

8 Universal access to health care, pharmaceuticals and technology: 1948 onwards

At the start of the 21st century, Australia had a world-class system of health care financing and provision, whereby people were able to access publicly subsidised health care services, pharmaceuticals, and medical technologies and devices, through a range of service and funding arrangements. These included government funding of public hospital and medical services; subsidised pharmaceutical products delivered through the Pharmaceutical Benefits Scheme (PBS); and medical devices (e.g., cardiac pacemakers, artificial hip joints) made available in hospitals following approval by the Medical Services Advisory Committee.

Medicare (and its predecessor, Medibank) and the PBS, in its various forms, were more than simply health care delivery systems, for their development was an intrinsic part of the re-structuring and financing of medical services towards the goal of better health in Australia.

However, access to these services was not universal for the Indigenous population, especially in remote areas of the country. Health services operating in remote and traditional communities had difficulty using the standard Medicare claims' process, and people living in these areas could be unaware of their entitlements. In many country towns, there was no access to Indigenous-specific services, mainstream services were often not culturally sensitive, and staff could be racist in their attitudes. In 1997, a range of initiatives were undertaken to increase Aboriginal and Torres Strait Islander enrolment in Medicare and to support the claiming of Medicare rebates on behalf of Indigenous Australians.⁶⁰⁶

Survey respondents: 'These systems of financing health care were among the leading public health successes of the century, not just because they provided more universal access to health care based on need, but also because structurally, they helped to restrain rising health costs and market failures in health care through pricing negotiation with suppliers of medical and health services and pharmaceutical drugs. While not perfect, these were significant system advances, ensuring health services remained affordable for individuals and for the community/taxpayers as a whole.'

These public health successes were 'policy initiatives rather than interventions.'

The development of Medicare and the Pharmaceutical Benefits Scheme

Beddie described the situation of the health system at the end of the 1960s - that led to the implementation of Medibank in 1975 - as 'under pressure'.³¹⁸ The costs of hospital treatment and the health care of chronically ill people were continuing to grow. Around 17% of people in the population had no health insurance, others were under-uninsured and the net cost of insurance was highest for the lowest-paid contributors.³¹⁸ High medical fees and rapidly increasing premiums fell disproportionately on people with low incomes and those who were chronically ill.⁶⁰⁷ Total health expenditure over the decade rose from \$683 million in 1961 to \$1.7 billion in 1971, well above the rate of GDP increase.⁶⁰⁸ By the time of the 1969 election, 'health issues had assumed a prominent role on the political agenda'.

Debate about health and welfare nationally was kindled by analyses from the Institute of Applied Economics Research, headed by an economist, Ronald Henderson. In 1966, Henderson concluded, after surveying living conditions in Melbourne, that one in 16 people were living in poverty: 'Australia was not, after all, an entirely lucky country'.³¹⁸ Henderson's colleagues, Richard Scotton and John Deeble, who were investigating health insurance, published proposals for a compulsory national health insurance scheme in 1968.⁶⁰⁹ Their ideas were adopted by Gough Whitlam when he became Leader of the Opposition.³¹⁸ A *Committee of Inquiry into Health Insurance*, chaired by Mr Justice Nimmo, reported in 1969 and both sides of politics committed themselves to the reform of the health system.⁶⁰⁷

The National Public Health Partnership in their discussion of the public health landscape of Australia (1998) described 'the major debate of the 1970s' as being how to ensure universal access to health care, and the development of community-based primary health care services.⁹ The result was the introduction of the federal system of 'Medibank' in 1975 by the Whitlam government, after overcoming resistance from a number of quarters including the Liberal-Country Party, the voluntary health insurance sector and the Australian Medical Association (AMA).⁶⁰⁷

Medibank was a tax-funded, national health insurance scheme that provided universal coverage of the population for medical expenses. It was administered by a newly established Health Insurance Commission (HIC). Medibank was so popular that, in the first few months of operation, the HIC processed many more than the expected 90,000 claims per day.⁶⁰⁷

Medibank's future became unclear after the dismissal of the Whitlam government in November 1975. The Liberal-Country Party caretaker government under Malcolm Fraser promised to maintain Medibank, while also committing to significant reductions in public expenditure.⁶⁰⁷ The Fraser government attempted to balance these competing priorities in a complex series of changes that initially retained Medibank, but as a non-compulsory alternative to private health insurance. These changes ultimately resulted in Medibank being dismantled.

The cost and affordability of health care was 'a perennial theme' during the 1970s.³¹⁸ For the Fraser government, Beddie noted, 'this meant a greater role for the private sector in the financing of health'.³¹⁸ In 1981, the Commonwealth accepted the recommendations from the Jamison Inquiry into hospital efficiency, that primary responsibility for the financing of hospital services be returned to the states and that patients be paid directly or through health insurance for services received. Block grants to the states calculated on a per-capita basis replaced previous cost-sharing arrangements, adding to pressure on hospitals to find more cost-efficient methods of service delivery (e.g., day surgery).⁶¹⁰

After a Labor government was returned to office in 1983, the Minister for Health, Dr Neal Blewett quickly reinstated a universal scheme of taxpayer-funded health cover. Medicare came into operation in February 1984 and was a key component in the prices and income accord that the government had negotiated with the Australian Council of Trade Unions, as part of its anti-inflation strategy.³¹⁸

Medicare remained the national health insurance program, providing access to a doctor of choice for out-of-hospital health care, free public hospital care, and subsidised pharmaceuticals.⁹ Medicare also supplied health care services for sub-populations with particular needs, by targeting preventive services for at-risk groups and improving medical services.⁹ The Medical Benefits Schedule (MBS) listed the fees to be paid for various medical services provided by approved practitioners.

'Bulk billing', a feature of Medibank reinstated under Medicare, was a mechanism by which 'insurance' payments could be made directly to medical practitioners through Medicare Australia (formerly the HIC). More importantly, the essence of bulk-billing meant that there was no required co-payment of the fee by the patient (that is, no 'gap' to be paid), and the doctor accepted the rebate (85% of the scheduled fee) as full payment.

The principles upon which Medicare was founded, to provide universal access and insurance for resident Australian and New Zealand citizens, and people who had applied for, or received, permanent residency, were:

- free and equal access to public hospital treatment (made available through the Australian Health Care Agreements between the Australian and state/ territory governments); and
- universal access to the Medicare rebate for out-of-hospital services (e.g., general medical practitioners (GPs), medical specialists).⁶¹⁰

While Medicare did not guarantee universal access to services *per se*, it did guarantee universal access to the Medicare rebate. Efforts were made by Medicare Australia to ensure that those who 'slipped

through the net' - primarily some in remote Aboriginal and Torres Strait Islander communities - were subsequently covered. Medicare Australia's Service Charter included the promise to 'increase awareness of our services amongst Indigenous Australians'.⁶¹¹ Aboriginal and Torres Strait Islander Australians could voluntarily identify themselves as such when enrolling for Medicare. By the end of March 2007, there were 159,003 people who had done so in their Medicare enrolments. In the NT, Indigenous enrolments were at 98%.⁶¹¹ Medicare also initiated a dedicated Aboriginal and Torres Strait Islander Access telephone helpline that received 34,779 calls in the nine months ending in March 2007.⁶¹¹ However, for the financial year 2001- 2002 (the latest year for which data were available), Medicare benefits per person for Indigenous people were only 39% of the non-Indigenous per person average, despite their poorer health status.⁶¹²

'Medicare [was a] system of universal health insurance ... based on a combination of revenue raised by levy and taxes. It had two key components: the first provided access to public hospital services for all Australians; the second, "medical Medicare", supported access to general practitioner and specialist services, the latter on referral. Specialist services included pathology and other diagnostic procedures such as x-ray.'

— S Leeder, *Healthy medicine: challenges facing Australia's health service*, Allen & Unwin, Sydney, 1999, pp. xiv, xv.

The Pharmaceutical Benefits Scheme

Pharmaceutical agents and medications assumed an ever-increasing role in the public's health, especially in the control of chronic diseases (e.g., cardiovascular disease) and their risk factors (e.g., high blood pressure).

A fore-runner of the PBS was created in 1948 in response to concerns that some Australians could not afford the life-saving new medicines that had become available after World War II. There had also been much earlier arrangements in 1919 that subsidised pharmaceuticals to groups such as ex-service men and women.⁶¹³

The modern PBS was established in 1960 to provide a range of subsidised prescription medicines that the community could access (after they had been approved by the Therapeutic Goods Administration (TGA)), at prices affordable to both the community and the government. A patient contribution (or co-payment, initially of five shillings) was also introduced in an attempt to control both volume and expenditure.⁶¹⁴ From its inception, the PBS grew exponentially, from a provider of a limited number of free 'life-saving and disease-preventing drugs' (159), to an extensive scheme of over 590 subsidised medications (in May 2002), available in many different forms and brands.⁶¹⁴

In 1964, an Adverse Drug Reaction reporting scheme for prescription medicines was introduced. An independent medical panel with expertise in the evaluation of medicine safety (the Adverse Drug Reactions Advisory Committee (ADRAC)) was formed in 1970 to advise the TGA on the safety of medicines. The reporting scheme received and reviewed all reports of suspected adverse reactions to prescription medicines, vaccines, over-the-counter medicines and complementary medicines. Serious reactions and reactions to newly marketed drugs were reviewed by ADRAC, which produced an *Australian Adverse Drug Reactions Bulletin* six times a year.⁶¹⁵

The TGA ensured that, after subsidised pharmaceuticals had been evaluated according to their efficacy and cost-effectiveness, they were scheduled and made available to all Australians. For the financial year 2001-2002, however, per person PBS benefits for Indigenous people were 33% of the per person PBS benefits for non-Indigenous people.⁶¹² This included the special supply arrangements under Section 100 of the *National Health Act 1953* (see Section 9.2).

Health care technologies

In 1937, the *Therapeutic Substances Act* was passed, but its promulgation was delayed by the advent of World War II.³¹⁸ In 1956, the *Therapeutic Substances Act 1953* repealed the previous *Act* and gave the

Commonwealth control of the importation and interstate trading of therapeutic substances.⁶¹⁶ It was reviewed in 1966 (after the thalidomide tragedy) so that Commonwealth powers could be used to require manufacturers to establish the safety, quality and efficacy of imported therapeutic goods.⁶¹⁷ The *Therapeutic Goods Act 1989* created the TGA and the Australian Register of Therapeutic Goods (ARTG), which compiled information on therapeutic goods for use in humans. In practice, the ARTG was a computer database of two broad classes of therapeutic goods, medicines and medical devices.⁶¹⁸ Unless therapeutic goods were specifically exempted, they had to be entered as 'registered' or 'listed' goods before they could be supplied or exported from Australia. There were about 63,400 products on the ARTG in 2005.

Health care technologies improved dramatically over the second half of the 20th century. A range of effective and less invasive treatments emerged, and demand for them grew. To manage this, a National Health Technology Advisory Panel was established in the early 1980s. The Australian Health Technology Assessment Committee replaced the Panel in 1986 and became the Medical Services Advisory Committee (MSAC) as part of the 1997/98 Budget initiative, aimed at strengthening the evidence base of the MBS. MSAC's role was to advise the federal Minister for Health and Ageing about the strength of evidence relating to the safety, effectiveness and cost-effectiveness of new medical technologies and procedures, and whether they should be publicly funded.

The Therapeutic Device Program was established in 1984 as a response to community concern over the numerous medical devices coming onto the market. The program's advisory body, the Therapeutic Device Evaluation Committee, held its first meeting in 1987.⁶¹⁶ It was replaced by the Medical Device Evaluation Committee (MDEC) in 2002. The role of the MDEC, as a statutory expert committee, was to provide independent medical and scientific advice to the Minister for Health and Ageing and the TGA on the safety, quality and performance of medical devices supplied in Australia.⁶¹⁹

The Prostheses and Devices Committee (PDC) was set up by the Minister for Health and Ageing in 2004 to advise on the listing and benefit levels of prostheses and medical devices.⁶²⁰ The Prostheses List recorded the no-gap and gap-permitted prostheses and the benefits payable for them. The *National Health Amendment (Prostheses) Act 2005* regulated the benefits paid for prostheses and medical devices by private health funds to hospitals for private patients.⁶²⁰ The intention under the *Act* was to have at least one no-gap prosthesis available for each relevant MBS item performed in private hospitals, and to use the least expensive, most clinically effective item as a benchmark (similar to the use of generic drugs as a cost containment measure in the PBS), while continuing to provide a choice of prostheses dependent on a 'modest premium' paid by the patient.^{620,621} The PDC was advised by Clinical Advisory Groups, members of the Panel of Clinical Experts and the Prostheses and Devices Negotiating Group in making its recommendations.⁶²⁰

Advances in medical services and technologies resulted in many procedures and applications becoming widely available to improve screening, diagnosis and treatment, and to prevent unnecessary suffering and deaths (e.g., X-rays, machines that made open heart surgery possible, prosthetics and artificial implants). For example, insulin pumps for diabetic patients could prolong life by an average of five years, by reducing diabetes-related complications.

Public health practices

The advent of Medibank, and its subsequent reincarnation as Medicare, resulted in access to medical care for all Australians, according to their health needs and regardless of their capacity to pay. Although there were changes to Medicare over the decades, this universal system aimed to ensure that basic health care was available to everyone. It revolutionised the payment for, and financing of, health care in Australia.

Encouraging GPs to bulk-bill was a way of ensuring that capacity to pay did not determine ability to access health services. The increase in the percentage of Medicare services that were bulk-billed provided evidence that it was an important component of the system. Some argued that a decline in

bulk-billing contributed to broader health inequalities, as, without this system, access to health care increasingly relied on capacity and willingness to pay, rather than on health need.⁶¹⁰

The bulk-billing rate rose to 76.6% in the June quarter of 2006 - the highest rate after Medibank was re-launched as Medicare in 1984 (Figure 8.1). Rates for young people (at 83.8%), and people in rural areas (at 71.3%), in particular, increased to record levels in 2006.

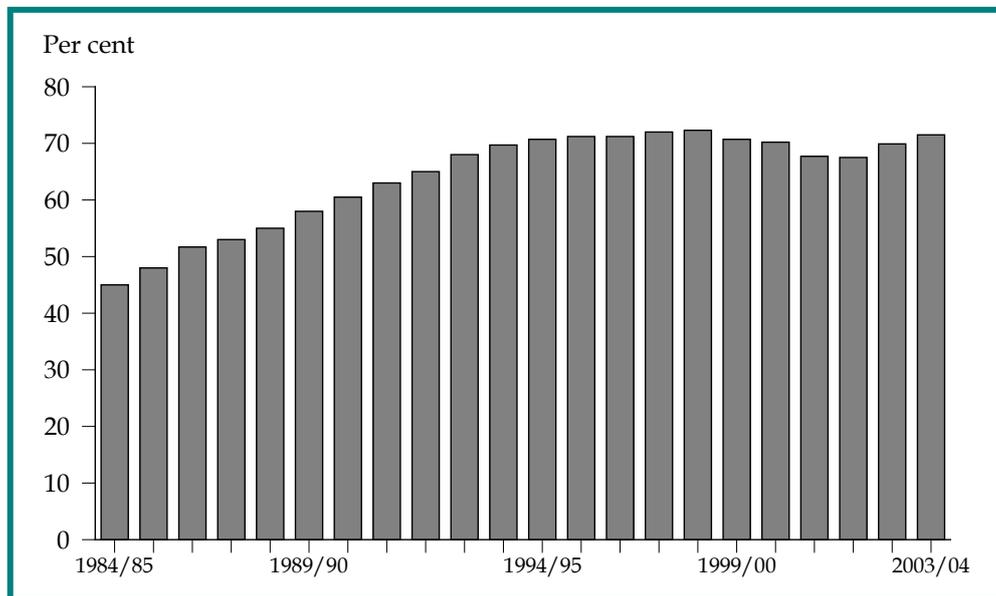


Figure 8.1: Percentage of Medicare services bulk billed, 1984/85 to 2003/04

Source: Medicare Australia, Medicare statistics, 2006.

Australia's PBS system was a world-class system, delivering accessible, affordable quality medicines, which the Australian Government subsidised and guaranteed for the entire population.⁶²² It was recognised internationally as a 'superior pharmaceutical pricing scheme', and described as 'controlling costs ... to pay what the drugs are therapeutically worth'.⁶²³ The schedule expanded and by the early 1990s, it covered drugs for most common treatable conditions.⁶²⁴

In order to gain a listing on the PBS, a drug had to be assessed for safety, quality and efficacy (under criteria specified in the *National Health Act 1953*) by the Australian Drug Evaluation Committee, a committee of the TGA.⁶²⁴ After a drug was recommended, its sponsor applied to the Pharmaceutical Benefits Advisory Committee (PBAC) for listing on the PBS, and the Pharmaceutical Benefits Pricing Authority negotiated a price to be paid to the manufacturer. Despite lower growth after 2000-01, the PBS remained the fastest growing area of health expenditure, because of:

- the listing of newer and more expensive drugs;
- some over-prescribing;
- consumer expectations;
- the ageing of the population; and
- intensive marketing by the pharmaceutical industry.⁶²⁴

The PBAC also played a major role in implementing the *National Medicines Policy*.⁶²⁵ This policy identified the need for a partnership of many stakeholders (Australian governments; health educators, practitioners and health care providers and suppliers; health care consumers; the pharmaceutical industry; and the media) to work together to achieve better health outcomes 'for all Australians, focusing especially on people's access to, and wise use of, medicines'.⁶²⁶

The PBS was a key factor in the pharmaceutical control of chronic diseases, as it ensured the availability of many useful drugs. Drug safety was regulated by the TGA, which monitored the safety and quality of pharmaceuticals and medical devices. ‘Quality Use of Medicine’ initiatives were important in making the best use of medications (Box 8.1).

The Australian Code of Good Manufacturing Practice for medicinal products (fully implemented in 2003) was the mechanism by which a manufacturer had to demonstrate compliance with good manufacturing practice in order to be licensed to manufacture a therapeutic good in Australia.⁶²⁸

The TGA was also responsible for public health assessments of agricultural and veterinary chemicals and operated an Office to support the Gene Technology Regulator.³¹⁸ Under the *Gene*

Technology Act 2000, a national scheme for the regulation of genetically modified organisms was established, to protect the health and safety of people and the environment, by identifying and managing risks posed by gene technology, and by regulating genetically modified organisms.⁶²⁹

In relation to medical technology and devices, GPs and specialists prescribed drugs and ordered diagnostic tests; surgeons and other specialists selected appropriate procedures, prostheses and medical devices; and hospitals purchased large diagnostic and surgical equipment and administrative support systems.⁵⁵⁸ Australia had a number of rationing systems in place, for instance, to ensure appropriate access to very expensive diagnostic equipment, such as MRI (Magnetic Resonance Imaging) machines.

The TGA had the role of safeguarding public health and safety by regulating medicines, medical devices, blood and tissues. Problems with medicines (including vaccines) and medical devices, including adverse reactions, device incidents, product deficiencies and defects, were reported to the TGA for investigation and appropriate action (such as recall of a product).

The technique of Health Technology Assessments (HTA) was developed and used by government to evaluate health care technologies, inform technology-related policy-making in health care, and ensure that the technologies that were introduced were appropriate and cost-effective. Community awareness of new technologies, however, was an important driver of demand.

Factors critical to success

Universal access, when coupled with high quality services and affordable medicines, represented the epitome of a successful health care system. Medicare was designed to be a ‘universal and institutionalised’ health insurance system. The risks of individual and population ill health were insured against collectively. Australia’s health care system, and especially its universalism, were highly valued by the community, and defended by most of those to whom it applied.⁶³⁰

‘The principle of universality, on which Medicare has been built, takes seriously the reality that sickness and accidents happen chaotically to any of us, and that a humane and caring society wishes all its citizens to have the same access to the same standard of care, according to need, and unrelated to their financial status.’ – S Leeder, Medical Journal of Australia, vol. 179, 2003, p. 476.⁶³⁰

Box 8.1 Quality Use of Medicines

Quality Use of Medicines (QUM) was one of the central objectives of Australia’s *National Medicines Policy*. The goal of the National Strategy for QUM was to make the best possible use of medicines to improve health outcomes for all Australians. QUM meant:

- selecting management options wisely;
- choosing suitable medicines if a medicine was considered necessary; and
- using medicines safely and effectively.

QUM applied equally to decisions about medicine use by individuals, and those that affected the health of the population.

The term ‘medicine’ included prescription, non-prescription and complementary medicines.⁶²⁷

In a world of rising health care costs, the cost-effectiveness of Australia's universal health care system was a crucial factor in its political success, and, with growing bipartisan support, it developed into an enduring institution.

Cost-effectiveness

The advent of bulk billing and the various changes to payment systems introduced by Medicare Australia, helped restrain the costs of health care in Australia. With administrative costs at 3% of total turnover, Medicare Australia processed more than 400 million transactions annually, paying benefits of approximately \$16 billion, through a network of 238 offices and over 1,000 access points in pharmacies and rural transaction centres, national telephone claiming, call centres and online services.⁶¹¹ Medicare Australia claimed to be 'one of the largest and most efficient health benefit and information processing agencies in the world'.⁶¹¹

Preventable health care-related adverse events, however, were estimated at \$2 billion a year in direct costs (5% of annual health care expenditure), and indirect costs of \$400 million a year in legal and compensation expenses (about 1% of the health budget).⁶³¹ These were likely to increase as health care became more complicated and susceptible to medical error.⁶³¹

In 2003, a comparison of the costs of pharmaceuticals under the PBS and those under the United States system indicated costs of up to \$2.4 billion per year less in Australia.⁶³²

Cost-benefit analyses were used routinely in these public health areas, underpinning decisions to list pharmaceuticals on the PBS, to include new vaccines in the universal immunisation schedule, and to implement new screening programs (e.g., bowel cancer screening, newborn hearing screening). PBAC's routine use of cost-effectiveness techniques, as the basis for price negotiations with manufacturers, demonstrated that decisions to fund new drugs could be based on formal measures of cost-effectiveness, in addition to factors such as the quality of underlying evidence, the magnitude of clinical benefit, and the availability of alternative treatments.⁶²⁴

Cost containment measures, such as the use of generic drugs listed on the PBS to constrain the cost and use of higher priced but clinically equivalent non-generics, and the 'benchmarking' of medical devices remained cost-effective strategies. For example, the *National Health Amendment (Prostheses) Act 2005* was expected to 'have a significant impact on reducing growth in private health insurance premiums by reducing the rate of growth in prostheses benefits' as a range of clinically effective prostheses was to be available at 'no gap' prices.⁶³³

There were suggestions that new devices (e.g., prostheses) would have to prove that they performed better than existing items in order to be eligible for approval for addition to the Australian Register of Therapeutic Devices.⁶³⁴ These measures would effectively constrain price increases and improve the value for money of these public financing systems.

The Productivity Commission, reporting on the impacts of advances in medical technology, determined that it was likely that the overall benefits had outweighed the costs.⁵⁵⁸ The Commission noted that the cost-effectiveness of individual technologies varied widely, and was not able to be ascertained for all, and that technology also drove increasing health care costs.

Survey respondent: 'Universal access to health care, a.k.a. Medicare, was one of the world class achievements for public health. Look at the vast populations of the world who did not have such basic guarantees and what inequities were created in health status. And Medicare was absolutely an example of "the organised approach by society". It has to be on the list!'

Future challenges

Further challenges lay in improving the equity and universality of access to quality health care. In 2003, Leeder identified areas where Australians did not have equitable access for a variety of reasons:

'Some general practitioners have closed their books, health care services are scarce in poorer areas, and, in rural towns, "up-front" payments for consultations are increasing while bulk-billing is in decline... Public hospital infrastructure [was] growing old and need[ed] replacement... Access to high technology is patchy (e.g., investigation and treatment of heart disease is more common among privately insured patients). Access to timely surgery is uneven, with private patients getting it quickly and public patients waiting longer.... Access to dentistry and ancillary health care services is inequitable – better access to high-quality services is offered to those who are privately insured and/or wealthy' – S Leeder, Medical Journal of Australia, vol. 179, 2003, p. 476.⁶³⁰

Better access of rural, remote and Indigenous populations to a range of health services, especially medical specialists and specialised treatments for cancer and other chronic diseases was required.⁵⁵⁸ Universal services also needed to be customised further for socioeconomically disadvantaged populations, including Aboriginal and Torres Strait Islander peoples.⁶¹¹

There was a need to minimise the effects of inappropriate antibiotic and other pharmaceutical use, limit unnecessary diagnostic tests (e.g., X-rays) and prevent pharmaceutical misadventure. Pharmaceutical side effects, over-prescription and over-dosage were significant causes of hospital admissions, illness and some avoidable deaths.

Demand for health care itself, and for medical technology, needed effective and ongoing management, as community expectations of medical technology and health care continued to rise.⁶³⁵ The Productivity Commission noted that there were variations in cost-effectiveness, and relatively low use of some technologies by some demographic groups (e.g., Indigenous Australians were significantly less likely to undergo heart procedures such as angioplasty with stenting, even though they had a higher prevalence of coronary heart disease).⁵⁵⁸ Their findings indicated that there was scope to further reduce inequalities in access to health care.

High failure rates in some hip and knee replacement devices were of concern, and the TGA established a review of the process for prosthesis approval.^{636,634} The 2006 Inquiry into Health Funding recommended an outcomes-based assessment process be introduced to examine the clinical benefits of new prostheses prior to their use, and to review the effectiveness of those already in use (Box 8.2).⁶³⁷ Generally, public health needed to improve registers, tracking, auditing and monitoring of the quality of devices and procedures that utilised them. Device recalls, retrieval and disposal also required attention.

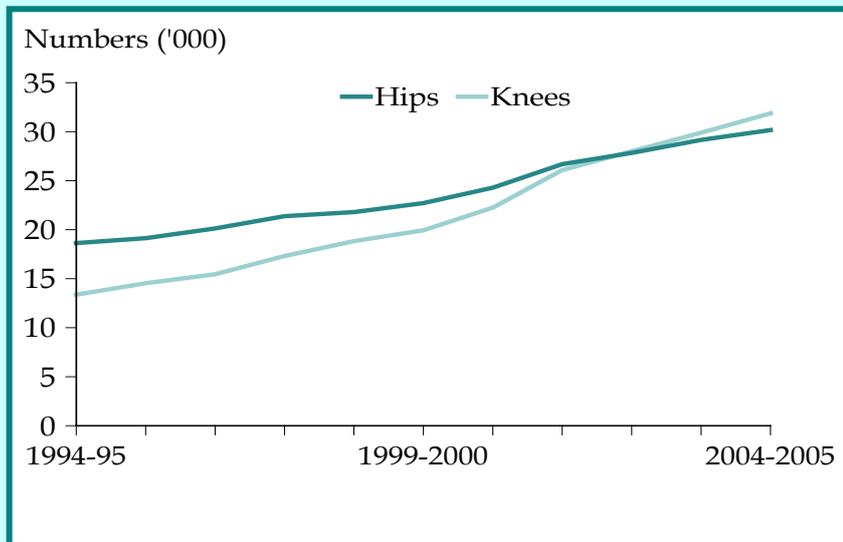
The report of the House of Representatives Standing Committee on Health and Ageing's Inquiry into Health Funding in 2006 highlighted the persistent bias of health funding agreements in treating rather than preventing illness, and in failing to promote wellness.⁶³⁷ While acknowledging the extension of services covered by the MBS (e.g., to include GPs providing coordinated care for chronically ill patients and incentives for earlier intervention in selected at-risk groups), the report noted that there were clear benefits in investing in prevention and earlier detection of chronic conditions, to avoid significant costs of future hospital treatment. It also highlighted the need to strengthen the capacity of primary health care services to promote wellness and continuity of care.

The government subsidising of private health insurance and private health services was one further challenge to its capacity to provide equitable and universal access to quality health care across Australia. Continuing reform of the Australian health system was needed to meet the needs of an ageing population, shortages in the health workforce, the rapid rate of development of new health technologies, and the increasing complexity of health care and rising community expectations.

Box 8.2 Improving artificial joint and hip replacement procedures

The National Joint Replacement Registry (NJRR) was established in 1999 to provide data on the outcomes of patients receiving hip and knee replacements. The Registry linked 'an individual patient, their diagnosis, the operative joint and the specific prostheses used'.⁶³⁶ The success of a procedure could be determined by linking data to subsequent procedures for that individual. Joint replacement was one of the commonest surgical procedures undertaken in Australia. In the period 1994-1995 to 2004-2005, the number of procedures increased by 93.8% (Figure 8.2), and was expected to increase as the population continued to age.

Figure 8.2: Hip and knee replacement procedures, 1994-1995 to 2004-2005



Source: Graves & Wells, *A review of joint replacement surgery and its outcomes*, 2006, p. 16.

A 2006 review estimated that the outcome data from NJRR had led to a significant reduction in the number of revised hip and knee replacements, equivalent to 1,200 fewer operations a year. In addition to substantial patient benefits, this reduced expenditure by around \$16-32 million per year. The cost of operating the registry was less than 0.1% of expenditure on joint replacement surgery.⁶³⁸

The NJRR could also identify emerging problems. Faulty prostheses could be identified and removed from the market far sooner with a national registry. In the USA where no registry existed, it could take hundreds or thousands of operations before a faulty prosthesis was identified. A critical factor in the success of the NJRR was the central role of orthopaedic surgeons, both individually and through their professional organisation, in obtaining the cooperation of other stakeholders - hospitals, orthopaedic prosthetic companies and state governments - and an Australian government commitment to fund the Registry.⁶³⁶

Table 8.1: Historic highlights of universal access to health care, pharmaceuticals and technology

1919	Repatriation Pharmaceutical Benefits Scheme established to provide free pharmaceutical products to ex-service men and women who were veterans of World War I and the Boer War.
1937	<i>Therapeutic Substances Act</i> passed but not promulgated and later repealed by the <i>Therapeutic Substances Act 1953</i> .
1947	<i>Pharmaceutical Benefits Act 1947</i> .
1948	Items listed in the Commonwealth Formulary supplied at Commonwealth expense to remote health establishments (e.g., bush nursing centres) approved as hospitals, for the purpose of providing pharmaceutical benefits to geographically isolated communities.
1950	Implementation of a wider-reaching but limited scheme to make a list of 139 'life saving and disease preventing drugs' freely available to the community under the <i>Pharmaceutical Benefits Act 1947</i> .
1953	<i>National Health Act 1953</i> passed.
1954	Pharmaceutical Benefits Advisory Committee (PBAC) established, to recommend drugs and medicines to be subsidised by pharmaceutical benefits.
1956	<i>Therapeutic Substances Act 1953</i> enacted.
1960	Pharmaceutical Benefits Scheme (PBS) introduced following the passage of the <i>National Health Act No. 72 1959</i> , and an expanded range of drugs available for the general public.
1964	Adverse Drug Reaction reporting scheme for prescription medicines introduced.
1968	Scotton and Deeble published proposals for a compulsory national health insurance scheme.
1969	The Committee of Inquiry into Health Insurance, chaired by Mr Justice Nimmo reported, and both sides of politics committed themselves to reform of the health system.
1970	The Adverse Drug Reactions Advisory Committee (ADRAC), a subcommittee of the Australian Drug Evaluation Committee (ADEC) formed to advise on the safety of medicines.
1973	Oral contraceptives listed on the PBS for the first time.
1974	Establishment of the Health Insurance Commission.
1975	Establishment of Medibank, the first tax-funded universal health insurance scheme. Community health centres established.
Early 1980s	The National Health Technology Advisory Panel (NHTAP) formed. Medibank dismantled.
1984	Medicare set up and the Therapeutic Device Program established.
1986	'Safety net' arrangements established to protect chronically ill people from huge pharmaceutical costs. NHTAP replaced by the Australian Health Technology Assessment Committee (AHTAC).
1989	Commonwealth <i>Therapeutic Goods Act, 1989</i> . Therapeutic Goods Administration (TGA) and the Australian Register of Therapeutic Goods (ARTG) established.
1990	Good Manufacturing Practice (GMP) codes introduced.
1997/98	The Medical Services Advisory Committee (MSAC) replaced AHTAC.
1999	National Joint Replacement Registry established to assess outcomes of patients receiving hip and knee replacements.
2000	The <i>National Medicines Policy</i> released.
2001	<i>Gene Technology Act 2000</i> .
2003	<i>Therapeutic Goods Act 1989</i> amended.
2004	The Prosthesis and Devices Committee (PDC) established to advise on listing and benefit levels of prostheses and medical devices.
2005	The Health Insurance Commission became Medicare Australia. Bulk-billing incentives increased. <i>National Health Amendment (Prostheses) Act 2005</i> passed.
2006	Highest Medicare bulk-billing rate since 1984 (at 76.6% for the June quarter 2006).