

Explanatory notes for Public health expenditure, 1999–00 to 2006–07 data cubes

What is a data cube?

A data cube contains data that is organised into multiple dimensions. It provides fast retrieval and drill down of structured information so that you can explore the interactions between different dimensions of your data.

Each dimension contains different levels of categories which contain increasing levels of detail in one or more drill down path. Categories are used to filter the data from each dimension in the cube.

The public health expenditure data cubes have three dimensions—*Year*, *Area of expenditure* and *Source of funds/Jurisdiction incurring expenditure*. Each dimension has drill down and drill up paths. For example, the dimension *Area of expenditure*, includes all the core public health activity categories and subcategories. You can drill down this dimension to view the expenditure information for the lowest level of category (e.g. breast cancer screening or tobacco). You can also drill up to find the expenditure data for the highest level of category, for example, Direct expenditure by Australian Government.

A number of tables have already been prepared to save users time in recreating commonly used tables. These supplementary tables can be accessed at http://www.aihw.gov.au/expenditure/public_health.cfm.

A word of caution about expenditure estimates

It is important that users of the data cubes understand that there are reasons—often beyond the control of the jurisdictions concerned—that affect the need for, and ultimately the resources devoted to, public health services. Before making comparisons of expenditure across jurisdictions, please read the section below on *Use and interpretation of expenditure estimates*.

It is also important that users note that the amount of expenditure reported in the cubes is an input measure only, and inputs are but one part of the health system. The output and outcomes that derive from this expenditure and other inputs are also of relevance, and will be dealt with in future reports on public health expenditure and performance.

Public health expenditure, 1999–00 to 2006–07 data cubes

Total Australian, state and territory government expenditure on public health activities is presented in three types of data cube. The cubes look at what is spent on public health from two perspectives—funding and expenditure. These different concepts are explained in *Public health expenditure in Australia, 2006–07*.

The first cube shows total funding of public health expenditure by source of funds, both in current price terms and as a proportion of that year's total.

The second and third cubes show total expenditure on public health activities by each jurisdiction in current and constant price terms and are presented by jurisdiction and by area of expenditure respectively.

The term ‘current prices’ refers to expenditure reported for a particular year, unadjusted for inflation. Constant price expenditure on the other hand, adjusts for the effects of inflation by using an index developed by the Australian Bureau of Statistics. All constant price estimates indicate what expenditure would have been had 2005–06 prices applied in all years (see *Public health expenditure in Australia, 2006–07* for detailed information on the deflators used to derive to constant price estimates).

All cubes cover the period 1999–00 to 2006–07, with each year representing the financial year 1 July to 30 June.

Data cube 1: Total funding of public health expenditure, by source of funds, 1999–00 to 2006–07

In this cube, funding is reported in terms of who provided the funds that were used to pay for public health services, rather than who actually incurred the expenditure.

Source of funds

The two major funding sources of public health expenditure are:

- the Australian Government, and
- state and territory governments.

The data cube shows aggregate funding from these two sources (Figure 1).

Australian Government

Funding by the Australian Government relates to public health activities and responsibilities of the Department of Health and Ageing and other agencies within the Health and Ageing portfolio, which include: the Australian Institute of Health and Welfare (AIHW); the National Health and Medical Research Council (NHMRC); Food Standards Australia and New Zealand (FSANZ); and the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

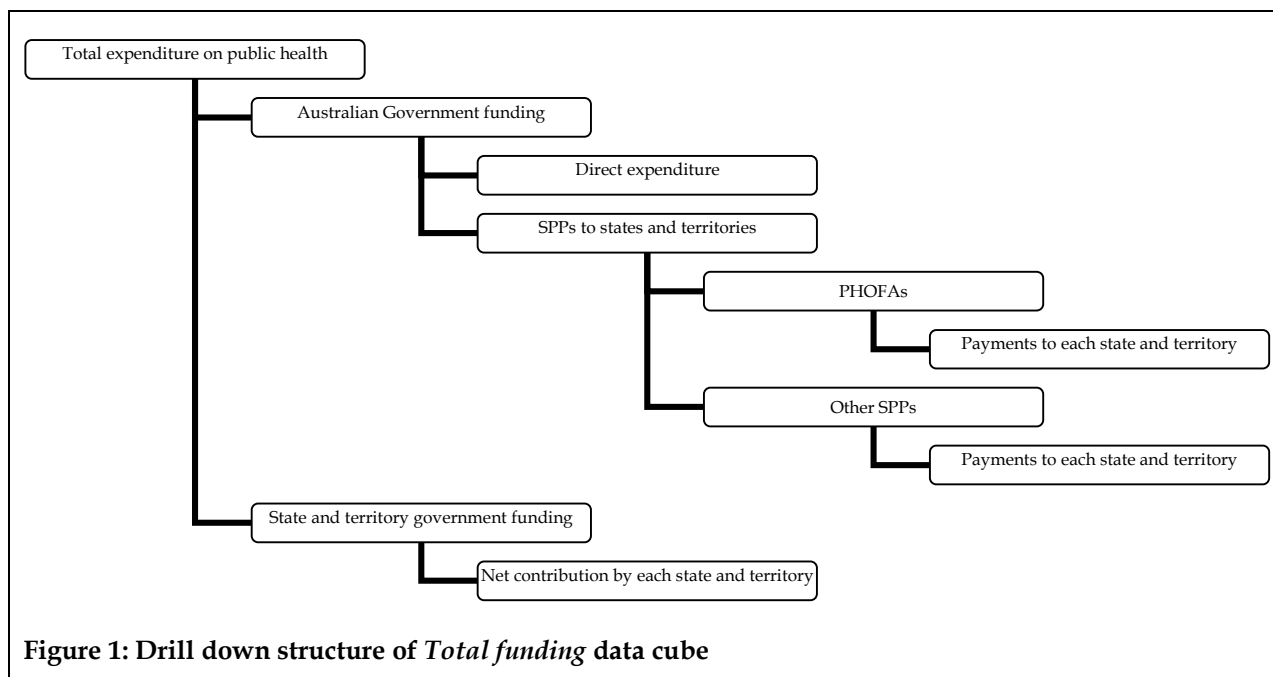
The Australian Government funds public health activities in two ways:

- through direct expenditure on its own programs, and
- through SPPs to state and territory governments.

The data cube can drill down to show Australian Government funding through these two sources. It is also possible to drill down further to show SPP funding (through the Public Health Outcome Funding Agreements (PHOFAs) and other SPPs) to each state and territory (Figure 1). Please refer to *Public health expenditure in Australia, 2006–07* for more information on the PHOFAs.

State and territory governments

Funding by state and territory governments has been calculated by subtracting Australian Government SPPs from each of their reported expenditure.



Measures

The measures available in this cube are:

- Funding of public health expenditure in current prices (\$ million)
- Proportion of total funding of public health expenditure (%).

Data cube 2: Total expenditure on public health activities, by jurisdiction, 1999–00 to 2006–07

In this cube, public health expenditure is reported in terms of who incurred the expenditure, rather than who ultimately provided the funding for that expenditure.

Jurisdiction incurring expenditure

Expenditure on public health activities is incurred through the Australian Government and state and territory governments. The data cube shows aggregate expenditure incurred by these two levels of government, and it is possible to drill down to the individual jurisdiction level.

Area of expenditure

The data cube can also show expenditure by jurisdiction on all, or one selected, public health activity category(s) at a time. For more information on what is included in each of the public health activity categories, please refer to *Public health expenditure in Australia, 2006–07*.

Measures

The measures available in this cube are:

- Total expenditure in current prices (\$ million)
- Total expenditure in constant 2005–06 prices (\$ million)

Data cube 3: Total expenditure on public health activities, by area of expenditure, 1999–00 to 2006–07

In this cube, public health expenditure is also reported in terms of who incurred the expenditure, rather than who ultimately provided the funding for that expenditure.

Area of expenditure

The data cube shows aggregate expenditure on each of the core public health activity categories (see *Public health expenditure in Australia, 2006–07*).

Jurisdiction incurring expenditure

The data cube can also show expenditure on each public health activity by all, or one selected jurisdiction(s).

Measures

The measures available in this cube are:

- Total expenditure in current prices (\$ million)
- Total expenditure in constant 2005–06 prices (\$ million)

Use and interpretation of expenditure estimates

The estimates presented in the data cubes are only for funding of public health expenditure by government health departments. The estimates do not account for funding of public health expenditure provided by:

- non-health government departments such as education, law enforcement, transport and environment
- local government authorities (LGAs), and
- non-government organisations and households.

However, the type and number of public health services funded by the above sources will affect the need for similar services to be funded at the Australian, state or territory government level. The role of LGAs in each state and territory is discussed further in *Public health expenditure in Australia, 2006–07*.

It should also be recognised that the need for public health services is not uniform across all states and territories, and higher spending by one jurisdiction does not necessarily imply that its population receive more or better quality public health services than another. It is also possible that some jurisdictions, such as the Australian Capital Territory, are required to cater for populations in surrounding states and territories.

It is also possible (based on results published in previous *National public health expenditure reports*), that there is economies of scale in the delivery of particular activities. This phenomenon is supported by the fact that some state and territory services require the establishment of basic infrastructure in their delivery—the cost of which is largely fixed—regardless of the size of the population being catered for. To this end, the more populous states can provide services at a much lower cost per person than, say, the two territories can. This reinforces that resource allocation for public health services is influenced by many factors which render comparisons across states and territories a little problematic.

To a lesser extent, there are a number of differences in data collection methods and processes for allocating overhead expenditures by each state and territory health department which may

also affect the comparability of expenditure estimates. Although all care has been taken to minimise the influence this may have, users of the data cubes should keep this in mind when comparing expenditure over time or between jurisdictions.