State of play of expenditure on public health by Australian governments

A survey of data available on public health expenditure in Australia for 1997–98 and for earlier years

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Health & Welfare Expenditure Series
Number 12

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2001

Australian Institute of Health and Welfare
Canberra

AIHW cat. no. HWE 18

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This publication is part of the Australian Institute of Health and Welfare's Health & Welfare Expenditure Series. A complete list of the Institute's publications is available from the Publications Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601, or via the Institute's web site (http://www.aihw.gov.au).

ISSN 1323–5850

ISBN 1 74024 136 3

Suggested citation

Australian Institute of Health and Welfare 2001. State of play of expenditure on public health by Australian governments: A survey of data available on public health expenditure in Australia for 1997–98 and for earlier years. Canberra: AIHW.

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Published by Australian Institute of Health and Welfare and National Public Health Partnership

Printed by National Capital Printing

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Preface

This document is a joint publication of the Australian Institute of Health and Welfare (AIHW) and the National Public Health Partnership (NPHP). It reports on the state of play with regard to public health expenditure data in Australia at 1999 and looks particularly at data available from existing sources for the reference year 1997–98. This report was compiled from the first stage of the National Public Health Expenditure Project (NPHEP). The NPHEP aims to define public health activities in Australia and report routinely on public health expenditure.

The NPHEP is overseen by the National Public Health Information Working Group of the NPHP. The Technical Advisory Group (TAG) of the NPHEP provides advice on the technical aspects of the Project as well as on the future direction of the collection. The TAG includes the project officers from each jurisdiction who have the responsibility for the day to day running of the collection. The AIHW project team is involved through the collection and validation of information from the jurisdictions and also coordinates the Project.

The main data discussed in this report are public health expenditure estimates produced by the Commonwealth Grants Commission. These data are supplemented by information from the Australian Bureau of Statistics and the Department of Health and Aged Care. The report shows that in 1999 we did not have reliable, comprehensive, valid or routinely collected public health expenditure data.

The next step in this Project addresses these inadequacies by establishing clearer, more comprehensive public health definitions. The further aim of the Project is to collect the expenditure data in a routine and consistent fashion through a common agreed process.

The potential gains for health from public health activities are great. Having a clear picture of expenditure patterns is essential for managing public health activities in a way that produces optimum benefit. This State of Play report presents an important step in establishing information about public health infrastructure in Australia.

Richard Madden

Director

Australian Institute of Health and Welfare

Acknowledgments

This report was produced by Robyn Kingham Edwards, Cid Mateo, John Goss and Gerard Fitzsimmons at the AIHW. Comments were received from the Commonwealth Grants Commission, the members of the Technical Advisory Group to the National Public Health Expenditure Project, and the National Public Health Information Working Group of the National Public Health Partnership.

The members of the National Public Health Expenditure Project Technical Advisory Group are from Commonwealth, State and Territory health departments and are listed below:

New South Wales	Mr Jim Pearse and Ms Teresa Kresevic, Structural and Funding Policy Branch, New South Wales Department of Health.
Victoria	Mr Guy Nicholson, Public Health and Development Division, Department of Human Services.
Queensland	Mr Graham Jarvis, Public Health Planning and Research Unit, Queensland Health.
Western Australia	Mr Alan Philp and Mr Clive Mulroy, Development and Support Unit, Public Health Division, Health Department of Western Australia.
South Australia	Mr Gervase Mallen and Ms Joanne Cammans, Risk Management Statewide Services, Department of Human Services.
Tasmania	Mr Peter Bobrowski, Public Health Expenditure Project, Department of Human and Health Services.
Australian Capital Territory	Mr Simon Lalor, Financial Management and Contracting Branch, Department of Health and Community Care.
Northern Territory	Ms Heather Moyle, Health Economics, Territory Health Services.
Commonwealth	Mr Brian Harrison, Population Health Division, Commonwealth Department of Health and Aged Care.

Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
AZT	azidothymidine—a drug used in the treatment of HIV
CGC	Commonwealth Grants Commission
GFS	Government Finance Statistics
GPC	Government Purpose Classification
HIV/AIDS	human immunodeficiency virus/acquired immune deficiency syndrome
n.e.c.	not elsewhere classified
NGO	non-government organisation
NPHEP	National Public Health Expenditure Project
NPHIWG	National Public Health Information Working Group
NPHP	National Public Health Partnership
STD	sexually transmitted disease
TAG	Technical Advisory Group (of the NPHEP)
TB	tuberculosis

Symbols used in tables

n.a.	Not available
. .	Not applicable
—	Nil or rounded to zero

Executive summary

Public health is characterised by planning and intervening for better health in populations rather than focusing on the health of the individual. These efforts are usually aimed at addressing factors that determine health and the causes of illness rather than their consequences, with the aim of promoting health or preventing illness.

This report has been produced as the first stage of the National Public Health Expenditure Project (NPHEP) which has the objective of more accurately describing public health expenditure in Australia. The report reviews what was known about expenditure on public health in Australia in 1999 and assesses the data which were current then. It also describes the overall Project.

A major difficulty in completing this task lay in addressing the complexity of public health. It is difficult to reach agreement on what constitutes public health expenditure. This report only includes 'core' public health expenditure as items of public health expenditure. Many government programs have a public health purpose or function or a public health impact. Only government programs where the public health function was the predominant function are included for discussion in this paper.

'Public health' and 'population health' are terms that are often used as synonyms to describe the organised efforts of a society to protect, promote and restore a population's health through collective or social actions. This report uses the term 'public health' as it is the term used by the National Public Health Partnership, under whose auspices the NPHEP is conducted.

Key findings

The main data discussed in this report are public health expenditure estimates produced by the Commonwealth Grants Commission as part of its February 1999 Report. These data are supplemented by information from the Australian Bureau of Statistics and the Department of Health and Aged Care.

- Data current in 1999 indicated that public health investment by governments in Australia comprised approximately 2% of recurrent health expenditure. In dollar terms, public health services expenditure in 1997–98 was $776m, while total recurrent health expenditure amounted to $43,994m. (This was 1.8% of recurrent health expenditure but, given the uncertainties in the data, the best we can say is that public health expenditure was about 2% of recurrent health expenditure.)
- Available evidence indicated that it is likely that public health expenditure made an impact on improvements in health status and well-being that was greater than its share of 2% of total health expenditure. For example, it has been asserted in the *American Journal of Preventive Medicine* that

  > Some of the greatest improvements in the nation's health status have resulted from population based, community wide approaches. For example, the dramatic increase in life expectancy in the twentieth century is due largely to public health measures to improve sanitation practices, provide safe water, control infectious diseases, and reduce the incidence of many chronic diseases. (Public Health Foundation 1994:58)

- Public health expenditure by the Commonwealth Department of Health and Aged Care was estimated to be $113m or 14.6% of total public health services expenditure.

Commonwealth grants to the States and Territories comprised $145m or 18.6% of total public health services expenditure. In total, therefore, the Commonwealth in 1997–98 funded $258m or 33.2% of total public health expenditure provided by all governments.

- Total State and Territory expenditure on public health was $624m. Public health expenditure funded by States and Territories (excluding that portion funded by the Commonwealth) totalled $479m or 61.7% of government public health expenditure.
- Local government involvement in the delivery of public health programs varies in accordance with the respective Local Government Acts and Health Acts. The limited information available in 1999 indicated that local governments spent at least $40m on public health services in 1997–98, which was 5% of total government expenditure on public health.
- It is estimated that expenditure on public health research in 1996–97 was $182m.

Data deficiencies

Notwithstanding the key findings outlined above, this report indicates that the accuracy and scope of data on public health expenditure which was current in 1999 was inadequate for the purpose of informing public health policy. More information was required on expenditure on the components of public health in order to provide a more accurate understanding of public health expenditure. Obtaining this information required clear definitions of core public health functions and required public health expenditure to be reported according to these definitions. Problems that needed to be addressed included:

- Inconsistency in the way current definitions were applied from State to State.
- Lack of clarity as to how activities on the borderline between public and community health should be classified.
- Collection of reliable data from local governments.
- Collection of reliable data from non-health government departments.
- The unknown overlap between public health research expenditure and other public health expenditure data.
- Non-inclusion of expenditure funded by non-government organisations and the household sector.
- Comparability across time.

The NPHEP addresses these data deficiencies in Stage 2 of the Project, through collecting public health expenditure data in a more uniform manner according to an agreed set of definitions of public health functions.

Introduction

This document reports on the state of play in 1999 with regard to public health expenditure data in Australia and, in particular, on data pertaining to 1997–98. Data on public health expenditure in 1997–98 were better than in previous years, because the Commonwealth Grants Commission (CGC) for the first time reported separately on public health services. However, there were deficiencies in the data. Information available in 1999 did not enable reliable, comprehensive or valid measuring of public health expenditure across all government agencies and the non-government sector. It was realised that this situation could be improved through establishing clearer core definitions of the different elements of public health expenditure and developing a common agreed process for collecting public health expenditure data.

The National Public Health Expenditure Project (NPHEP) has undertaken the management of such a process in order to provide more reliable, comprehensive and valid information on public health expenditure. A large component of the Project to date has been the development of public health definitions and collection methods, which will enable consistent collection of data. Data were collected for 1998–99 according to these national definitions.

Expenditure information, when combined with epidemiological information about outputs and outcomes, will contribute to providing answers for questions such as: what are Australians getting from our public health effort? and how cost-effective are our public health approaches to health and illness issues?

Why measure expenditure on public health?

Governments are charged with working for the common good and are accountable for their decisions. Hence they are required to describe their activities and their achievements, including those related to the population's health. It is not an easy task to assess the effects of public health programs because of the difficulty in ascribing any change in population health to a particular intervention, with the added constraint that it may be a long time between an intervention and the expected change in a population's health. Nonetheless, effectiveness, efficiency and cost must all be considered.

Evaluating the effectiveness of a program requires collection of information on inputs, outputs and outcomes. For example, it is expected the breast cancer screening program will produce a significant drop in mortality rates from breast cancer through early detection. In order to evaluate the effectiveness and efficiency of this measure, the cost of screening must be identified (cost of inputs), the number of screens done must be measured (outputs) and the change in breast cancer mortality rates due to the screening must be measured (outcomes). If any of these pieces of information are missing then a full evaluation is not possible. The NPHEP is collecting data on the cost of inputs (that is, expenditure), with the objective of collecting the data in such a way that they can be related to outputs and outcomes.

The need to accurately identify expenditure on public health by all levels of government has received more attention following the establishment of the National Public Health Partnership (NPHP). The health ministers of the Commonwealth, State and Territory Governments established the NPHP in October 1996. The objective of the Partnership has been to plan and coordinate national public health activities. This objective provides a more

strategic approach with which to address public health priorities. It also provides a method of assessing and implementing new public health directions as major national initiatives.

The Partnership has followed a broad interpretation of 'public health', one not confined only to the health sector but rather including activities undertaken in other sectors of the economy, such as the transport, environment protection and education sectors. This interpretation is in line with the current international debate on the importance of social conditions in determining the health of populations. The NPHEP will be addressing the non-health sectors of the economy in Stage 3 of the project (see below for a description of the different stages of this Project).

Responsibilities of different levels of government

The health care system in Australia is complex, involving many providers and portfolios. A distinguishing feature is the extent to which responsibilities are split between different levels of government, and the varied participation of the public and private sectors (AIHW 2000). Historically, the Commonwealth's main role in health for many years was quarantine. Later on, responsibilities for the health needs of veterans, for medical benefits (pharmaceutical, sickness and hospital) and for medical services and dental services were added (AIHW 1998). The provision of specific-purpose grants to States, under Section 96 of the Constitution, enabled the Commonwealth to expand its role in the health system (AIHW 1998).

The States and Territories use diverse sources of funding to fulfil their health responsibilities. State and Territory Governments retain the major responsibility for the public provision of health services, including public and psychiatric hospital systems, community health and rehabilitation and the regulation, inspection, licensing and monitoring of premises and personnel. They have a major role in public health (AIHW 1998).

Local governments affect health through activities such as: environmental monitoring and management, economic development, public safety, maintaining roads, cultural and recreational development, land use planning and the provision of community services, as well as through direct community and public health activities.

For public health investment, the State and Territory Governments shoulder most responsibility in communicable disease control, immunisation, health promotion, breast cancer screening and environmental health. The Commonwealth plays an important role in funding public health activities of non-government organisations (NGOs), State and Territory Governments and medical practitioners. It has a leadership and coordination role and also directly provides some public health services—particularly in the regulatory area.

Local government has a major role in environmental health functions.

National Public Health Expenditure Project

The NPHEP aims to develop measures of public health investment in Australia through the development of a national routine collection of public health activity and expenditure information. The Project intends to study public health in both the government and non-government sectors of the economy, across the three levels of government and those NGOs conducting public health interventions.

There are four stages to the Project:

Stage 1 (the stage this publication reports on): Development of objectives of the Project, development of definitions and of the collection process, and the collation and analysis of existing data.

Stage 2: Collection of data for 1998–99 on eight public health expenditure categories from Commonwealth State and Territory health authorities in a uniform manner.

Stage 3: Collection of public health expenditure data for 1999–2000 from non-health government departments and non-government agencies, as well as from health authorities. Implementing changes to administrative collections so that collection of data is more routine.

Stage 4: Collection of public health expenditure data for 2000–01 and embedding of collection in routine administrative collections.

The Project aims to address a shortfall in public health information in Australia on the investment or input side. The collection of expenditure and revenue information across eight public health expenditure categories (Stage 2 of the Project) marks the first collection of this type in the public health or population health arena in Australia. The lessons learnt in this collection will be used to construct a suitable and robust methodology for the collection of similar public health information in future years that will be part of administrative by-product data. At a later stage, the Project intends to promote the link between public health inputs and outputs, so that cost-effectiveness analyses may be undertaken on public health interventions.

The NPHEP data, along with information from other sources, will enable a number of questions to be considered:

- How much investment in public health actually takes place in Australia? How does this level of investment compare with past expenditures?
- How does the level of public health investment differ from investment in other health sector activities? What proportion of health expenditure is directed towards prevention of illness and maintenance of good health as opposed to the treatment/rehabilitation of illness or injury?
- Who funds most of the national public health effort—the Commonwealth, the States or local governments?

The major partners in public health in Australia are the Commonwealth Government and State, Territory and local governments. The private sector is a minor contributor to the funding of public health activities. In addition, the household sector also makes a major contribution to preventing injury and illness while promoting health through healthy eating, exercise and safe behaviours. However, the extent of this contribution is difficult to measure and a monetary valuation of this contribution will not be attempted as a part of the NPHEP.

Management

This project is being coordinated nationally by the Australian Institute of Health and Welfare with funding from the Commonwealth Department of Health and Aged Care. The Commonwealth has also partially funded State contributions to this work. The NPHP, via its National Public Health Information Working Group (NPHIWG), has responsibility for the development of the expenditure definitions and methodology as well as the preparation of reports on Australia's public health expenditure.

Introduction to the concepts

What is public health?

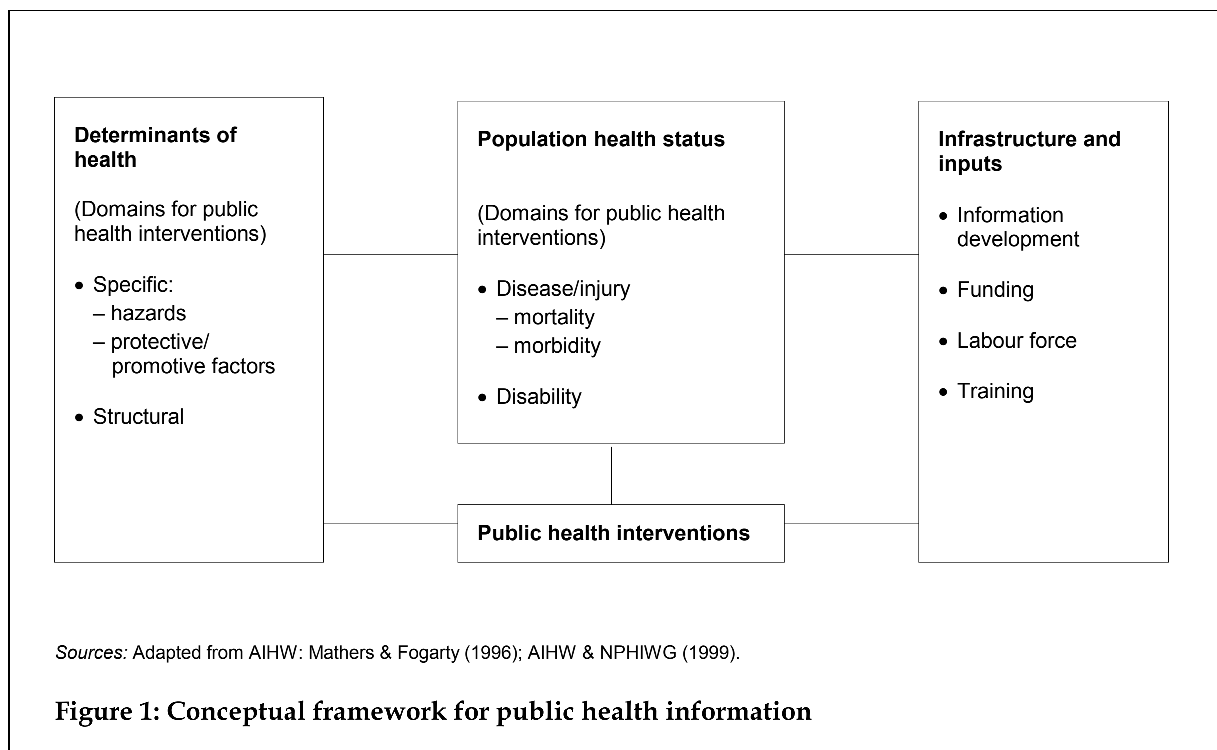
The NPHP defines 'public health' as the organised response by society to the need to protect and promote health, and to prevent illness, injury and disability. The starting point for identifying public health issues, problems and priorities, and for designing and implementing interventions, is the population as a whole, or population sub-groups (NPHP 1998).

'Public health' and 'population health' are terms that are often used as synonyms to describe the organised efforts of a society to protect, promote and restore a population's health through collective or social actions. Public health is characterised by planning and intervening for better health in populations rather than focusing on the health of the individual. These efforts are usually aimed at addressing factors that determine health and the causes of illness rather than their consequences, with the aim of promoting health or preventing illness.

Governments are charged with working for the common good and are accountable for their decisions; hence they are required to describe their achievements, including those related to the population's health. It is not an easy task to assess the effects of public health programs because of the difficulty in ascribing any change in population health to a particular intervention, especially given that some time may elapse between an intervention and the expected change in a population's health. Nonetheless, effectiveness, efficiency and cost all need to be considered.

Conceptual framework supporting the National Public Health Expenditure Project

A comprehensive conceptual framework for public health information, one which included resources, was proposed in a 1996 report on public health information needs (AIHW: Mathers & Fogarty 1996). That framework provided the basis for the information framework adopted in the National Public Health Information Development Plan. The major dimensions of the framework (presented in Figure 1 overleaf) can also be used to describe categories of public health information. This information can be used to plan, implement and review public health strategies. The framework has been modified and simplified to align it with the conceptual approach to a national public health planning and practice framework auspiced by the NPHP (NPHP 2000b). *A Planning Framework for Public Health Practice* defines the principles that characterise public health action and also provides a framework for the development of public health performance indicators. An AIHW discussion paper on national public health indicators (AIHW 1999) and a well-developed overseas model, the Canadian health indicator framework (Canadian Institute for Health Information 2000), helped to shape the process. A key feature of both these frameworks is that resource information contributes to a comprehensive understanding and evaluation of public health action. In addition, the NPHP has developed a series of 'core functions' of Australian Public Health Practice.



Sources: Adapted from AIHW: Mathers & Fogarty (1996); AIHW & NPHIWG (1999).

Figure 1: Conceptual framework for public health information

What is expenditure?

Expenditure on public health services may be comprised of a number of direct and indirect expenditures. Direct expenditure may be defined as expenditure undertaken by a specific cost centre within a public health expenditure category. Examples include expenditure by an immunisation cost centre or a radiation safety cost centre. The indirect expenditure category includes public or population health program-wide services that are less specific, such as epidemiology units or public health policy and strategy units. Indirect expenditure will also usually include agency-wide services such as corporate services or the Office of the Chief Health Officer. Usually, public health program-wide services and agency-wide services will need to be apportioned across categories to estimate the overall expenditure required to deliver a particular public health expenditure output. The total cost of delivering the output includes the expenditure through the direct cost centre, as well as a portion of the costs of the indirect cost centres.

Public health definitions

The NPHEP has examined a wide range of definitions of public health in coming to a set of national definitions. Information from the Organisation for Economic Co-operation and Development, the World Health Organization and the USA and from the NPHP core public health functions project, State health authorities and academics has been considered. A workshop of all interested parties in December 1998 and meetings of the Technical Advisory Group of the NPHEP since have devised and refined the definitions.

Set out below are the definitions which were arrived at for the Project, and, for comparison, the definitions used by the Australian Bureau of Statistics (ABS) and by the USA. There are clear commonalities between the NPHEP definitions, the ABS Government Purpose Classification (GPC) definitions and the USA core public health functions definition of

public health services. The NPHP core public health functions also map to these definitions. As the NPHEP work is refined, it is proposed to suggest changes to the GPC definitions so that there will be concordance between the NPHEP and the GPC.

National Public Health Expenditure Project definitions

Core public health expenditure categories have been defined in the NPHEP in collaboration with health departments from the Commonwealth, State and Territory Governments. Utilising these definitions enables a uniform method of collecting public health expenditure information at a national level.

The seven major core public health expenditure categories agreed so far are:

- Communicable disease control;
- Selected health promotion programs (population health oriented);
- Immunisation;
- Environmental health (includes radiation safety, Legionella control, vector/rodent control, public health aspects of water quality controls, hazardous materials management and disaster management);
- Food standards and hygiene;
- Breast cancer screening; and
- Cervical screening.

In addition, 'Communicable disease control' has been divided into

a. HIV/AIDS and hepatitis C;
b. Needle exchange programs; and
c. All other communicable disease control.

'Immunisation' has been divided into

a. Organised childhood immunisation;
b. Organised pneumococcal and influenza immunisation; and
c. All other organised immunisation.

The *National Public Health Expenditure Project Collection Manual Stage 2 (1998–99)* details the inclusions and exclusions for each of these categories.

An additional direct public health expenditure category has been defined as 'All other core public health':

- 'All other core public health' includes alcohol regulation, tobacco and illicit drugs control, air and noise pollution control and poisons and pharmaceutical regulation.

The above categories represent reasonably discrete public health outputs or products.

In addition, five public health program-wide or indirect expenditure categories have been defined:

- information systems, disease surveillance and epidemiology;
- public health policy, program and legislation development;
- public health communication and advocacy;
- public and environmental health laboratory services; and
- public health research and development.

Expenditures in these areas are an input for the direct public health expenditure categories, and need to be allocated to the direct public health expenditure categories in order to understand the full costs of the eight public health expenditure products or outputs.

In arriving at these core public health expenditure categories, consideration was given to two major classifications already in use. These were the ABS Government Purpose Classifications category 2550 and the United States Public Health Service definition. While these two generally covered the types of functions to be included in the Project, they were considered to be too imprecise to allow for proper classification of activities into the core categories.

Australian Bureau of Statistics Government Purpose Classification category 'Public health services' (2550)

The ABS Government Purpose Classification (GPC) defines 'Public health services' for the purposes of Government Finance Statistics (GFS). Data is collected from governments by the ABS under the GFS framework and is published by the ABS at an aggregate level in various publications. More detailed information is retained by the ABS in the Public Finance Database. Information from this database is used by other agencies, such as the CGC and the Australian Institute of Health and Welfare, in compiling their estimates of government expenditure.

The ABS definition of 'public health services' agreed in 1997 is as follows:

> Outlays on public health services consisting of population health service programs and preventive health service programs.
>
> > Population health service programs are defined as those programs which aim to protect, promote and or restore the collective health of whole or specific populations (as distinct from activities directed to the care of individuals). This includes:
> >
> > - health promotion campaigns;
> > - occupational health and safety programs;
> > - food standards regulation;
> > - environmental health;
> > - nutrition services;
> > - communicable disease surveillance and control; and
> > - epidemiology.
> >
> > Preventive health service programs are those programs that have the aim of preventing disease. This includes:
> >
> > - immunisation programs;
> > - breast cancer and cervical screening; and
> > - screening for childhood diseases.

USA Public Health Service definitions

The USA Public Health Service conducted a study in 1993 on national expenditure estimates for the core functions of public health. The objectives of the study were to develop a reliable methodology for estimating state expenditures for core public health functions and begin

developing preliminary state and national estimates of expenditures for core public health functions (Public Health Foundation 1994:58).

Below are the definitions of the six core public health functions.

Figure 2: USA core public health functions

Function	Includes	Does not include
1. Health-related data, surveillance, and outcomes monitoring	Disease and injury registries Data systems related to service availability; utilisation, cost, and outcome Epidemiology (surveillance, disease reporting, sentinel events) Population-based needs assessments (i.e. community health assessments) Vital statistics Environmental epidemiology Immunisation status tracking Injury epidemiology Mental health epidemiology Substance abuse epidemiology	Client-based data systems
2a. Investigation and control of diseases, injuries, and response to natural disasters (non-clinical services)	Communicable disease detection Chronic disease prevention and detection Emergency response teams (e.g. disease outbreaks, toxic spills, product recalls, emergency systems, natural disasters) HIV/AIDS prevention—counselling and testing Outbreak investigation and control (including immunisations as part of outbreak control) Screening activities Follow up counselling (e.g. nutrition, exercise, smoking) STD contact tracing	CD4 + testing Dental health services (including topical fluoride treatments in schools) Treatment of diabetes, lupus, haemophilia, sickle cell anaemia, epilepsy, Alzheimer's disease, and other chronic diseases Genetic disease services Purchase and provision of AZT Prenatal/perinatal care Services for premature and new and preschool-aged children Services to children with special needs WIC supplemental food program (these expenditures on worksheet)
2b. Investigation and control of diseases, injuries and response to natural disasters (public health clinical services)	Selected public health clinic services: immunisations, family planning clinics, STD clinical services, TB clinical services Management of client-based data systems that support the four types of services above	Mental health clinic services Mental retardation clinical services Substance abuse clinical services Personal health services other than that specified

(continued)

Figure 2 (continued): USA core public health functions

Function	Includes	Does not include
3. Protection of environment, housing, food, water and the workplace	Air quality	Construction of facilities
	Asbestos detection	
	Consumer protection and sanitation: food sanitation, general sanitation, housing, public lodging, recreational sanitation, shellfish sanitation, substance control/product safety, vector rodent control	
	Environmental risk management	
	Environmental sampling	
	Fluoridation services	
	Hazardous materials management (accidents, transportation spills, etc.)	
	Lead investigation	
	Occupational health and safety	
	Radiation control	
	Radon detection	
	Waste management sewage, solid and toxic	
	Water quality control (public/private drinking water, groundwater protection, etc.)	
4. Laboratory services	Public health laboratory services (include newborn metabolic screening)	Mental health laboratory services (therapeutic drug monitoring)
	Environmental health laboratory services	
	Laboratory regulation and quality control services	
	Medical examiner, toxicology and other forensic medicine services	
	Substance abuse laboratory services ('driving under the influence' testing)	
5. Public information and education and community mobilisation	Comprehensive school health education	
	Population-wide health promotion/risk reduction programs: injury prevention education and promotion, nutrition education, parenting education, physical activity and fitness, population-based risk reduction programs, seat belts, sexuality education, tobacco use prevention and cessation	
	School campaigns such as 'Say no to drugs' day	
	Substance abuse prevention	
	Public education campaigns	

Background to discussion of available public health expenditure data

Sources of the data and relationships

This report mainly uses data from the Commonwealth Grants Commission (CGC) and the Commonwealth Department of Health and Aged Care (formerly the Department of Health and Family Services). The Commonwealth data have been extracted from the *Department of Health and Family Services Annual Report 1997–98*. Public health expenditure data for 1997–98 for State and Territory expenditure have been extracted from the published *Report on general revenue grant relativities* and on additional unpublished data from the CGC. The information in Tables 12 to 14 has been taken directly from 1999 CGC data. Tables 1 and 3 show some adjustments to these CGC data, made according to information provided by State and Territory health departments. The Australian Bureau of Statistics (ABS) Public Finance Database was used to extract information about expenditure on public health services by local governments. Public health research data was obtained from unpublished ABS data from their 1996–97 Research and Experimental Development Survey. An unknown portion of the ABS public health research expenditure is also included in the CGC data on State expenditure and the Department of Health and Aged Care expenditure, so therefore the public health research data are not included in the overall total.

Data deficiencies

Major problems in need of solution include:

- inconsistencies in the way current definitions are applied from State to State;
- lack of clarity as to how activities on the borderline of public and community health should be classified;
- collection of reliable data from local governments;
- collection of reliable data from non-health government departments;
- the unknown overlap between public health research expenditure and other public health expenditure data;
- non-inclusion of NGO-funded and household sector expenditure; and
- comparability across time.

There are a number of sources for data on public health expenditure. Some of this information has been collected independently of other information, so therefore the ability to describe the total level of public health expenditure accurately and consistently is limited. For example, as mentioned above, there is an unknown overlap between public health research expenditure and other public health expenditure data.

The publication by the CGC of data on public health expenditure as a separate category from community health expenditure is an important step forward, but the CGC public health

category is really a mixture of expenditure categories and there are too many approximations involved in their estimates for the data to be really useful.

Expenditure by non-government organisations (NGOs) is difficult to ascertain. Information on grants to NGOs can be collected, but the contribution their own fund-raising and other sources of revenue make to their expenditure is difficult to ascertain.

The NPHEP is in the process of addressing these issues through collecting public health expenditure data in a more uniform way according to an agreed set of definitions of public health functions.

Government public health expenditure data

Summary

A total of $776m of funding for 'Public health services' (Government Purpose Classification (GPC) code 2550) was provided by governments during 1997–98, which was 1.8% of total recurrent health expenditure of $43,994m (Table 1).

The best estimates of government expenditure on 'Public health services' (GPC code 2550) during 1997–98 are presented in Table 1.

Direct public health expenditure by the Commonwealth Department of Health and Aged Care (formerly the Department of Health and Family Services) in 1997–98 was $113m or 14.6% of total government public health services expenditure. In addition, the Commonwealth made grants to the States and Territories of another $145m or 18.6% of total government public health services expenditure. In total, the Commonwealth in 1997–98 contributed $258m or 33.2% of the total public health spending by governments.

State and Territory Government funding of $479m accounts for the majority (61.7%) of public health services funding. The total public health expenditure for which they were responsible was $624m or 80% of government public health expenditure. This amount includes the grants of $0.5m that State and Territory Governments made to local governments.

Available data indicates total local government expenditure on public health services in 1997–98 was $40m or 5% of total government expenditure (of which $39m was funded by local governments (Table 1)). The estimated expenditure of $40m is almost certainly an underestimate.

Table 1: Expenditure on public health services Government Purpose Classification 2550, by source of funds, 1997–98

	Commonwealth Government					
	Direct expenditure	Grants to States & Territories	Total C'wealth funding	State and Territory government funding	Local government funding	Total government funding
Public health services						
Components of expenditure ($m)	113	145	258	*479	39	**776**
Total funding (%)	**14.6**	**18.6**	**33.2**	**61.7**	**5.0**	**100**

* Includes State grants to local government of $1.1m. Excludes Commonwealth grants to States.

Sources: Estimated by AIHW from following sources:

Most of State data derived from unpublished CGC data on GPC 2550 public health expenditure.

Australian Bureau of Statistics 1999. Public Finance Database, 1998 update. Canberra: ABS.

Commonwealth grants and direct expenditure from (Commonwealth) Department of Health and Family Services (DHFS) 1998. Annual Report 1997–98. Canberra: DHFS.

South Australian Department of Human Services unpublished data.

Queensland Health unpublished data.

[Northern] Territory Health Services unpublished data.

Commonwealth grants to States and Territories for public health

Commonwealth public health grants to States and Territories of $145m are presented in more detail in Table 2.

National public health grants of $114m, Youth Suicide Strategy grants of $2.6m and essential vaccine grants of $28m were distributed among the States and Territories during 1997–98. When these figure are presented on a per person basis there is some variation. The per person figure varies from $7.01 in Queensland to $20.08 in the Northern Territory. Commonwealth grants to all the States and Territories averaged $7.77 per person in 1997–98, and four States are within 10% of the average. Tasmania and the Australian Capital Territory are 36% and 25% higher (respectively) than the national average.

Table 2: Commonwealth public health grants to States and Territories, 1997–98, total and per person.

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
National public health grants	40,149	26,440	18,211	9,914	9,315	4,080	2,489	3,190	**113,788**
Youth Suicide Strategy	776	497	714	243	155	166	—	85	**2,636**
Essential vaccines	9,620	6,982	5,110	2,756	2,190	745	373	500	**28,276**
Total ($'000)	**50,545**	**33,919**	**24,035**	**12,913**	**11,660**	**4,991**	**2,862**	**3,775**	**144,700**
Per person ($)	8.01	7.32	7.01	7.12	7.86	10.55	9.29	20.08	**7.77**
Population ('000)	6,307	4,633	3,427	1,814	1,483	473	308	188	**18,633**

Sources: Grants from *Final Budget Outcome 1997–98*. Population from Commonwealth Grants Commission *Report on general revenue grant relativities 1999* Vol II:451.

State and Territory Government public health expenditure

State and Territory Government involvement in the delivery of public health programs varies in accordance with their respective health Acts. Generally the State and Territory Governments implement public health through the coordination and delivery of public health programs such as immunisation, disease screening, communicable disease monitoring and control, environmental health, health education and risk factor control.

The components of State and Territory Government expenditure on 'Public health services' (GPC code 2550) during 1997–98 (excluding Commonwealth grants) are shown in Table 3. This expenditure was equivalent to $23.86 per person nationally, an estimate based on ABS data with some adjustments by the CGC. The Institute has made further adjustments based on advice from State health authorities.

For some States the CGC did not have detailed information from the States about public health expenditure. In a number of cases the raw program data that the CGC was provided by the ABS had public health expenditure combined with community health expenditure. Therefore the CGC made an adjustment to the combined program data so that part of the combined program expenditure was allocated to public health and part to community health. For example, an adjustment of $100m is shown for Victoria. This adjustment of $100m was made by the CGC. Thus, the total public health expenditure estimated for Victoria is $37.8m from identified public health programs plus the estimated $100m public

health portion of a combined program. The CGC estimate is in accord with the total expenses of $146.4m recorded in 1996–97 for Public Health Services (Output Group 116) in the Department of Human Services. A similar, but negative, adjustment of $29.6m was made to the New South Wales data. The CGC made a negative adjustment of $25.0m for South Australia, which attempted to make 1997–98 expenditure more consistent with expenditure from previous years. This adjustment was not validated by the SA Department of Human Services, so has been omitted from Tables 1 and 3. However it is still included in Tables 12 to 14. Data for years prior to 1996–97 were collected directly from the States and showed marked inconsistencies with ABS GFS data provided for 1996–97 and 1997–98.

Advice from Territory Health Services indicated that the Northern Territory public health services expenditure was actually $28.4m, when the CGC estimate made in 1999 was $30.6m. The CGC data indicated that New South Wales received grants of $11m from NGOs for public health services. The CGC data did not show receipt or payment of grants to NGOs separately for other States.

The funding by State Governments of public health services expenditure as estimated by the CGC ranges from $12m in the Australian Capital Territory to $132m in New South Wales. State and Territory total funding of 'Public health services' expenditure (GPC code 2550) amounted to $479m during 1997–98 (Table 3).

A State and Territory analysis including per person amounts shows the distribution of this expenditure for 'Public health services' (GPC code 2550) in more detail. Per person expenditure varied from $14.51 in New South Wales to $150.85 in the Northern Territory. The large difference for the Northern Territory is partly due to different definitions of public health expenditure. For example, the Northern Territory has included all alcohol and illicit drug services in the public health expenditure category, whereas in most other States the treatment portion of these programs has been included in the Community Health Services category. In addition, the Northern Territory experiences increased per person costs due to the remoteness of much of its population, especially its Aboriginal communities.

Table 3: Funding of public health services expenditure (GPC category 2550), by States, 1997–98, ($'000)

Expenditure category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Public health services	132,251	37,775	98,174	54,715	44,143	12,568	12,033	28,359	**420,018**
Adjustment	—	100,000	—	—	*	—	—	—	**100,000**
Revenue—NGOs	–11,106	—	—	—	—	—	—	—	**–11,106**
Other purposes n.e.c.	–29,621	—	—	—	—	—	—	—	**–29,621**
Total ($'000)	**91,524**	**137,775**	[(a)]**98,174**	**54,715**	[(b)]**44,143**	**12,568**	**12,033**	[(c)]**28,359**	479,291
Per person expenditure ($)	14.51	29.77	28.65	30.16	29.76	26.57	39.07	150.85	**25.72**
Population ('000)	6,307	4,633	3,427	1,814	1,483	473	308	188	**18,633**

Source: Commonealth Grants Commission (CGC) 1999 Review unpublished data. Population from CGC *Report on general revenue grant relativities 1999*, Vol II:451.

Notes: As this is State funding data, expenditure funded by Commonwealth grants to States is excluded.

(a) Adjusted to represent Queensland Health Finance Branch mapping exercise against GPC codes for 1997–98 from $63,632m to $98,174m.

(b) Original data from CGC made an adjustment of $25.0m, which proved difficult to justify. Following consultation with South Australia it was agreed $55.703m was the best estimate of public health expenditure through the South Australian Government for 1997–98. These included amounts for Public Health Services funded by the South Australian Government of $44.143m and Commonwealth grants of $11.660m. The original CGC estimate of GPC 2550 was $30.648m, which consisted of $19.143m (State Government funding) plus $11.505m (Commonwealth grants).

(c) The original CGC estimate of $30,554m for public health has been corrected by the Northern Territory from $30,554m to $28,359m.

Public health expenditure by local governments

Local government involvement in the delivery of public health programs varies from State to State in accordance with the respective Local Government Acts and Health Acts. Generally, the local government protects and fosters health in ways such as environmental management, economic development, public safety, maintaining roads, cultural and recreational development, land use planning and the provision of community services. The majority of environmental control is carried out at the local government level.

Local government recurrent expenditure for 1997–98 for public health services recorded in the ABS Public Finance database was $39.6m. (There was no local government capital public health expenditure recorded in 1997–98.) However, only data for Queensland, South Australia, Tasmania and the Northern Territory is recorded (Table 4).

Table 4: Local government expenditure for public health services by State or Territory, total and per person, 1997–98

State or Territory	Amount ($)	Per person ($)
Queensland	30,828,000	8.99
South Australia	5,511,000	3.71
Tasmania	2,737,000	5.79
Northern Territory	566,000	3.00
Total	**39,642,000**	. .

Sources: ABS Public Finance Database. Population from CGC *Report on general revenue grant relativities 1999* Vol II:451.

The ABS public finance database also provides numbers for State grants to local government. For Victoria, State grants and subsidies to local governments for public health purposes totalled $16.8m and for the Northern Territory health grants to local governments totalled $0.5m. The ABS Victorian grant figures were excluded as there is no expenditure showing in the ABS database by Victorian local governments in the public health area (Table 4).

Thus the total funding for public health services by local governments is calculated as the total expenditure of $39.6m minus the Northern Territory funding of $0.5m, which gives $39.2m. Therefore local governments fund 5.0% of government expenditure on public health, and spend 5.1% of public health moneys.

Table 5: Local government expenditure on 'Public health services', Government Purpose Classification 2550, by source of funds, 1997–98.

	Local government		
	Total funding	Grants from States	Total expenditure
Public health services			
Components of expenditure ($m)	39	1	**40**
Proportion of total government public health expenditure (%)	5.0	0.1	**5.1**

Sources: Grants from States from Commonwealth Grants Commission (CGC) unpublished data.
Total expenditure from ABS Public Finance Database.
Population from CGC *Report on general revenue grant relativities 1999* Vol II:451.

According to the CGC numbers, local governments in Victoria, Queensland, Western Australia and the Northern Territory received State grants for public health services in 1997–98. The total for these grants was $18.0m. Local governments in Victoria received $16.8m, in Queensland they received $40,000, in Western Australia local governments were recorded as receiving $382,000 and in the Northern Territory they received $784,000. Note the discrepancy between the ABS data which shows only two States making grants to local governments and the CGC data which shows four States (Table 6).

Table 6: CGC data on State grants to local government by State, 1997–98 ($)

State	Grants ($)
Victoria	16,754,000
Queensland	40,000
Western Australia	382,000
Northern Territory	784,000
Total	**17,960,000**

Source: Commonwealth Grants Commission unpublished data.

The above discrepancies show the accuracy of the coding of expenditure on public health by local governments in the ABS Public Finance database is not high. Thus the amount noted here of $40m is almost certainly a minimum. At the very least it should be $16.8m higher, reflecting the grants by the Victorian Government to local governments for public health purposes. Presumably this $16.8m grant was spent on public health, but when the Victorian local governments have reported this expenditure to the ABS they have recorded it against some other GPC such as community health.

Public health research

In 1999, the most recent available data from the Australian Bureau of Statistics (ABS) for public health research expenditure were for 1996–97. Table 7 shows public health research expenditure for 1994–95 and 1996–97 by source of funds. Only research undertaken by Commonwealth or State agencies or universities or private not-for-profit research institutes is included. Between 1994–95 and 1996–97, the Commonwealth Government sector's funding of public health research decreased from $54.9m to $43.3m—a decrease of 21%. State Government funding also decreased from $42.1m to $41.1m—a decrease of 2%. Total expenditure increased by $18.7m in 1996–97. Sectors that increased funding of public health research were universities and business. University funding of public health research increased by 51% between 1994–95 and 1996–97. Business sector funding increased by 69%.

Table 7: Public health research expenditure, by source of funds, 1994–95 and 1996–97, current prices ($'000)

	Years			Proportion of total	
	1994–95	1996–97		1994–95	1996–97
Source of funds	($'000)	($'000)	Percentage change	%	%
Commonwealth Gov't	54,891	43,319	–21	33.6	23.8
State Governments	42,067	41,143	–2	25.7	22.6
Universities	37,859	57,031	51	23.1	31.3
Private not-for-profit	7,459	8,235	10	4.6	4.4
Business sector	10,201	17,259	69	6.2	9.5
Other	7,836	10,003	28	4.8	5.5
Overseas	3,284	5,301	61	2.0	2.9
Total	**163,596**	**182,289**	11	**100.0**	**100.0**

Sources: Data compiled by the Australian Institute of Health and Welfare from the ABS 1994–95 and 1996–97 Research and Experimental Development Survey.

Data for university sector is 1994 and 1996. For other sectors it is 1994–95 and 1996–97.

Table 8 shows public health research expenditure in 1996–97, by the sector which performed the research and by the type of public health research. Sectors differ considerably as to whether they are primarily funders of research or performers of research. The Commonwealth Government is a large funder of public health research ($43.3m in 1996–97), but Commonwealth Government agencies only performed $7.3m worth of public health research in that year (Table 8). The State and Territory Governments were not only major funders ($41.1m)—they also produced a lot of research ($39.8m). Universities funded a significant amount of public health research ($57m) but undertook much more ($101m in 1996–97). The private not-for-profit sector was a modest funder ($8.2m) but undertook a significant amount of public health research ($34.2m).

Public health research expenditure has been identified by the ABS in the classes below. The class receiving the most in the public health research category is 'Mental health', at $21.7m or 11.9% of the total expenditure in this category.

The classes receiving the least in 1996–97 were 'Health status' (indicators of well-being), which received $2.0m (1.1%of total funding) and 'Social structure and health', which received $2.2m (1.2% of total funding).

Public health research expenditure performed by the private not-for-profit sector in the classes 'Behaviour and health' and 'Mental health' was suppressed by the ABS, for confidentiality reasons. However the total expenditure for the two classes was made available, so this is included in the table.

Table 8: Public health research expenditure by sector which performed the research and by class of public health research expenditure, 1996–97 ($'000)

Class	Commonwealth	State	Higher education	Private not-for-profit	Total	
	($'000)				($'000)	Per cent
Public health	—	—	12,733	—	12,733	7.0
Women's health	—	2,928	10,381	750	14,059	7.7
Health related to ageing	353	839	4,771	3,568	9,531	5.2
Child health	64	4,636	4,591	2,743	12,034	6.6
Aboriginal health	—	3,570	2,510	—	6,080	3.3
Substance abuse	—	890	7,707	468	9,065	5.0
Occupational health (excluding economic development aspects)	723	2,044	4,666	30	7,463	4.0
Environmental health	780	477	4,403		5,660	3.1
Mental health	530	9,000	12,131	n.p.	21,661	12.0
Behaviour and health	75	2,267	5,002	n.p.	7,344	4.0
Mental health/Behaviour and health	—	—	—	*13,520	13,520	7.4
Disease distribution and transmission	—	457	2,936	—	3,393	1.9
Preventive medicine	481	2,390	2,856	11,066	16,793	9.2
Dental health	—	96	1,166	—	1,262	0.7
Nutrition	244	1,211	4,516	255	6,226	3.4
Food safety	3,168	107	264	—	3,539	1.9
Health status (e.g. indicators of 'well-being')	249	578	1,146	51	2,024	1.1
Social structure and health	122	262	1,787	10	2,181	1.2
Public health not elsewhere classified	493	8,069	17,444	1,717	27,723	15.2
Total	**7,282**	**39,819**	**101,009**	**34,181**	**182,291**	**100.0**

Source: ABS 1996–97 Research and Experimental Development Survey.

* The amount $13,520,000 shown in the 'Mental health/Behaviour and health' row of the 'Private not-for-profit' column has been estimated by subtracting the sum of reported figures for each class in the 'Private not-for-profit' column from the total of $34,181,000.

n.p. not for separate publication

The data collection process for this research data is quite separate to the collection process for the data reported earlier from the CGC and the ABS Public Finance Database. It is not known how much of the public health research in Tables 7 and 8 is included in the public health expenditure recorded in earlier tables, but it is thought the overlap is fairly small.

Public and community health expenditure in Australia, 1960–1998

Available data on community and public health expenditure for the period 1960–61 to 1997–98 are presented in Tables 9 to 11. The data has been collected using different definitions over a timeframe spanning 37 years. Some differences in the definitions of public health are evident.

Data for all health expenditure for the three years 1960–61, 1963–64 and 1966–67 were collected by Dr John Deeble and published as part of his PhD thesis in 1970. 'Public health services' were defined very broadly in Deeble's thesis as including maternal and child health, school health, other personal and environmental and supporting health. In order to isolate what is currently understood as public health expenditure from the other areas, expenditure on maternal and child health services, school health services and personal services (except tuberculosis control) has been subtracted from what Deeble called 'public health services'. Expenditure on teaching has been subtracted from total recurrent health expenditure data in the Deeble thesis to make his data more comparable with recurrent health expenditure data collected since.

Expenditure on public health for 1960–61 to 1969–70 is presented in Table 9. Public health represented about 1.5% of total recurrent health expenditure.

For 1969–70 only a combined figure for public and community health expenditure is available.

Table 9: Public and community health expenditure, Australia, 1960–61 to 1969–70, current prices

	Public & community health expenditure	Public health	Total recurrent health expenditure	Public & community health as % of total recurrent health expenditure	Public health as % of total recurrent health expenditure
Year	Current prices $ ('000)			%	%
1960–61	28,800	9,500	674,300	4.3	1.4
1963–64	35,400	12,100	844,400	4.2	1.4
1966–67	46,200	16,200	1,111,900	4.2	1.5
1969–70	67,800	n.a.	1,536,660	4.4	n.a.

n.a. not available

Sources: Reference Deeble 1970, for the data periods 1960–61, 1963–64 and 1966–67. Public health is environmental health plus TB control. Current Account Expenditures on health services, Research Section, Commonwealth Department of Health, 1973, for data period 1969–70 which includes supporting services (approx. $1m) with public health.

The public health category in the years 1970–71 to 1984–85 was called 'Health promotion and illness prevention' and was defined as follows:

> Health promotion and illness prevention relates to programs concerned primarily with preventing the occurrence of diseases and mitigating their effect, and includes such activities as mass chest X-ray campaigns, immunisation and vaccination programs, control of communicable diseases, hygiene and nutrition advisory services, food and drug inspection services, regulation of standards of sanitation, quarantine services, pest control, anti-cancer, anti-drug and anti-smoking campaigns and other programs to increase public awareness of disease symptoms and health hazards. (AIH 1988:77)

Table 10 shows expenditure on public health for 1970–70 to 1984–85. As a proportion of total health expenditure, this level is highest in the years 1970–71 through to 1974–75 at 1%. The level then reaches a low in 1977–78 and 1979–80 of 0.4%. The level increases in 1984–85 to 0.8% of public health expenditure as a proportion of total recurrent health expenditure.

Table 10: Public and community health expenditure, Australia, 1970–71 to 1984–85, current prices

Year	Public & community health expenditure	Public health expenditure	Total recurrent health expenditure	Public & community health as % of total recurrent health expenditure	Public health as % of total recurrent health expenditure
	Current prices $('000)			%	%
1970–71	n.a.	n.a.	1,791,000	. .	. .
1971–72	48,000	20,000	2,091,000	2.3	1.0
1972–73	55,000	23,000	2,382,000	2.3	1.0
1973–74	66,000	28,000	2,878,000	2.3	1.0
1974–75	90,000	38,000	3,839,000	2.3	1.0
1975–76	159,000	44,000	5,092,000	3.1	0.9
1976–77	183,000	42,000	5,901,000	3.1	0.7
1977–78	184,000	28,000	6,762,000	2.7	0.4
1978–79	211,483	37,000	7,461,556	2.8	0.5
1979–80	236,095	36,000	8,297,403	2.8	0.4
1980–81	281,781	50,000	9,456,527	3.0	0.5
1981–82	321,702	62,000	11,049,086	2.9	0.6
1982–83	426,717	72,000	12,434,110	3.4	0.6
1983–84	487,005	89,000	13,995,960	3.5	0.6
1984–85	605,685	121,000	15,397,008	3.9	0.8

Sources:

AIH 1988: Table 1.01, p6; Table 3.09, p34, 1981–82; Table 3.10, p35, 1982–83; Table 3.11, p36, 1983–84; Table 3.12, p37, 1984–85; Table H.1, p78, 1975–76; Table H.2, p79, 1976–77; Table H.3, p80, 1977–78; Table H.4, p81, 1978–79; Table H.5, p82, 1979–80; Table H.6, p83, 1980–81; Table H.7, p84, 1980–81; Table H.8, p85, 1981–82; Table H.9, p86, 1983–84; Table H.10, p87, 1984–85.

Public health expenditure as a proportion of total recurrent health expenditure in current and constant prices for the years 1985–86 through to 1997–98 are presented in Table 11. Public health expenditure is not reported separately in the years 1985–86 through to 1992–93. Public and community health expenditure is combined for these years and, expressed in constant prices as a proportion of total recurrent health expenditure, ranges from 3.6% in 1986–87 to 5.5% in 1989–90.

The Government Purpose Classification (GPC) definition for public health for 1994–95 to 1995–96 was as follows:

Public health—

Covers outlays on: administration, inspection, support, operation, etc. of school medical and dental services, and programs concerned with community health goals.

School medical and dental services are usually delivered at the school by special teams not connected with a hospital, clinic or practitioner.

Includes outlays on:

Prevention services, such as immunisation and inoculation; disease detection services, such as for venereal disease and tuberculosis; services delivered by special teams not connected with an institution or clinic in non medical settings, such as the national Trachoma and Eye Health Program; services provided to particular community groups, such as Aborigines; anti

drug and anti smoking advertising campaigns; alcohol and other drug rehabilitation programs predominantly involving medical care and treatment; family planning services; occupational health services; nutrition services; regulation of food standards; epidemiology, the study of distribution of disease and factors responsible for that distribution; and dissemination of information to increase public awareness of disease symptoms and health hazards.

Excludes outlays on:

Public health services not associated with a community health goal, such as community health centres, classified to other sub-groups of GPC 051 if institution based or otherwise to GPC 0528; blood banks classified to GPC 0511; medical clinic services not associated with a community health goal classified to the appropriate sub group of GPC 052; and alcohol and other drug rehabilitation programs predominantly involving welfare services classified to GPC 0620. (ABS 1994:113)

The GPC definition for public health for 1996–97 onwards was as follows:

Public health services—

Outlays on public health services consisting of population health service programs and preventive health service programs.

Population health service programs are defined as those programs which aim to protect, promote and or restore the collective health of whole or specific populations (as distinct form activities directed to the care of individuals).
Includes outlays on: health promotion campaigns; occupational health and safety programs; food standards regulation; environmental health; nutrition services; communicable disease surveillance and control; and epidemiology.

Preventive health service programs are those programs which have the aim of preventing disease. Includes outlays on: immunisation programs; breast cancer screening; and screening for childhood diseases. (ABS unpublished)

Table 11: Public and community health expenditure, Australia, 1985–86 to 1996–97, current and constant prices.

Year	Public & community health	Public health	Total recurrent health	Public & community health	Public health	Public & community health	Total recurrent health	Public & community health
	Current prices $('000)			% of total	% of total	Constant prices $('000) (1996–97)		% of total
1985–86	688,828	n.a.	17,172,374	4.0	n.a.	1,033,034	26,513,907	3.9
1986–87	725,280	n.a.	19,527,907	3.7	n.a.	997,239	27,835,237	3.6
1987–88	824,703	n.a.	21,574,627	3.8	n.a.	1,079,893	28,823,604	3.7
1988–89	1,099,052	n.a.	24,275,410	4.5	n.a.	1,354,635	30,521,369	4.4
1989–90	1,497,486	n.a.	26,833,876	5.6	n.a.	1,744,824	31,689,851	5.5
1990–91	1,359,428	n.a.	29,300,275	4.6	n.a.	1,498,818	32,505,239	4.6
1991–92	1,358,414	n.a.	31,175,477	4.4	n.a.	1,459,483	33,568,613	4.3
1992–93	1,596,896	n.a.	32,842,094	4.9	n.a.	1,698,373	34,898,903	4.9
1993–94	1,773,307	632,211	34,412,405	5.2	1.8	1,871,070	36,197,195	5.2
1994–95	1,706,084	659,198	36,626,954	4.7	1.8	1,769,796	37,902,769	4.7
1995–96	1,995,757	n.a.	39,390,243	5.1	n.a.	2,031,400	40,067,778	5.1
1996–97	2,096,831	n.a.	41,596,481	5.0	n.a.	2,096,831	41,596,481	5.0

n.a. not available.

Note: Public health and community health follow the GPC definitions, but the definitions varied over this period.

Sources: ABS Public Finance Database; Department of Finance and Administration (DOFA) Database.

Between 1960 and 1999, public health expenditure as a proportion of total health expenditure did not rise above 2.1% and at times went below 1%. Some of this variation was due to different definitions of public health used over the period. These inconsistent definitions mean that comparisons of public health expenditure over this time period are problematic.

Analysis of Commonwealth Grants Commission public health data

The Commonwealth Grants Commission public health category 4395 includes the categories of 'Public health services' (Government Purpose Classification 2550), 'Pharmaceuticals, aids and appliances' (GPC 2560), 'Other health research' (GPC 2579), and 'Health administration not elsewhere classified (n.e.c.)' (GPC 2590). Consequently, the CGC 'Public health services' category is substantially larger than the GPC 'Public health services 2550' category.

The following data must be interpreted cautiously. This was the first time the CGC estimated 'Public health services' as a separate category. The CGC used Australian Bureau of Statistics (ABS) Government Finance Statistics (GFS) expenditure that was adjusted following advice from the States as per the usual CGC process.

Table 12 shows the detailed numbers underlying the CGC estimates of public health services expenditure.

Commonwealth grants for public health to the States and Territories as recorded by the CGC total $142m. (This number differs from the number given in Table 1 and Table 2 ($145m), because the CGC counts grants for the Youth Suicide Strategy of $2.6m in their 'Family and child welfare' category rather than in the 'Public health services' category.)

Community health services expenditure includes only expenditure for Tasmania of $2.6m.

In Table 12, expenditure under the category of 'Public health services' (GPC code 2550) for the whole of Australia is given as $387.7m. This figure differs from the figure given in Table 3 ($420.018m) because the original CGC data for public health has been corrected by the various State and Territory Governments.

'Pharmaceuticals' (GPC code 2560) expenditure includes only expenditure of $0.5m for the Australian Capital Territory, and probably represents a miscode.

'Other health research' (GPC code 2579) expenditure of $38m incorporates amounts from only four States.

Expenditure under the category of 'Health administration not elsewhere classified (n.e.c.)' (GPC code 2590) of $140m does not include South Australia or the Northern Territory.

The averaged figure for the CGC 'Public health' category has been calculated for the Australian population and the States and Territories. There is some variation from the national per person average shown in Table 12. The State and Territory per person figures range from $35.41 in New South Wales to $182.15 (Table 3: $150.85) in the Northern Territory. The higher expenditure in the Territory is expected because of the large Aboriginal and Torres Strait Islander population, because of the higher cost of delivering services, and because the small population of the Territory does not permit economies of scale to be utilised. In public health, economies of scale have a large impact on the cost of services. In addition, there are significantly higher costs in delivering public health services in the many rural and remote communities within the Northern Territory, particularly to remote Aboriginal communities. The costs of delivering some public health services such as Breast Cancer Screening are significantly higher because the Territory does not have a resident radiologist with the necessary expertise to read these X-rays. However, most of the variation between the States is expected to be due to data problems. As can be seen by the adjustment row in Table 12, some of the raw data from the States has had to be adjusted quite substantially on the basis of Commission estimates and judgment.

Actual expenditure on CGC public health in 1997–98 by the States and Territories totalled $748.3m or $40.16 per person, or 4.8% of money spent on health expenditure by State and Territory health authorities.

Table 12: Expenditure by States and Territories (including Commonwealth grants) by GPC categories as recorded in CGC database, 1997–98

Expenditure category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Commonwealth grants to the States	49,769	33,422	23,321	12,670	11,505	4,825	2,862	3,690	****142,064**
Community health services	—	—	—	—	—	2,642	—	—	**2,642**
2550 Public health services	132,251	37,775	63,632	54,715	44,143	12,568	12,033	30,554	**387,671**
2560 Pharmaceuticals	—	—	—	—	—	—	573	—	**573**
2579 Other health research	3,467	15,284	20,504	—	—	—	–783	—	**38,472**
2590 Health administration n.e.c.	78,547	9,817	24,316	—	–291	10,560	17,023	—	**139,972**
Other purposes n.e.c.	–29,621	—	—	—	—	—	—	—	**–29,621**
Adjustment	—	100,000	—	—	-25,000	–7,376	–15,000	—	**52,624**
Revenue from NGOs	–11,106	—	—	—	—	—	—	—	**–11,106**
Total	**223,307**	**196,298**	**131,773**	**67,385**	***30,357**	**23,219**	**16,708**	*****34,244**	**748,291**
Per person expenditure ($)	35.41	42.37	38.45	37.15	20.46	49.08	54.24	182.15	40.16
Population ('000)	**6,307**	**4,633**	**3,427**	**1,814**	**1,483**	**473**	**308**	**188**	**18,633**

* The CGC made an adjustment of $25.0m, in order to make 1997–98 expenditure more consistent with expenditure from previous years. Data for years prior to 1996–97 were collected directly from the States and showed marked inconsistencies with ABS GFS data provided for 1996–97 and 1997–98. The $25m adjustment was not validated by the South Australian Department of Human Services. Therefore it was agreed to leave out this adjustment in the analysis undertaken in Table 3.

** CGC category 4395 Australian total for Commonwealth grants differs from the Australian total in Table 2 as 'Youth Suicide Strategy' is included as public health in Table 2, but the CGC treats this grant as part of its 'Family and Child Welfare' category.

*** NT advise actual expenditure was $37.939m consisting of $28.359m 'Public health services', $2.475m 'Other health research' and $2.445m 'Health administration n.e.c.'.

Source: Unpublished data from the CGC 1999 Review. Population from CGC *Report on general revenue grant relativities 1999* Vol II:451.

Comparison of Commonwealth Grants Commission data, 1996–97 and 1997–98

Table 13 presents CGC public health expenditure for 1996–97 and 1997–98 as published in the CGC report. Data for South Australia or the Northern Territory have not been adjusted as they have been in Table 3 and are therefore lower than in Table 3. The CGC have advised that data estimates for 1997–98 are more accurate than the estimates for 1996–97. 1997–98 was only the second year that ABS produced GFS health expenditure based on the restructured GPC classification. The data did not match very well with CGC data from previous years, which had been collected directly from the States. This added to the general uncertainty surrounding this newly produced series, and resulted in the CGC making further adjustments to ensure greater consistencies between 1997–98 and previous years. These differences mean that 1996–97 and 1997–98 are not really comparable. The NPHEP will attempt to promote the comparison of data over time by giving due recognition to issues of comparability and reliability.

Table 13: Expenditure on public health (CGC category) by State and Territory, 1996–97 and 1997–98

	1996–97 expenditure			1997–98 expenditure		
	CGC public health	CGC total Health	1996–97 Proportion spent on CGC public health	CGC public health	CGC total Health	1997–98 Proportion spent on CGC public health
State	$ million	$ million	(%)	$ million	$ million	(%)
New South Wales	175.303	5139.745	3.4	223.307	5442.563	4.1
Victoria	195.621	3253.155	6.0	196.298	3277.434	6.0
Queensland	74.682	2659.409	2.8	131.773	2876.741	4.6
Western Australia	57.993	1560.357	3.7	67.385	1711.481	3.9
South Australia	39.547	1113.663	3.6	30.357	1265.858	2.4
Tasmania	18.508	428.843	4.3	23.219	434.881	5.3
Australian Capital Territory	12.910	269.068	4.8	16.708	263.624	6.3
Northern Territory	25.908	296.387	8.7	34.244	338.587	10.1
All States expenditure	**600.472**	**14720.627**	**4.1**	**723.290**	**15611.169**	**4.6**

Notes

1. Above expenditure includes expenditure funded by Commonwealth payments to the States.
2. Data above is not adjusted for known inaccuracies in Northern Territory, Queensland and South Australia data.

Source: CGC *Report on general revenue grant relativities 1999*, Vol II: Table C–64:350.

Standardised Commonwealth Grants Commission public health expenditure by State, 1997–98

The CGC 1999 report estimates the standardised expenditure for each State. These estimates are reported in Table 14. The figure for each State represents the amount that needs to be spent in that State in order to provide the national average level of service to the population. As described in the CGC 1999 published report, this is derived by applying each State's combined Disability Factor for delivering public health services to the standard (national average) per person expenditure. The Disability Factor aims to reflect differences between the States and Territories in their social, economic and demographic structures. Consideration is given to many factors likely to be of influence between the States, including their socio-demographic position, administrative scale and degree of urbanisation. A more detailed description is provided in the CGC report of 1999 (CGC 1999:42–43).

If a disability factor is less than one (< 1), it implies negative needs—that is, that State has to spend less per person than the national average to provide the average level of service. A disability factor greater than one (> 1) implies positive needs—that is, that State has to spend more per person than the national average to provide the national average level of service. For example, in 1997–98, standard (national average) expenditure was $38.81 per person. The CGC estimated that New South Wales would need to spend $39.36 per person—more than the national average—to provide the average Australian level of service in public health. Therefore New South Wales had a positive need (or a disability factor greater than one (> 1)). It is estimated it actually spent $35.41 per person in 1997–98.

On the basis of the CGC 1997–98 figures, New South Wales, Western Australia and South Australia spent less than the standardised level for their State, and Victoria, Queensland, Tasmania, the Australian Capital Territory and the Northern Territory spent more. Only in South Australia and the Northern Territory is the standardised significantly different from the actual expenditure. The low South Australian figure seems to be due to an underestimate of public health expenditure that has been corrected in Tables 1 and 3 in this report. The high Northern Territory figure could indicate a number of things. It could mean the CGC formulas have not adjusted sufficiently for the higher cost of delivering public health services in the Northern Territory. It could be that in a context such as the Northern Territory, where much of the expenditure is for Aboriginal people, it is hard to separate public and community health expenditure categories. Some of that which in other jurisdictions would classify as community health has, in the Northern Territory, been classified as public health. Or the difference could mean that the Northern Territory places a higher priority on public health than other States and Territories and so invests considerable funds in this area so as to achieve a high standard of public health services. Any or all of the above factors could explain the large difference between actual Northern Territory public health expenditure and the standardised expenditure.

Table 14: Standardised and actual CGC public health expenditure by State, 1997–98

	Actual expenditure per person	Percentage of national average (standard expenditure)	Standardised expenditure per person	Actual as percentage standardised
	$	%	$	%
New South Wales	35.41	91	39.36	90
Victoria	42.37	109	37.06	114
Queensland	38.45	99	36.18	106
Western Australia	37.14	96	39.85	93
South Australia	20.46	53	38.36	53
Tasmania	49.07	126	43.51	113
Australian Capital Territory	54.23	140	50.63	107
Northern Territory	182.15	468	74.12	245
Australian Standard Expenditure	**38.81**	. .	. .	. .

Note: There are some differences in the numbers in Table 14 as compared to Tables 1 and 3. Table 14 is sourced from the published CGC report and represents the CGC public health category. Tables 1 and 3 are sourced from CGC unpublished data on expenditure in the GPC public health category, with adjustments based on health authority advice.

Source: CGC *Report on general revenue grant relativities 1999*, Vol II, Table C–64:350.

Conclusion

Investment in core public health activities in Australia in 1997–98 was about 2% of total recurrent health expenditure. State and Territory Governments funded $479m worth of public health expenditure, which was 61.7% of all government funding of public health in 1997–98. The Commonwealth Government funded $258m worth of public health services, which was 33.2% of the total.

Local government expenditure (as reported in the Australian Bureau of Statistics public finance database for 1997–98) was $40m or about 5% of public health expenditure. Not all States are represented in local government expenditure for 1997–98. Future collections of data for public health expenditure by local government need improvement in order to provide an accurate picture of all levels of government expenditure on public health.

In 1999, the most recent available data on public health research funding from the ABS were for 1996–97. Between 1994–95 and 1996–97, the Commonwealth and State Government share of public health research funding decreased and the university and business share of funding increased.

Between 1960 and 1999, public health expenditure as a proportion of total health expenditure did not rise above 2.1% and at times fell below 1%. Some of this variation was due to different definitions of public health used over the period. These inconsistent definitions mean that comparisons of public health expenditure over this time period are problematic.

Historically there has been insufficient understanding of the benefits of public health expenditure. It is plausible to conclude that the benefits Australia gains from public health expenditure justify more expenditure than the present 2% of total recurrent health expenditure. The National Public Health Expenditure Project will provide data to evaluate this proposition in a more valid and reliable way.

In the course of collecting available public health information and compiling it in one report, it became clear that Australia did not have an adequate process for reporting public health expenditure. The NPHEP addressed this issue in Stage 2 of the Project, through collecting public health expenditure data in a more uniform way according to an agreed set of definitions of public health functions.

Poor information about Australia's expenditure on public health does not enable policy makers to ascertain the impact of public health investments. Accounting for expenditure each year will enable observations of trends in public health expenditure and, if these data are linked to resultant changes in health and well-being, it will enable policy decisions to be based on temporal evidence. Thus the NPHEP will provide more accurate data to support the development of policy and to enable evidence-based decisions.

Stages 1 and 2 of the project will enable a picture of public health expenditure in health authorities. Stages 3 and 4 will extend to non-health government authorities and non-government agencies.

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