in the organizations concerned are really looking for, due to pressure from their bureaucracy. Staff may feel obliged to dumb down the job specifications to help save money, to make competitions more open or to meet requirements of employment law, for example. So although an MPH may be desired for a given job, the ad may not say so. In this way, some advertisements can be suspect data sources.

## **2.6 BENCHMARKS**

The Australian public health community looks at benchmarking as a fairly recent arrival on the demand assessment front. Their plan points to it possibly being used to arrive at the number and types of public health worker required in a given region, based on what has proved "appropriate, affordable and sustainable" in a similar model region, or benchmark, elsewhere in the country <sup>45</sup>. A draft National Aboriginal Health Workforce Strategic Framework<sup>46</sup>, for example, recommended a notional set of staff to population ratios, such as for GPs and nurses. Widespread use of benchmarking, however, does not seem very likely at present.

## **2.7 PRE-SERVICE/IN-SERVICE TRAINING**

The wide range of non-medical professionals that are becoming involved in public health today are creating increased demand for more public health elements in a variety of non-medical undergraduate courses in Australia. La Trobe University in Victoria claims to be leading the charge with joint bachelor degrees that link health sciences with a variety of non-medical disciplines many of which are relevant to public health practice. So far, health sciences is available at Latrobe combined with either arts, business/commerce, development studies, economics, environmental science, international relations, law, media studies or pastoral care degrees.

People interviewed for this study in Australian public health were unanimous in agreeing that public health training should be a compulsory component of undergraduate medical studies.

Although the role of the federal government in funding Australian public health education dates back over 60 years, the current Public Health Education and Research Programme (PHERP), administered by the Department of Health and Ageing, was established in 1986. Through PHERP funding, public health centres at tertiary institutions nationwide are assisted to provide a range of public health education and research training programs including graduate diplomas, masters and doctorates of public health as well as workplace-relevant short courses.

PHERP was developed in three discreet phases. Phase 1 of the program (1987 to 1995) involved provision of support at four universities for Master of Public Health courses as well as support for specialist research training programs. Phase 2 of the program (1995 to 2000) extended financial support to 17 universities and a major focus of this phase was to encourage cross institutional co-operation within states and territories. Phase 3 covers the period 2001 to 2005 and reflects a new funding approach to

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<sup>45</sup> Similar to the UK approach being used in studies noted on page 24 above.

<sup>46</sup> Australian Department of Health & Aged Care - 2001.

encourage institutional co-operation in collaboration across states and territories, multidisciplinary approaches, innovation and quality in teaching and research training in public health. The total funding approved for Phase 3 of PHERP is approximately A\$46 million over five years or an average of about A\$9 million per year.

The MPH degree comes in for criticism in Australia because it fails to make graduates service or work-ready. University teaching staff feel this is unfair, especially as it is a one year course and it is not practical to cover everything during that time. The MPH also serves up a lot of new material that can be hard for people coming from an individual health background to take on board. It can also mean adopting a new value system as well as new knowledge.

Very little in-service training is being offered in Australian public health at the moment. Historically, the federal authorities have left continuing education to state governments and employers. As a result, very little staff development took place and individuals were left essentially on their own. This situation was aggravated by health budget cuts in the 90s, to the point that staff development has become a luxury for the smaller public health agencies across Australia.

Those working in the NSW system say they would welcome a well thought-out overall public health in-service training strategy for the state. Meanwhile, they point out that they have the benefit of a woman from the French Cancer Bureau who visits Australia every few years to run communications skills training for public health agencies.

## **2.8 A VIRTUAL UNIVERSITY**

Some Australian institutions are reported to be discussing a virtual public health university. Until quite recently, on-line health-related courses were regulated, but they can now be offered by any university. Most are offering a variety of courses over the Internet - but mainly as part of their undergraduate medical programs.

Apart from conventional classroom studies, public health education in Australia seems to involve multimode courses where private on-line chat room discussions are combined with interactive keyboard sessions and in-person lectures/tutorials. Phone conference tutorials are also becoming more common.

As we have found in other parts of the world, faculties are said to be quite firmly divided into those who are comfortable with the newer ways of teaching and those who are adhere strongly to traditional Aristotelian means of educating students.

## **2.9 RECRUITMENT AND RETENTION**

Those involved in public health workforce recruitment and retention in Australia, reckon that they are doing a pretty atrocious job of it right now.

Having good structures around is seen as being a big help when it comes to promoting the migration of good people/graduates to public health - such as well-established training programs and institutions like the UK or U.S. Faculties of Public Health. But Australia is reported to be doing too little. Only a small number of new graduates

come forward to tackle public health each year and most physicians arrive at public health late - in their 40s/50s, as reported in Chicago. Most public health jobs are in the public service, so the financial rewards are generally comparatively low and the career paths are more designed to fit a "stop in until retirement" model, than one that would accommodate a broadly qualified health professional looking to add public health experience to his/her portfolio.

As in other jurisdictions, epidemiology is seen to be the most glamorous of the public health disciplines. It is also the most portable, commanding excellent salaries in the private sector. Even in this field there are no schemes at present in Australia for MDs to drop in and out of public health. So they tend to remain locked into individual health care careers.

Modern public health outfits are becoming more multi-disciplinary and so need fewer medically-qualified people than used to be the case. The view in Australia is that physicians continue to exhibit power in an educational and political sense, so they will still be needed to run and manage public health operations. There's also a feeling that the Australian public expects to see an MD heading up public health units, rather than an MPH from some other discipline.

However, government health officials recognize that MDs have a weakness in the public health environment because they tend to think in terms of sick people, even when tackling group and population issues where the sick individuals have yet to put in an appearance.

Generally speaking, Australia is also challenged by the increasing globalization of the healthcare workforce. The low Australian dollar and (in some cases) the relative lack of career opportunities have made other parts of the world - like Canada, the U.S. and the UK - look like attractive destinations for well-qualified Australian public health professionals, and not just doctors.

**Good News:** Our public health people are committed and enthusiastic.  
**Bad News:** They are so passionate about their work, they forget to gather evidence.  
*Australian Public Health Educator*



### 3. SOME AUSTRALIAN INSIGHTS

1. The NPHP workforce planning approach where social requirements drive a largely competency-based process seems generally well-suited to meet Canadian needs. It works like this:

- Establish the services needed by the public.
- Work out the skills and competences needed to deliver those services.
- Derive the number and types of staff required to provide the necessary competences to deliver the services at the organizational or program level.
- Match competences/quantity of actual people in place with the needed competences and identify gaps.
- Link gaps to training and education policies.

2. The NPHP plan is currently undergoing a series of pilot trials. The first of these has recently been completed in NSW. The draft trial report has been written and it should be useful to Canadian planners. Nevis expects to receive an unofficial copy shortly.

3. NPHP has worked well to give the states a joined up voice on public health issues - including workforce. The real rival out there is the clinical workforce. Some efforts are being made to get both parties together, but not much has been achieved so far. Canada could benefit from an NPHP.

4. Pulling together reliable public health workforce data is a real problem everywhere. The Australians have collected<sup>47</sup> a number of reasons why this is so - here are just some of them:

- The complexity and diverse range of initiatives covered by public health.
- The wide variety of occupational groups engaged in public health.
- Wide variety of organizations involved in the area.
- A lack of integration amongst those working in the area.
- The lack of an overall nationally coordinated public health strategy.
- The division of responsibilities and subsequent fragmentation and lack of coordination between various levels of government, departments and programs within each level of government.
- The differences that exist in roles and responsibilities across the states and territories.
- Limited workforce research expertise and funding.

5. Public health is only 3% of the total health bill in Australia and training is always the first part of the public health budget to experience financial cuts.

6. The trouble with public health is that politicians and the public at large are not clear what it is. Does it mean drains or hospitals? The subject is so broad almost everything is related to public health in some way. Worse, the benefits of public health are so

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<sup>47</sup> NPHP: *Planning framework for the Public Health workforce - Discussion Paper*. June 2002

diffuse, only the difficulties tend to be clear. It is almost necessary to create public health disasters from time to time to attract attention and realistic funding, according to Australian officials.

7. NPHP staff themselves believe that Australia has only just begun to scratch the surface of public health workforce development. They want to get to a real strategy covering the whole thing - medical, nursing, training, etc. At present, they are still tending to handle workforce development issues individually and with ad hoc solutions and actions.

8. Public health units in Australia are becoming more multi-disciplinary and so need fewer medically-qualified people these days. Physicians continue to exhibit power in an educational and political sense, however, so they will still be needed to run and manage public health operations. Also, the Australian public expects to see an MD heading up public health units, rather than an MPH from some other discipline.

"Public Health prevents illnesses and therefore its victories - like those of military intelligence - are very often silent victories".

# CHAPTER SIX: CONCLUSIONS



## **1. PUBLIC HEALTH WORKFORCES ARE HARD TO COUNT AND EVALUATE - BUT IT MUST BE DONE**

- Poor public health workforce data remain a real problem in all three of the countries studied. Time spent putting together a really bullet-proof method of counting and characterizing Canada's public health workforce would be time well spent. The approach adopted must nail down the practitioner workforce in detail and have good enough data on the wider workforce to reveal its potential for filling gaps in the system as a whole. It must also lend itself to being updated regularly.

- The three public health authorities under consideration are working with their national statistics agencies to come up with enough relevant employment categories to allow more useful public health practitioner and wider workforce data to be captured consistently on an annual basis.

- Registration of public health workers makes them easy to count and at the same time measures their individual competencies against national (or international) standards on a regular basis. So it will pay to devise ways of registering as many public health workers as possible. Make it compulsory - but simple to do and easy to enforce in a cheerful way. Look at working in cooperation with existing professional associations where it makes sense.

## **2. CAN PUBLIC HEALTH WORKFORCE DEMAND REALLY BE ESTABLISHED AND FORECAST RELIABLY?**

If not, workforce planning will stumble since even existing gaps in the system will not be identified consistently. Australia, the UK and the U.S. are all at different stages in tackling this issue, but they are all heading towards roughly the same type of competency-based approach. In general terms, it works like this:

- Establish the services needed by the public<sup>48</sup>.
- Work out the skills and competences needed to deliver those services.
- Derive the number and types of staff required to provide the necessary competences to deliver the services at the organizational or program level.
- Match actual positions with needed competences and identify gaps.
- Link gaps to training and education policies.
- Run pilot programs in representative communities/regions to spot and correct snags.

<sup>48</sup> Based on core public health activities - such the U.S. "Ten Essential Public Health Services" on p.34.

It is clear that such a scheme only addresses the existing situation and that it requires a solid knowledge of the current workforce and its competences. It also needs a clear view of the services actually required by the public across the whole system - where there will be wide variations from large urban centres to large remote areas with sparse populations. This dictates a bottom-up approach with central leadership and coordination across all levels of government. Over time, this will provide an increasingly detailed picture of whether enough public health is available in all parts of the country.

How about predicting future demand/needs? Given an acceptable knowledge of which competencies are needed now, how many of them are needed and where (quality, quantity and geography) is an excellent basis for projecting what will be required in the future. The Australians, who seem further ahead on competency-based planning than the other two countries studied, suggest the following method:

- ◆ Identify and measure future public health goals and activities.
- ◆ Determine what information, priority or program changes generate demand for public health services.
- ◆ Describe the incremental organizational competences required to achieve the goals and implement action.
- ◆ Describe the competency set required by the workforce of the future<sup>49</sup>, down to the delivery level.
- ◆ Translate this into the FTE's and teams needed to deliver the competencies

The competency-based approach is both flexible and far-reaching. It not only allows realistic workforce demand modelling down to the front line in public health, it also permits the competences that need to be taught in degree and other training courses to be identified and brought in line with actual operational requirements.

### **3. UK BOTTOM-UP TEAMING IS WORTH A MORE DETAILED LOOK**

The UK is also looking at teaming as a way of creating effective multi-disciplinary groups for front-line public health delivery. A ratio of one specialist/consultant to four/five supporting public health people is thought to be about the right ratio, empirically speaking. Pilot studies are being carried out at the moment.

### **4. HOW TO FILL THE GAPS?**

The Australian, British and U.S. experience shows that Public Health Workforce planning needs top-down strategy and leadership, but bottom-up implementation. What works on the front-line must be established first and then rolled up to form the basis of the national plan. Gap-measurement/filling from the top seem to have a poor track record.

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<sup>49</sup> Identifying five and 10 year targets, say.

Increasing the supply of public health specialists by cranking up training capacity is a relatively slow way of increasing supply. In the short term, recruitment and on-the-job-training appear to work best.

#### **5. CANADA COULD WELL BENEFIT FROM AN NPHP**

NPHP has worked well to give the Australian states/territories a joined-up voice on public health issues - including workforce. Canada could perhaps use a semi-permanent body like NPHP to provide a consistently staffed forum for tackling public health issues across the federal-provincial divide.

#### **6. FUNDING IS NOT A PROBLEM IN THE U.S. ....**

Ample funding has been provided to boost public health's bioterrorism and emergency response readiness in all parts of the U.S.. A competence-based system is looking to emerge and yet the main obstacles to making it happen remain in place four years after CDC drafted its public health workforce development plan.

#### **7. ... BUT MULTIPLE JURISDICTIONS MAKE SUCCESSFUL NATIONWIDE U.S. PLANNING TOUGH FOR THE FEDS**

Many believe that the U.S. public health system is in the process of letting a one-shot opportunity to achieve substantial workforce development slip through its fingers for want of well-integrated national planning and leadership in the face of multiple layers of public health management/delivery that vary widely from state to state.

#### **8. THE UK PLAN RAN AGROUND ....**

The HDA 2002 Public Health Workforce Development Plan was thrown out by the UK Department of Health. The reasons are unclear, but it is possible that management did not want to see substantial gaps in the workforce published in an official document. Equally they may not thought the population-based supply and demand approach was valid.

#### **9. ... BUT THEY ARE GRADUALLY MOVING AHEAD ON A NEW APPROACH**

The UK still needs a structured approach to workforce planning. No rational approach is visible at present, but the NHS is moving towards more skills/competency-based approaches, while tackling future planning on a regional basis.

#### **10. STATUS OF NON-MEDICAL SPECIALISTS IS A PROBLEM EVERYWHERE**

Medically qualified public health specialists are still considered more valuable than their non-medical counterparts. There are still significant differences in their salaries. In the UK, NHS non-medic public health specialists are determined to end this. They say it is inequitable and that it downgrades the public health professional in medical eyes.

## 11. WHAT TO DO NEXT?

- Agree the range of public health services needed by the Canadian public. Determine what factors affect current and future demand for these services, such as Health Canada goals and initiatives, environmental concerns, new legislation, recognition of disadvantaged communities and the need to increase readiness/capacity to tackle bioterrorism and serious communicable disease outbreaks.
- Examine the Canadian public health workforce in detail. Use the "specialists, practitioners, wider workforce" breakdown. Identify both full-time and part-time activities. Define the workforce boundaries. Find out where the data are weak and how to correct this. Know how to keep the data up to date. Acquire a sound knowledge of what skill combinations work well on the front line of public health delivery across Canada.
- Establish the availability of competency sets applicable to the Canadian situation. Focus on specialist and practitioner groups. See how well these sets map to public health competences taught in Canadian universities and colleges.
- Prepare Canada's Public Health Workforce Development Plan. Make it happen.

The use of "framework" as a substitute for "plan" or "strategy" on the front of public health workforce planning documents seems widespread. This is surprising since it conveys the impression that the plan is a supporting document and rather tentative at that. It seems to invite other interested parties to use it as a vehicle to achieve their own objectives or as the basis for endless discussion.

Sometimes a real task or objective framework is a useful tool to help build up plans and strategies - as with scaffolding on a building. By the time the plan is completed, however, it needs to stand alone and to be called a plan; otherwise it invites substantial change or rejection before it is put into action. People are bound to wonder if it is a plan at all, when it says framework on the front.

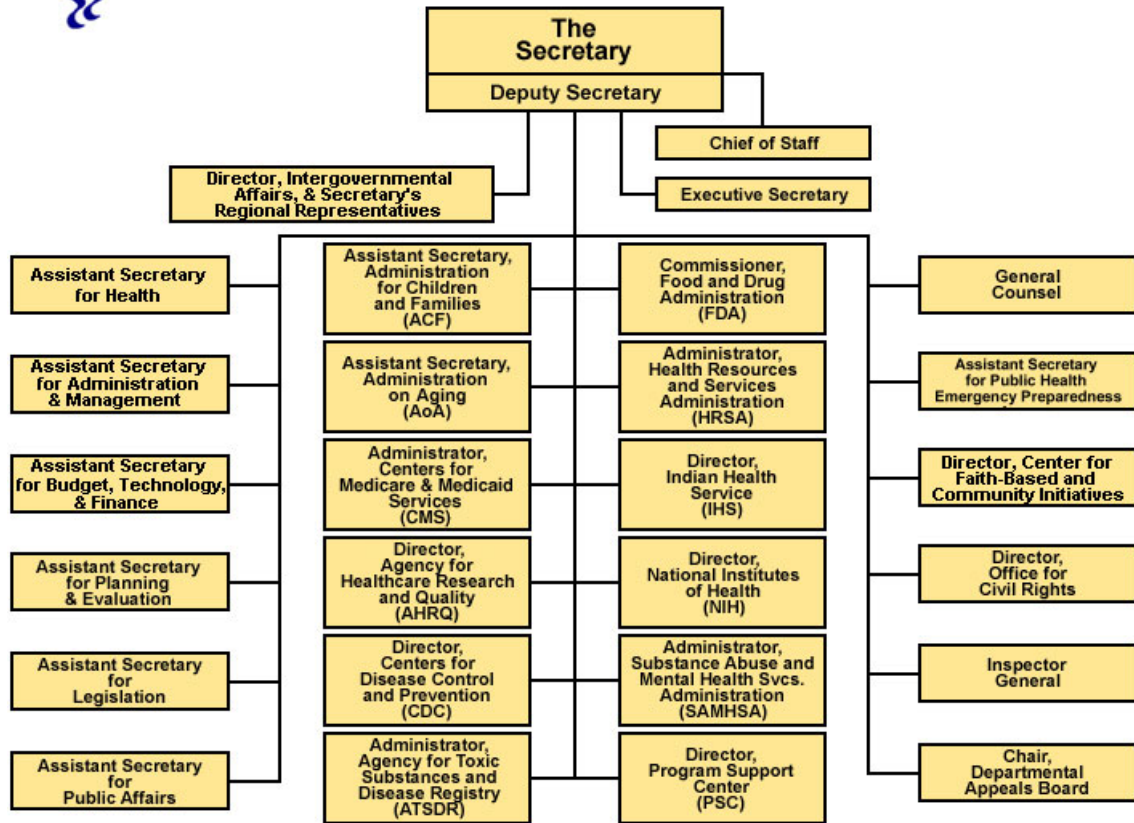
## **ANNEX A**

### **UK Public Health Specialist Competence Self-Assessment Framework**

Scan in 7 pages here

**ANNEX B**

**U.S. Department of Health and Human Services  
Organization Chart**



## ANNEX C

### **Recommended U.S. Public Health Competency Sets**

**A COLLECTION OF COMPETENCY SETS OF  
PUBLIC HEALTH-RELATED OCCUPATIONS AND PROFESSIONS**

SOURCE: Public Health Practice Program Office, CDC (2003).

Updated for the Public Health Workforce Development Annual Meeting, January 21-23, 2003, Atlanta, GA

Competency Sets	Worker Level	Where to Find Them on the WWW
<b>Core-Basic Public Health</b> <i>Council on Linkages: Core Competencies for Public Health Professionals, 2001</i>	front-line, senior professional, supervisor, manager	Public Health Foundation (PHF), <a href="http://www.trainingfinder.org/competencies/list_nolevels.htm">http://www.trainingfinder.org/competencies/list_nolevels.htm</a> and <a href="http://trainingfinder.org/competencies/list_levels.htm">http://trainingfinder.org/competencies/list_levels.htm</a>
<i>21 Competencies for the 21st Century, 1999</i> Commission, Dec. 1998, Chapter 4	professional	The 4th Report of the Pew Health Professions, <a href="http://www.futurehealth.ucsf.edu/pewcomm/competcn.html">http://www.futurehealth.ucsf.edu/pewcomm/competcn.html</a>
<i>Competencies for Providing Essential Public Health Services, 1997</i>	professional	<i>The Public Health Workforce: An Agenda for the 21st Century</i> , Public Health Functions Project, ODPHP, DHHS, <a href="http://www.health.gov/phfunctions/pubblth.pdf">http://www.health.gov/phfunctions/pubblth.pdf</a> essential services, <a href="http://www.apha.org/ppp/science/10ES.htm">www.apha.org/ppp/science/10ES.htm</a>
<b>Accounting</b> <i>Core Competency Framework for Entry into the Accounting Profession: Functional Competencies</i>	entry-level professional	American Institute of Certified Public Accountants, (AICPA) <a href="http://www.aicpa.org/edu/func.htm">http://www.aicpa.org/edu/func.htm</a>
<i>Competency Model for the New Finance Professional</i>	professional, technical, support	American Institute of Certified Public Accountants (AICPA) tool being piloted, <a href="http://www.cpatoolbox.org">http://www.cpatoolbox.org</a>

Competency Sets	Worker Level	Where to Find Them on the WWW
<i>Core Competencies</i> (future of the CPA profession), 2001	professional, technical	Vision Project Team and State Societies, CPA Vision Project: 2001 and Beyond <a href="http://www.cpavision.org">http://www.cpavision.org</a>
<b>Basic Life Skills</b> <i>CASAS Competency List</i>	basic life skills	Secretary's Commission on Achieving Necessary Skills, DOL <a href="http://www.casas.org/01AboutCasas/01Competencies.html">http://www.casas.org/01AboutCasas/01Competencies.html</a>
<i>High School Student Competencies and Indicators</i>	high school graduates	National Occupational Information Coordinating Committee (NOICC), Academic Innovations <a href="http://www.academicinnovations.com/notice.htm">http://www.academicinnovations.com/notice.htm</a>
<b>Behavioral Science (general)</b> <i>Behavioral &amp; Social Science Competencies</i> , draft 2001	professionals	School of Public Health Science and Research, CDC Corporate University, draft to be validated; Charlotte Wilson, HRMO <a href="mailto:CWilson@cdc.gov">CWilson@cdc.gov</a>
<i>Ethical Principles of Psychologists and Code of Conduct</i> , December 1992	professionals	American Psychological Association (APA), "General Principles" <a href="http://www.apa.org/ethics/code.html">http://www.apa.org/ethics/code.html</a>
<b>Biological Science</b> <i>Biological Science Competencies</i> , draft: 2001	professionals	School of Public Health Science and Research, CDC Corporate University, draft to be validated; Charlotte Wilson, HRMO <a href="mailto:CWilson@cdc.gov">CWilson@cdc.gov</a>
<b>Bioterrorism</b> <i>Bio-terrorism</i>	All public health workers	Center for Disease Control, Bio-terrorism and related topics/including web casts <a href="http://www.cdc.gov/washington/re/toppic/bioterro.htm">http://www.cdc.gov/washington/re/toppic/bioterro.htm</a>

<i>Bioterrorism and Emergency Readiness: Competencies for ALL Public Health Workers</i>	all public health workers	Bioterrorism and Emergency Readiness: Competencies for ALL Public Health Workers, Center for Health Policy, <a href="http://www.nursing.hs.columbia.edu/institute-centers/chphsr/brcmps.htm">http://www.nursing.hs.columbia.edu/institute-centers/chphsr/brcmps.htm</a>
Community-based Health <i>Community Health Scholars Program: Goal and Competencies</i> , June 1999	post-doctoral student	Community-Based Public Health (CBPH), University of Michigan School of Public Health, Kellogg sponsored, program competencies, <a href="http://www.sph.umich.edu/chsp/goal.html">http://www.sph.umich.edu/chsp/goal.html</a>
Community Based Participatory Research (pending) Cultural Competency <i>Providing Care to Diverse Populations</i> <i>State Strategies for Cultural Competency in Health Systems</i>	all state, local health officials	Workshops sponsored by Agency for Health Care Policy and Research, <a href="http://www.ahrpr.gov/news/ulp/ulpcultr/btm">http://www.ahrpr.gov/news/ulp/ulpcultr/btm</a>
<i>The provision of Culturally Competent Health Care</i>	leader, professional, technical support	Amy Blue, PhD, Assistant Dean for Curriculum and Evaluation, Medical University of South Carolina College of medicine, <a href="http://www.musc.edu/deansclerkship/recultur.html">http://www.musc.edu/deansclerkship/recultur.html</a>
<i>Courses/ training/online database/tools</i>	health professionals	National Center for Cultural Competence, Georgetown University Center for Child and Human Development, University Center for Excellence in developmental Disabilities, <a href="http://www.georgetown.edu/research/gucdc/nccc">http://www.georgetown.edu/research/gucdc/nccc</a>
Learning Resources/Training Materials <i>Cultural Competency Training</i>	all healthcare professionals	Cultural Competency Training, Illinois Health Education Consortium: IHEC, <a href="http://www.ihec.org/i-pro3-3.html">http://www.ihec.org/i-pro3-3.html</a>

Competency Sets	Worker Level	Where to Find Them on the WWW
<b>Dentistry</b> <i>Competency Statements for Dental Public Health</i> , September 1997	professional	American Association of Public Health Dentistry (AAPHD), <a href="http://www.pitt.edu/~aaphd/dph.competency.html">http://www.pitt.edu/~aaphd/dph.competency.html</a>
<b>Economics</b> <i>Nebraska Standards in Business Education</i> <i>Essential Learnings: Focus on Economics</i>	student, public	EcEd Economics Education Web competencies and learning objectives, <a href="http://ecedweb.unomaha.edu/standards/home.htm">http://ecedweb.unomaha.edu/standards/home.htm</a>
<i>National and State Content Standards in Economics</i>	student, public	Economics America, National Council on Economic Education (NCEE), 20 standards, learning objectives and performance benchmarks, <a href="http://www.economicsamerica.org">http://www.economicsamerica.org</a>
<b>Emergency Preparedness</b> <i>Core Public Health Worker Competencies for Emergency Preparedness and Response, April 2001</i>	leader, administrator, professional, technical, support	Center for Health Policy, Columbia University School of Nursing, <a href="http://cpmcnet.columbia.edu/dept/nursing/institute-centers/chphsr/COMPETENCIES.pdf">http://cpmcnet.columbia.edu/dept/nursing/institute-centers/chphsr/COMPETENCIES.pdf</a> (April 2001) and <a href="http://www.nursing.hs.columbia.edu/institute-centers/chphsr/brcomps.pdf">http://www.nursing.hs.columbia.edu/institute-centers/chphsr/brcomps.pdf</a> (December 02)
<i>Fire &amp; Emergency Services Competency Module</i>	technical	Industry-Specific Competency Modules, Knowledge Point, <a href="http://www.knowledgepoint.com/products/firecomp.html">http://www.knowledgepoint.com/products/firecomp.html</a>
<b>Engineering</b> <i>Sample Elements and Tasks for Engineer</i> , October 1999	professional	Headquarters Performance Management System, DOE, <a href="http://www.hr.doc.gov/hqpmms/engineer.htm">http://www.hr.doc.gov/hqpmms/engineer.htm</a>

<p><b>Environmental Health</b>  <i>Environmental Health Competency Project: Recommendations for Core Competencies for Local Environmental Health Practitioners</i>, May 2001</p>	<p>front-line, local-level professional</p>	<p>American Public Health Association (APHA) and National Center for Environmental Health (NCEH/CDC) with NEHA, NACCHO, ASTHO, FCA, AAS, NALBOH, final draft in clearance June 1, report due August 2001. Patrick Bohan, NCEH, PBohan@cdc.gov, <a href="http://www.apha.org/ppp/chproject.htm">http://www.apha.org/ppp/chproject.htm</a></p>
<p><i>Environmental Health Competencies: Core Competencies for the Effective Practice of Environmental Health</i></p>	<p>professional</p>	<p>Funding Opportunity, Association of School of Public Health (ASPH), Developing Communities of Excellence in Environmental Health, <a href="http://www.aspb.org/fac_document.cfm/69/69/5968">http://www.aspb.org/fac_document.cfm/69/69/5968</a></p>
<p><i>Registered Environmental Health Specialist/Registered Sanitarian Examination</i></p>	<p>entry-level professional</p>	<p>National Environmental Health Association (NEHA), exam content outline; Ryan Rudolph, <a href="mailto:rrudolph@neha.org">rrudolph@neha.org</a>, <a href="http://www.neha.org">http://www.neha.org</a></p>
<p><b>Epidemiology</b>  <i>Health Science and Epidemiology Competencies</i>, 2001</p>	<p>professional</p>	<p>School of Public Health Science and Research, CDC Corporate University, draft to be validated; Charlotte Wilson, HRMO, <a href="mailto:CWilson@cdc.gov">CWilson@cdc.gov</a></p>
<p><i>Core Activities for Learning (CALS)</i></p>	<p>doctoral-level Epidemic Intelligence Officer</p>	<p>Epidemic Intelligence Service (EIS), CDC  Jim Alexander, <a href="mailto:EPO/DAPHT, JAlexander1@cdc.gov">EPO/DAPHT, JAlexander1@cdc.gov</a></p>
<p><i>Evaluation of EIS Competency Domains: Epidemiologic Process, Communication, and Professionalism</i>, 2001</p>	<p>doctoral-level Epidemic Intelligence Officer</p>	<p>Epidemic Intelligence Service (EIS), CDC  Jim Alexander, <a href="mailto:EPO/DAPHT, JAlexander1@cdc.gov">EPO/DAPHT, JAlexander1@cdc.gov</a></p>
<p><i>Maternal and Child Health Epidemiology Fellowship Competency Guidelines</i></p>	<p>professional</p>	<p>Council of State and Territorial Epidemiologists (CSTE) with CDC, <a href="http://www.cste.org/MCHcompetencies.pdf">http://www.cste.org/MCHcompetencies.pdf</a></p>

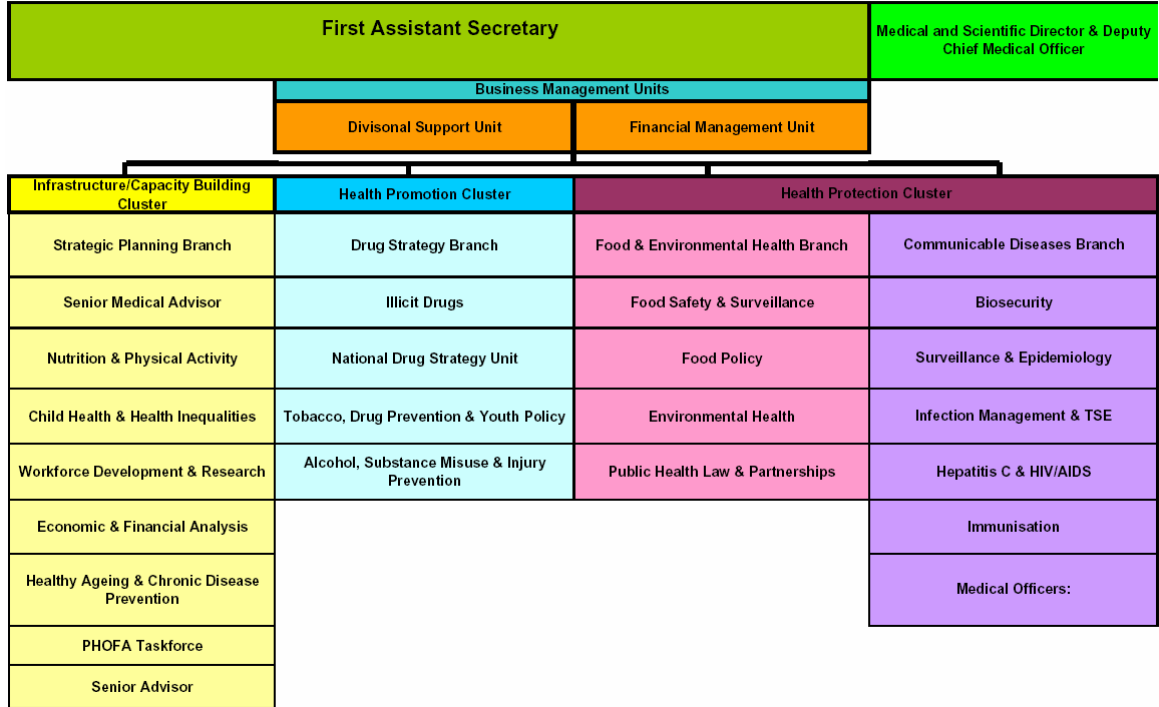
*continued*

Competency Sets	Worker Level	Where to Find Them on the WWW
<i>Infection Control and Epidemiology: Professional and Practice Standards, 1998</i>	professional	Association for Practitioners in Infection Control & Epidemiology (APIC) and Community and Hospital Infection Control Association, Canada (CHICA), <a href="http://www.apic.org/pdf/practstnd.pdf">http://www.apic.org/pdf/practstnd.pdf</a>
<b>Ethics</b> <i>Center for Ethics</i>	all health care professionals	Center for Ethics, Health Science Ethics. Health Care Ethics consortium of Georgia, Emory University, in development, <a href="http://www.emory.edu/ETHICS">http://www.emory.edu/ETHICS</a>
<i>Center for Bioethics and Health Law</i>	MPH students/health care professionals	Center for Bioethics and Health Law, University of Pittsburgh, <a href="http://www.pitt.edu/~bioethic/">http://www.pitt.edu/~bioethic/</a>
<b>Evaluation/Program Analysis</b> <i>Competencies for Public Health Analyst (GS-685), 2001</i>	professional	School of Public Health Administration, CDC Corporate University, draft to be validated; Ronald Lake, HRMO <a href="mailto:RLake@cdc.gov">RLake@cdc.gov</a> , <a href="http://fintranet.cdc.gov/hrmo/analyst.htm">http://fintranet.cdc.gov/hrmo/analyst.htm</a>
<i>Career Development: Core Competencies (Evaluation and Inspections), December 1999</i>	manager, program analyst, team leader, administrator, technical support, secretary	Office of Evaluation and Inspections (OEI), Office of Inspector General (OIG), <a href="http://www.hhs.gov/oig/oci/evaluator/evaluator.html">http://www.hhs.gov/oig/oci/evaluator/evaluator.html</a>
<b>Global Health Competency</b> <i>Division of International Health, Core Competencies, CDC,</i>	International Health workers	Core Competencies and Outputs for Public Health Practitioners or Applied Epidemiologists, <a href="http://www.cdc.gov/eppo/dih/core.html">http://www.cdc.gov/eppo/dih/core.html</a>

## **ANNEX D**


### **Ministry of Health and Ageing - Australia Population Health Division Structure**

POPULATION HEALTH DIVISION STRUCTURE - October 2003



**ANNEX E**

**National Public Health Partnership  
Agenda 2002-2004**

<b>National Public Health Partnership Agenda 2002 – 2004</b>		
Agenda Category		<b>Achieving Integration Through Common Themes Across NPHP Agenda Categories</b>
New initiatives and key strategic developments linking to major AHMAC agendas	<ul style="list-style-type: none"> <li>• <b>Child, Youth and Mothers' Health</b></li> <li>• <b>Chronic Disease Prevention:</b> implementation of Framework<sup>1</sup></li> <li>• <b>Aboriginal and Torres Strait Islander Health:</b> <ul style="list-style-type: none"> <li>- taking a public health approach</li> <li>- working with key national bodies such as SCATSIH</li> <li>- ensuring that Aboriginal and Torres Strait Islander issues are given priority in all areas of the work program</li> </ul> </li> <li>• <b>Health of Prisoners:</b> public health issues</li> <li>• <b>Genetics:</b> public health approach</li> <li>• <b>Healthy Ageing:</b> in partnership with the Healthy Ageing Task Force</li> <li>• <b>Primary Health and Community Care</b> Agenda: contribute to the ongoing agenda of AHMAC, for example through JAG and implementation of the SNAP Framework</li> <li>• <b>Workforce:</b> development of the public health workforce</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Addressing health inequalities through public health programs and interventions.</i></li> <li>• <i>Improving the quality of public health practice. (For example by extending the use of tools developed such as the Planning and Practice Framework and the Evidence Schema etc).</i></li> <li>• <i>Engaging effectively with key non-government organisations, key experts, major national structures and committees and key consumer groups. The NPHP Advisory Group will facilitate this activity.</i></li> </ul>
Implementation and ongoing policy development in priority areas of public health	<ul style="list-style-type: none"> <li>• Controlling Communicable Diseases - through CDNA - (including immunisation, HIV/AIDs and Hepatitis C)</li> <li>• Preparedness for and responsiveness to bio-terrorism</li> <li>• Environmental Health – through enHealth Council</li> <li>• Nutrition – through SIGNAL<sup>2</sup></li> <li>• Physical Activity – through SIGPAH<sup>2</sup></li> <li>• Injury Prevention– through SIPP</li> <li>• Public Health Information – through NPHIWG</li> <li>• Evaluation and performance of public health programs</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Strengthening the evidence for public health interventions and enhancing the economic arguments for public health.</i></li> <li>• <i>Integrating key risk groups, settings and priority areas into all work programs as appropriate, for example Aboriginal and Torres Strait Islander people, mental health and prevention, substance misuse and primary care and community health.</i></li> </ul>
<b>Key partners and collaborations</b> achieved through mechanisms such as joint working groups, common membership, representation or joint projects	<ul style="list-style-type: none"> <li>• SCATSIH</li> <li>• JAG – GPPAC/NPHPG</li> <li>• Mental Health Prevention and Promotion Working Group</li> <li>• AHMAC workforce group</li> <li>• HIRC</li> <li>• NHPAC</li> <li>• NHPC</li> <li>• NACOH</li> <li>• NHMRC</li> <li>• NHIMG</li> <li>• AHMAC Primary Health &amp; Community Care Group</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Public health research – collaboration and priority setting.</i></li> <li>• <i>Regulatory reform.</i></li> </ul>

## **ANNEX F**

### **People Interviewed for this Study**

## PEOPLE INTERVIEWED

### AUSTRALIA

Lynne Madden      Manager, PH Training & Development Unit  
NSW Department of Health, North Sydney

Dr. Vivian Lin      Prof. Public Health  
Faculty of Health Sciences, La Trobe U.

Dr. Karen Roger      Executive Officer  
National Public Health Partnership

### UNITED KINGDOM

Dr. Alison Hill      Director, South East PH Observatory  
Institute of Health Sciences  
Oxford University

Ros Dunkley      Institute of Health Sciences  
Oxford University

Dr. Ian Harvey      Professor Epidemiology & Public Health  
University of E. Anglia

Viv Speller      Director, Health Development Agency

Dr. Selena Gray      Reader of Public Health  
Faculty of Health & Social Care,  
University of the West of England

### UNITED STATES

Dr. Maureen Lichtveld      Assoc Dir. Workforce Development  
CDC, Atlanta

Joan Gioffi      Senior Service Fellow, Public Health Practice  
CDC, Atlanta

Dr. Bernard Turnock      Clinical Professor of Community Health  
School of Public Health  
University of Illinois-Chicago

### CANADA

Dr. Joe Losos      University of Ottawa

Dr. Peter Walker      Dean, Faculty of Medicine, University of Ottawa

Dr. Carmel Martin      University of Ottawa