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## 2 ABOUT THE INDICATORS AND DATA PRESENTED IN THIS REPORT

### 2.1 The performance indicator framework – efficiency and effectiveness

A robust indicator framework must cover all key dimensions of performance. Accordingly, in giving effect to the Council of Australian Governments' (COAG) directions, the Steering Committee required the Working Groups to develop performance indicators for each service area relating to both the *effectiveness* and the *efficiency* of service delivery. Although these terms have broadly agreed meanings in public administration, in practice they are often interpreted differently.

The process for developing the performance indicators and reporting these to COAG is described in Box 2.1. This chapter outlines the framework adopted by the Steering Committee and its Working Groups in developing the indicators presented in this Report. It also discusses some of the key limitations and issues to be considered when attempting to make comparisons between jurisdictions or within jurisdictions over time based on this information.

#### Defining "effectiveness"

There is now a greater degree of agreement about the measurement of the performance of the public sector than was the case one or two decades ago. Likewise, there is general agreement that policy objectives should be stated in terms of outcomes to be achieved.

The term 'effectiveness' is usually used in the context of statements about the achievement of policy objectives, although there is some variability in the precise meaning given to this term in public administration literature. Some authors refer to the effectiveness of outputs in relation to achieving desired outcomes, whereas others refer to the effectiveness of appropriations in relation to desired outcomes.

The definition of these and other key terms used in the Report are outlined in Box 2.1.

**Box 2.1: Some terms used throughout the report**

**Descriptors:** These are descriptive statistics included in the Report which relate to the size of the service system, its client mix and the environment within which government services are delivered. They are provided to highlight the differences between jurisdictions and to make these more transparent.

**Effectiveness:** How well the outputs of a service achieve the stated objectives of that service.

**Efficiency:** Efficiency indicators relate to how well organisations use their resources to produce services.

**Environmental factors:** Factors such as geographical dispersion or population structure that may affect the performance indicator results of a jurisdiction.

**Inputs:** The resources used by a service area in providing its service. Resources include land, labour and capital.

**Outcome:** An outcome can be considered as the impact of the service on the status of an individual. While a service provider can influence an outcome, external factors can also apply. For example, a desirable outcome for a school would be to add to the ability of students to effectively participate in, and interact with, society through their lives. Similarly, a desirable outcome for a hospital would be to improve the health status of an individual receiving a hospital service.

**Outputs:** The services provided by a service area. For example, one of the outputs of a public acute care hospital is a treated case.

**Unit cost:** Used throughout this report as a proxy indicator of productive efficiency.

For the purposes of this report, the Steering Committee has aimed to provide information about the performance of government service provision. Indicators of effectiveness, in large part, focus on the impact of services on the client group or on the community. Generally, these impacts fall into one of three main categories:

### *Quality*

The quality of a service can be measured in many ways. A common approach to assessing quality is the degree of satisfaction of users of the service. This customer or client focus has been identified as a key indicator of quality in several areas of the Review including public housing, vocational educational and training, hospitals, and police. Other approaches include identifying the incidence of service failure. For example, the incidence of misadventure in hospitals has been identified as an indicator of quality.

Other indicators also used to measure quality include accreditation and the quality of inputs. These, however, are further removed from the impact the service has on clients.

### *Accessibility*

An important issue for government services is the extent to which clients are able to access the service. The ease of access can be defined with reference to waiting periods to enter the service (for example, hospitals, public housing, courts administration); the affordability of the service (for example, public housing, aged care, courts administration); or physical accessibility (for example, geographic location or ramps for wheelchairs).

Accessibility of services to particular target groups is also an important issue in some areas. Existing indicators which seek to address this issue are based on the representation of the target group in the client base compared to their representation in total population. The shortcoming of these indicators is that they seldom take into account any variations in target groups' demands for these services compared with the rest of the community.

### *Other impacts on the client*

In many service areas, key objectives focus on influencing the lives of the client group. Examples include:

- an objective of hospital services is to improve the health status of the patient receiving the treatment in hospital;
- an objective of schools to provide students with the necessary skills to effectively participate in, and interact with, society through their lives; and
- an objective of child protection services to reduce the occurrence and re-occurrence of child maltreatment and minimise its effects on children and families.

This raises the important issue of the existence of a *hierarchy of objectives* (or outcomes) that are pursued by each service area. This issue is discussed in more detail in Section 2.3: Focus of the Review.

### **Defining "efficiency"**

The term efficiency is generally used to describe how well organisations use their resources in the production of services. For example, an efficiency measure for a hospital would consider the resources used in treating cases. There is, however, some variability in the degree of precision with which concepts are defined. Two broad dimensions of efficiency are widely acknowledged — *productive* efficiency and *allocative* efficiency.

Productive efficiency measures the relationship between inputs and outputs. As this relationship is complex, there are a range of interrelated meanings of productive efficiency. It can be measured in terms of quantity (the least amount of inputs required to produce a given amount of output). Productive efficiency could also be measured using prices (for example, the least *cost* to produce a

given amount of output). A better measure of efficiency would measure the optimum mix of the various factors of production, having regard to their prices, required to produce a given amount of output.

However, given that most organisations produce a variety of outputs rather than a single output, the more informative measures of efficiency are able to measure relationships between variations in the mix of inputs and variations in the mix of outputs.

Allocative efficiency relates to producing the optimal mix of services given budget constraints.

The Review has focused on productive efficiency rather than allocative efficiency and has developed approximate measures of price efficiency.

### *Unit costs*

The main proxy indicator of productive efficiency is the cost per unit of service. The choice of the unit of output varies across service areas, including per episode of service (for example, hospitals), per client (in corrective services), or per hour of service delivery (for vocational education and training).

Whilst unit costs are a useful measure, clearly they will vary for reasons other than inefficiency, including the mix of clients, differences in the environment within which services are delivered, scale of operations and costs of inputs. Where possible, similar service outlets have been separately identified to reduce the influence of some of these factors (for example, the costs of metropolitan schools have been separately identified from schools in non-metropolitan areas). Contextual information has also been provided in an attempt to make these differences more transparent.

Unit cost is a composite measure of the factors of production. In some cases, the Steering Committee has sought to develop separate unit cost and physical productivity measures of the two main factors of production: labour and capital.

The unit cost information is limited at this stage by the incomplete usage of accrual systems and by the inadequacy of capital valuation and associated depreciation charges. As most State and Territory governments are in the process of moving to accrual systems and are seeking to comply with accepted accounting standards in the implementation of these systems, it is anticipated that better unit cost information will be available for inclusion in subsequent reports.

### *Other efficiency measures*

Recognising the conceptual limitations of unit costs as an indicator of efficiency, other more sophisticated tools have been explored as part of this Review.

In particular, Data Envelopment Analysis (DEA) has been identified as a measurement technique that appears to be well suited to assessing efficiency in the delivery of government services.

DEA is a linear programming based technique that is capable of handling multi-input, multi-output production processes, as often exist in areas of government service provision. Moreover, this technique, unlike other more sophisticated tools, does not require outputs to be priced which has obvious application to government services.

DEA operates by identifying best performers, in terms of input use and output production. Other service providers are allocated a single efficiency score based on their performance relative to these best performers.

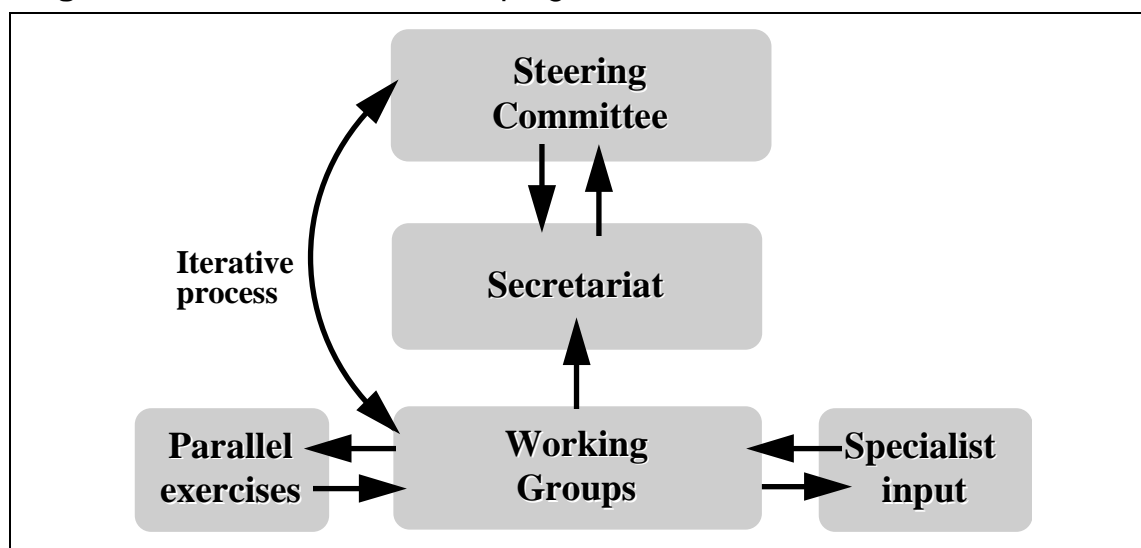
It does, however, require accurate data on all relevant input and output levels. Service providers that do not have a typical relationship between their inputs and outputs can have a significant impact on the results and a fairly large sample of service providers is required. In addition, efficiency is measured relative to *observed*, and not actual, best practice, although the larger the sample, the more robust are the results. It should be noted that like any efficiency measurement tool, outputs — and units of measure of these outputs — still need to be identified for estimation purposes.

DEA has been used to measure the performance of a range of service providers internationally, and its applicability in the Australian context is being further examined by the Steering Committee. It is anticipated that an information paper will be issued by the Steering Committee on the use of this technique in 1996.

## **2.2 Interpreting the indicators presented in this report**

### **Developing appropriate indicators**

In developing the performance indicators the Steering Committee is supported by working groups that have been established for each area of service provision. Each jurisdiction was given the opportunity to nominate a representative on each of the working groups.

**Figure 2.1:** Process for developing indicators

The working groups report to the Steering Committee and, in almost all cases, are convened by a member of the Steering Committee. The relationship between the Steering Committee, the working groups, and the Secretariat is illustrated in Figure 2.1. As outlined in the Chairman's Preface to this Report, the working groups received assistance from the national statistical service and research groups as well as from specialist agencies. The Review also established links with parallel exercises established by Ministerial Councils.

The Steering Committee recognises that the usefulness of an indicator depends to a large extent on how well it is designed. Although there is no clear definition of what makes a good indicator, the Committee has sought to design ones that are:

- clearly defined;
- developed for the tasks performed by the organisation;
- relevant to the needs of clients;
- not susceptible to individual manipulation;
- cost-effective to produce; and
- comprehensive.

The criteria of comprehensiveness is critical. It is important that the performance indicators cover all key aspects of the operations. Failing to do so may lead to "goal displacement". That is, it may lead to a strong focus on activities that are measured to the exclusion of activities that are not.

### **Reliability of data**

Performance indicators must be built on credible information. The performance indicators will only be as good as the information that is used to compile them.

Consequently, comparisons between jurisdictions (and within jurisdictions over time) are only valid when the data have been defined robustly and collected in a consistent manner.

Where possible, the Steering Committee has sought to rely on established data sources. In many cases, however, a new data collection process needed to be established. Consequently, much of the information presented in the Review was achieved through the processes established by the Steering Committee through each service areas' working group.

The Steering Committee recognises that the quality, consistency, comparability and completeness of data contained in this Report needs to be improved over time. This is particularly the case where data have not been drawn from established national data sources. In these cases, further work is required to develop detailed definitions and counting rules for variables that make up each indicator. In some cases, State-specific, non-comparable data have been included to give a fuller picture of performance within the jurisdiction. In these cases the lack of comparability has been clearly noted in the relevant chapter.

Over time, it is anticipated that the needs of the Steering Committee for robust data on these services will be reflected in the developmental and data collection work of the Australian Bureau of Statistics (ABS). Accordingly, over time, it may be appropriate for the ABS to expand its role in the collection of the data required for key performance indicators identified in the Review.

*Key performance indicator data needs to be subject to the same rigour as financial data*

For government services, the development of robust, comparable data which provides meaningful information on the extent to which service objectives are achieved is critical. The same rigour is required as that applied to the development of accounting standards and counting rules for financial statements, which provide a performance report on the success of private enterprises in achieving their objective of profitability.

Bringing performance indicators more fully into an overall reporting framework to improve data integrity should be strived for. The ability to draw conclusions from the information collected will be strengthened as the quality of the indicators and the consistency and completeness of data collected is improved.

## **Using indicators**

A key to using the performance indicators developed in the Review is to understand their limitations. Using the indicators properly will assist users in getting the most out of the performance information provided. The Steering Committee would urge readers to exercise caution when using the indicators. There are a number of general factors that need to be considered.

First, each indicator presented in the Review should be considered as part of a suite and not interpreted in isolation from other indicators that make up the performance framework. It is not appropriate, for example, to focus on the relative costs of service delivery without also considering the relative effectiveness of the service. Further, both efficiency and effectiveness need to be considered in the light of the contextual information provided.

Second, there is a need to recognise differences between jurisdictions and between different types of providers which will impact on the performance data and the ability to make comparisons. These include variations in:

- the nature of the services delivered;
- the extent of the progress of reform by the jurisdiction;
- the size and geographic dispersion of the service providers;
- the clients served;
- input costs beyond the control of the service system; and
- policy objectives, or more commonly, variations in emphases across the range of identified objectives.

These factors should be taken into account when drawing conclusions based on the information presented in this Review.

## **2.3 The focus of the Review**

The indicators presented in this report focus on the performance of service systems, such as the hospital and school education systems. Indicators have been developed which seek to address the immediate objectives these service systems are attempting to achieve.

The Steering Committee, however, recognises the existence of a hierarchy of objectives in public policy. At the broad 'macro level' there are objectives which all governments pursue aimed at improving the quality of life in our community. While the service agencies that are the focus of this Review play a contributing role in achieving these objectives, final accountability rests at a whole of government level, rather than an individual agency level. For example, the health system aims to improve the health status of all Australians through a variety of preventative, treatment and support strategies. While acute hospitals, as part of the system, contribute to the broader aim, final accountability for a healthy population is a broader issue.

Similarly, there are more ‘micro level’ objectives that are pursued by each individual service outlet — each school or hospital for example. While these will be consistent with the broader system objectives, they will necessarily focus on a narrower and more specific set of outcomes.