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Health system costs of diseases and injury in Australia 1993–94

**An analysis of costs, service use and mortality for
major disease and injury groups**

**Colin Mathers
Ruth Penm
Rob Carter
Chris Stevenson**

**Australian Institute of Health and Welfare
Canberra**

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Board Chair
Professor Janice Reid

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Dr Richard Madden

Any enquiries about or comments on this publication should be directed to:

Colin Mathers
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601

Phone: (02) 6244 1138

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Summary

This report provides a systematic analysis of total health system costs of disease and injury in Australia in 1993–94. Disease and injury groups are defined according to the chapters of the International Classification of Diseases (Version 9).

Total recurrent health expenditure in Australia in 1993–94 was \$34.1 billion. The disease cost estimates include over 90% of this expenditure, or just over \$31 billion in total. The main components of health expenditure not yet included in the disease cost estimates are capital expenditure, community health services and public health programs (apart from three cancer public health programs).

The six disease groups that account for the most health expenditure in Australia, in descending order, are:

- circulatory diseases \$3.7 billion (12% of total health system costs)
- digestive system diseases \$3.7 billion (12%)
- musculoskeletal problems \$3.0 billion (9.5%)
- injury and poisoning \$2.6 billion (8.3%)
- mental disorders \$2.6 billion (8.3%)
- respiratory diseases \$2.5 billion (8.0%).

Digestive system diseases are the second most expensive group in part because of the large expenditure on dental services (\$1.8 billion), although they account for relatively few deaths compared with disease groups such as circulatory system, injury and cancers (in eighth position at \$1.9 billion). Musculoskeletal problems and mental disorders, which include many long-term chronic disorders with relatively low fatality rates, rank third and fifth in terms of total health system costs.

Total health system costs for females are 34% higher than those for males: \$18.0 billion compared with \$13.4 billion. Costs are higher for females than males for all disease groups apart from perinatal conditions, injury and congenital anomalies. After complications of pregnancy, the female to male cost ratio is highest for genitourinary problems (2.4), followed by mental disorders (1.5), blood disorders (1.5) and endocrine, metabolic, nutritional and immunity disorders (1.4).

Total health system costs for males rise with age and peak in the 65–74 year age group, whereas those for females peak in the 25–34 year age group, reflecting childbearing and health costs related to the genitourinary system. They then decline to age group 55–64 years, rising again at older ages.

Total health system costs per person in 1993–94 ranged from a minimum of around \$800 for boys aged 5–14 years to \$7,900 for women aged 75 years and over. The male–female difference in per person costs is greatest in the peak reproductive years, where average annual costs for women aged 25–34 years were \$1,695, almost double the average cost of \$865 for men of the same age.

This report aims to provide the best possible estimates of health system resources directed at the prevention and treatment of diseases and injuries, given the limitations of the available health system cost and utilisation data. Such information will assist in understanding the existing allocation of resources among the population, across different health sectors, and different diseases.

Preface

The Australian Institute of Health and Welfare (AIHW) started the Disease Costs and Impact Study (DCIS) in 1992 with funding from the Health Advancement Program of the then Commonwealth Department of Health, Housing, Local Government and Community Services and from the National Health and Medical Research Council (NHMRC). Originally conceived as part of a broader approach to evaluation and referred to as the Macro Economic Evaluation Model (MEEM), it was headed by Rob Carter at the Institute. The MEEM estimated the economic impact of specific diseases and disease groups in Australia in 1989-90, both in relation to direct costs to the health system and a range of indirect costs. The study also developed a set of summary measures of disease impact in terms of potential years of life lost and health service use.

Following completion of these analyses, Rob Carter moved to the Centre for Health Program Evaluation (CHPE) at Monash University in Melbourne, but continued collaboration with the Institute on the project. The methodology was revised and extended to include health sectors accounting for over 90% of recurrent health expenditure. The revised methodology was used to carry out a comprehensive accounting of disease costs across all chapters of the ICD-9 Classification of Diseases for the year 1993-94. The results are presented in this report.

In updating cost estimates to 1993-94 data, the Institute's Disease Costs and Impact Study has focused on the direct costs of health services, so that the disease costings form a disaggregation of national health expenditure. Other disease costing reports to be published by the AIHW during 1998 include:

- *Health System Costs of Cancer in Australia 1993-94* (in collaboration with the National Cancer Control Initiative);
- *Health System Costs of Cardiovascular Disease and Diabetes in Australia 1993-94*; and
- *Disease Costing Methodology used in the Disease Costs and Impact Study 1993-94*.

Preliminary results for disease costs across all chapters of the ICD-9 Classification of Diseases for the year 1993-94 were reported in section 6.7 of *Australia's Health 1998* (Australian Institute of Health and Welfare 1998). Those results differ slightly from the estimates published here due to a revision of the casemix distribution for nursing home residents.

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