I N S I D E

A FRAMEWORK FOR MONITORING HEALTH OUTCOMES IN QUEENSLAND

Introduction

The Australian Health Ministers' Advisory Council (AHMAC), in its *Sunshine Statement* of February 1993, set out a national commitment to achieve optimal individual and population health within available resources through a focus on improving health outcomes. AHMAC defined a health outcome as *'a change in the health of an individual, a group, or population, which is attributable to an intervention or series of interventions'*. Simultaneously, Health Ministers endorsed the concept of setting national goals and targets as a means of making significant improvements in the health status of Australians, and the *1992 Medicare Agreements Act* required the Commonwealth and all States and Territories to have agreed to national health goals and targets by 30 June 1994.

Queensland, along with the other states and territories, has since endorsed the national health goals and targets outlined in *Better Health Outcomes for Australians - National Goals, Targets and Strategies*

for *Better Health Outcomes into the Next Century*[1]. Cardiovascular health, cancer control, injury prevention and control and mental health have been identified as the four national priority areas and Queensland Health now has a responsibility to monitor health outcomes with respect to these areas. Queensland Health operates under a program management system, and hence the focus on outcomes needs to relate to the program structure. There are three program areas: the Population Health Program Area, the Treatment Program Area and the Health Maintenance Program Area. In brief, the Population Health Program Area, which focusses on populations rather than individuals, addresses the protection and promotion of health, and the primary goal is the reduction of the risk of illness, disease and injury and the promotion of good health. The Treatment Program Area addresses the treatment of illness and injury and the broad aim is to reduce the case-fatality or case-morbidity rates. The Health Maintenance Program Area addresses the support of people with illness and disability and aims to maximise their independence, dignity and quality of life.

In order to consider progress towards improved health outcomes for priority areas, suitable monitoring systems need to be in place. Epidemiology and Health Information Branch have undertaken to develop practical methods and a framework for monitoring health and health service outcomes

Benchmarking activities

Benchmarking processes form an important part of activities to improve health outcomes by pointing to areas of maximum potential health gain. For example, a comparison of Organisation for Economic Cooperation and Development Countries has demonstrated that the greatest potential for mortality gain in Queensland lies with ischaemic heart disease, transport accidents, suicide and self-inflicted injuries, and that the four conditions with the highest excess mortality in Queensland are malignant melanoma of the skin, mental disorders, chronic bronchitis, emphysema and asthma, and suicide and self-inflicted injury[2].

Comparisons of health data are being undertaken by the Epidemiology and Health Information Branch at the following three levels:

- International comparisons
- Inter-state comparisons
- Inter-regional comparisons.

Benchmarking topics to date have included:

- health care expenditure
- availability and use of services
- health care systems
- mortality
- morbidity
- life-style factors
- health outcomes

Monitoring health outcomes within a program management framework

Table 1 summarises the current position with respect to monitoring progress for the four priority areas within the organisation's program management framework.

Population Health Program Area

Within the population health program, an improvement in health outcomes can be expressed as a reduction in the incidence or prevalence of a condition. Targeting the incidence of any condition or disease usually requires a long term strategy which involves reducing the factors known to contribute to its development. Therefore, it is important that as well as monitoring the incidence of conditions, the prevalence of known risk factors for these conditions is monitored.

To follow is a summary of current progress in terms of monitoring improved health outcomes for the Population Health Program Area:

- A framework for reliably monitoring the incidence of acute myocardial infarction is being developed.
- The Queensland Cancer Registry (QCR) provides cancer incidence information.
- The Queensland Injury Surveillance and Prevention Project (QISPP) provides incidence data for injuries requiring hospital treatment in the Brisbane South Region.

- The Queensland Suicide Register (Suicide Research and Prevention Program) provides information on the incidence of one aspect of mental disease.
- The National Mental Health and Well-being Survey, to be conducted in 1996/97, will provide information on the incidence of the more common mental disorders.

The Epidemiology and Health Information Branch *Regional Health Survey* program has established a framework for monitoring the prevalence of risk factors in Queensland. In 1993, the surveys provided baseline data at a regional and statewide level for the major risk factors in the areas of cardio-vascular health, injury and cancer. Repeating the survey at selected time intervals offers the potential to monitor trends in the prevalence of these risk factors. The *National Health Survey (1989/90 and 1994/5)*, the *National Heart Foundation Risk Factor Prevalence Survey (1989)*, the *National Aboriginal and Torres Strait Islander Survey (1994)*, and the *National Nutrition Survey* (1994/5) are examples of other sources of risk factor prevalence information.

Treatment Program Area

The treatment programs treat diagnosed or recognised health conditions, and program outcomes can be expressed as a reduction in case-fatality rates or a reduction in the duration of illness associated with particular conditions.

A framework is being established to enable the monitoring of severity adjusted case-fatality rates for acute myocardial infarction (AMI), thereby enabling the outcomes of hospital-based care for AMI to be measured. Similarly, a framework for monitoring cancer survival rates is being established using the QCR data, and a clinical outcomes system for cancer (using staging information to adjust for severity) has been piloted with information from the Princess Alexandra Hospital cancer registry.

Similarly, matching mental health data with mortality data will provide case-fatality rates for mental health (although the issue of severity adjustment is more complex for mental health). A pilot study to illustrate this process was conducted in 1992[3].

The establishment of a trauma registry is planned at the Royal Brisbane Hospital. This will enable severity adjusted case-fatality rates for injuries to be measured.

In addition to work proceeding for monitoring the four national priority areas, a Perinatal Epidemiology Unit has been established at the Mater Hospital. In conjunction with the Epidemiology and Health Information Branch, this unit will use perinatal data to undertake outcomes analysis and assessment of the necessity, effectiveness and appropriateness of various systems and procedures in the maternal and perinatal health area.

Health Maintenance Program Area

The health maintenance program aims to maximise the quality of life and functional level of people who are disabled or disadvantaged by their condition or impairment.

The health status (SF-36) survey conducted in 1994 by the Epidemiology and Health Information Branch provides baseline data on self-perceived health status (both physical and emotional) for the Regions and for the State. The SF-36 measures eight health dimensions which relate to self-perceived quality of life and overall well-being:

- physical functioning
- role limitations due to physical problems
- bodily pain
- general health
- vitality
- role limitations due to emotional problems
- social functioning
- mental health

The provision of baseline data is important as it will enable the full interpretation of data from future studies focussing on particular sub-groups within the community eg. clients of particular services, people with particular illnesses, people living in rural or remote areas.

Monitoring inequalities in health status

Queensland Health is committed to reducing inequalities in health status between various groups in the population.

Identified target groups are:

- Aboriginal and Torres Strait Islander peoples

- people from a Non-English Speaking Background
- people living in rural and remote areas
- young people
- people from low socio-economic groups
- women
- men
- the elderly

In relation to the Population Health Program Area the aim is to effectively target priority groups and, for the Treatment and Health Maintenance Program Areas, the broad aim is to improve the access of priority groups to health services.

The outcomes listed above require monitoring in a way which permits comparisons of health outcomes to be made between different population groups.

Some health outcomes information on people living in rural and remote areas, those from lower socio-economic groups, males, females and the elderly is available from the major data collections, the *Regional Health Surveys* and other national surveys. However, in general, the survey sample sizes are not sufficient to provide reliable data on Aboriginal and Torres Strait Islander and Non-English Speaking Background peoples. In addition, the lack of appropriate identifiers on death certificates and incomplete identification in hospital records means other strategies are required to address gaps in the data. The *National Aboriginal and Torres Strait Islander Survey*, conducted in 1994, has provided information on a range of issues including health status, disability, access and attitudes to health services and health and health risk factors.

Summary

The Epidemiology and Health Information Branch aims to establish a practical means of monitoring health outcomes for the four national priorities within a program management framework. The resulting information will facilitate management consideration of progress towards national goals and targets and will assist in determining state priorities. The dissemination of appropriate information to Regions and Population Health Units will facilitate local planning processes.

3

Table 1. Monitoring health outcomes

National Priorities	PROGRAM AREA					
	Population Health *Aim: To lower incidence/prevalence*		**Treatment** *Aim: To lower morbidity and case-fatality rate*		**Health Maintenance** *Aim: To maximise quality of life and functional capacity*	
	Indicator	**Source**	**Indicator**	**Source**	**Indicator**	**Source**

Cardio-vascular health	· Acute myocardial infarction incidence
	
	· Risk factor prevalence (smoking, alcohol, nutrition, body mass index, exercise, blood pressure)
		· EHIB developing measure using sample hospital data, hospital morbidity records & ABS mortality records
		· RHS
		  NHS
		  NHF RFPS
		  NATSIS
			· Severity-adjusted case-fatality rates	· EHIB developing measure using sample hospital data, hospital morbidity records & ABS mortality records
				
				Status: *Development stage*
					· Self-perceived health status (physical and emotional)	· SF-36 survey

Cancer control	· Cancer incidence
	
	· Risk factor prevalence
		· QCR
		
		· RHS
		  NHS
		  NHF RFPS
		  NATSIS
		  Commissioned research projects
			· Stage-adjusted survival rates	· ABS mortality records, hospital cancer registries
				
				Status: *Pilot study completed*
					· Self-perceived health status (physical and emotional)	· SF-36 survey

Injury prevention and control	· Injuries requiring hospital attention
	
	· Risk factor prevalence (pool safety, alcohol consumption, home safety, etc.)
		· QISPP
		
		· RHS
		  NHS
		  NATSIS
			· Severity-adjusted case-fatality rates
			
			· Time from site of injury to place of treatment
				· Proposed trauma registry
				
				· Included in new ambulance forms
				
				Status: *Design phase*
					· Self-perceived health status (physical and emotional)
					
					· Long term outcomes for trauma patients
						· SF-36 survey
						
						· Proposed trauma registry

Mental Health	· Suicide deaths · Incidence of schizophrenia and depression	· SRPP · Mental Health data collection NMHS (1996/97)	· Case-fatality rates for schizophrenia and depression	· Mental health data collection, ABS mortality records ***Status:*** *Initial pilot study completed*	· Self-perceived health status (physical and emotional)	· SF-36 survey

Key to abbreviations

ABS	Australian Bureau of Statistics	**QCR**	Queensland
NATSIS	National Aboriginal and Torres Strait Islander Survey (1994)	**QISPP**	Queensland
NHS	National Health Survey (1989/90; 1994/5)	**RHS**	Regional Hea
NHF RFPS	National Heart Foundation - Risk Factor Prevalence Study (1989)	**SF-36**	Short Form -
NMHS	National Mental Health and Well-Being Survey (1996/7)	**SRPP**	Suicide Rese

References

1. Commonwealth Department of Human Services and Health, 1994, *Better health outcomes for Australians - National goals, targets and strategies for better health outcomes into the next century*. AGPS, Canberra

2. Epidemiology and Health Information Branch, 1995, *Benchmarking - Mortality rates amongst Organisation for Economic Co-operation and Development countries*. Information Circular No. 33.

3. Tucker, PJ, 1992, *Preliminary development and testing of a record - linkage epidemiology system for analyses of mortality in mental illness*. MPH Thesis, University of Queensland

4