Healthcare in Focus

2013

How does NSW measure up?

Annual performance report
Please note that there is the potential for minor revisions of data in this report. Please check the online version at www.bhi.nsw.gov.au for any amendments.
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Measuring and reporting on the performance of complex healthcare systems is a crucial factor in their continuous improvement. It is however also a challenging task. A lot of information related to volume of services provided, wait times, patients’ experience of care and the health status of the population is available in various forms. Organising it in a comprehensive yet succinct report means that there is a balance to be struck between providing a complete assessment while focusing on key salient points.

*Healthcare in Focus 2013* is the fourth edition of our annual report on how New South Wales (NSW) compares with other healthcare systems. It builds on the work done in previous years, looking at new areas that have been less explored in the past.

This year we also introduce the Bureau’s revised performance measurement framework which serves as the organising principle for the report. Developed through scanning and synthesis of existing frameworks and models used in various countries and organisations, it provides a comprehensive and coherent blueprint to bring together, in a meaningful way, disparate information about the performance of the system.

The framework incorporates different perspectives on performance. First, from the patients’ point of view, it gauges how well the system achieves its objectives of providing care when and where needed; delivering the right healthcare, in the right way; and ensuring that healthcare makes a difference for patients. Second, from a system perspective, the framework assesses value for money; if the system provides health for all and fair healthcare services and, ultimately, how it ensures that there is capacity to provide healthcare services into the future. Together, these important aspects relate to the dimensions of accessibility, appropriateness, effectiveness, efficiency, equity and sustainability.

Using this framework, we introduce new information alongside already published indicators to provide a balanced account of the relative performance of NSW. The report encompasses some indicators that relate specifically to the public healthcare sector and others that relate to the care that the people of NSW receive, regardless of whether it is from private sources of care, public hospitals or Commonwealth funded organisations or providers. As such, this report is about how the complex healthcare system works as a whole, in an integrated way, providing an opportunity to reflect on the care that the population receives.

This year’s report reconfirms the good performance of NSW on the international stage. Comparing the state with high performing countries internationally provides insights into those areas where NSW is a leader, as well as identifying areas where there is potential to improve. We hope that this year’s edition will provide new insights for people to better understand areas of excellence as well as areas that might be targeted for improvements in coming years.

**Dr Jean-Fréderic Lévesque**  
MD, PhD  
Chief Executive
Summary
Assessing performance in NSW

Healthcare and healthcare systems are complex. Tasks and functions vary – a caring touch, a technical operation, an enabling administrative process or governance mechanism. Timescales range from minutes in the delivery of urgent life-saving interventions, to years in caring for chronic conditions. Healthcare providers are interdependent – specialists, generalists, technicians, support staff.

Any meaningful assessment needs to cope with this complexity and capture how care is delivered for patients, reflecting fairly on performance. One way to focus on such real-life delivery of care is to try to answer questions that patients and their advocates might ask:

- Are patients’ and populations’ needs assessed, measured and met; are different groups benefiting from healthcare?
- Are healthcare services evidence-based and technically sound? Are they respectful, patient centred and responsive to patient expectations?
- Are healthcare services addressing patients’ problems and improving health?
- Are healthcare services providing good value for the resources invested?
- Are the benefits of care distributed equitably between subgroups in the population, without discrimination or uneven treatment of equals?
- Is the system adapting to changes in patient needs and expectations, and to changing circumstances? Is it assuring its future performance?

**Healthcare in Focus 2013** includes 135 measures to answer these questions. For many of the measures, performance is compared with Australia as a whole and 10 other countries – placing NSW healthcare performance in an international context.

**So what did we find?**

The people of NSW receive high quality healthcare. While there are some areas for improvement, overall the state performs well.

**Accessibility: Healthcare when and where needed**

- Individual ‘out-of-pocket’ expenditure on healthcare is high in NSW, relative to comparator countries.
  - 15% of adults reported skipping an element of care (doctor consultation, medication or test) due to cost and 23% said their family spends more than $1,000 a year on medical expenses – second only to the US.
- In 2013, among NSW adults who needed to see a specialist, fewer than half (46%) reported relatively short waits (< 4 weeks) for an appointment. There were three countries where more than 70% of those needing to see a specialist reported such short waits.
- Half of NSW adults needing elective surgery (53%) reported waiting one month or less – in the mid-range internationally (public and private hospitals combined).
- While NSW met national targets for timely elective surgery in public hospitals, waiting times for hip, knee and cataract procedures are higher than in comparator countries.
**Appropriateness: The right care, the right way**

- The hospital sector performs well in ensuring care coordination.
  - Medication review after hospitalisation is reported by most patients (86%).
  - Internationally, NSW had the highest proportion of hospitalised patients reporting arrangements were made for follow-up care (81%).
- Preventive care is not uniformly provided.
  - Six in 10 NSW adults (63%) reported having a blood pressure check in the previous year – the lowest proportion among countries surveyed.
  - Half of women (aged 20–69 years) reported being screened for cervical cancer (Pap test) in the preceding two years (52%) – a lower proportion than in many comparator countries.

**Effectiveness: Making a difference for patients**

- NSW adults were among the most positive about how well their healthcare system works.
  - Half of adults (50%) said that on the whole, the system works well and only minor changes are necessary to make it better – a substantial increase from 24% in 2010.
- The effectiveness of the system at reducing hospitalisations and deaths from potentially avoidable conditions has improved over the past decade.
- Between 2001 and 2011 premature mortality (measured in potential years of life lost) due to cancer, decreased by 14%; due to heart attack by 49%.
- Hospitalisations for complications following medical or surgical procedures are, in international terms, relatively high and increasing in NSW.

**Efficiency: Value for money**

- NSW gets good value for its healthcare dollar – no country spent less per person, and had better results for premature mortality.
- NSW hospitals have a relatively low average length of stay for a range of conditions.

**Equity: Health for all, healthcare that’s fair**

- Income-associated gaps in timely access to a GP, and in confidence in managing existing conditions, are larger in NSW than in comparator countries.
- NSW has sizeable insurance-associated gaps in access to specialists and blood pressure checks.

**Sustainability: Caring for the future**

- NSW has an ageing nursing workforce; but an increasing proportion of medical professionals aged under 30 years.
Healthcare in Focus is an annual publication that reports on the performance of the NSW healthcare system. It draws on a range of data sources to build a wide-ranging picture of performance, placing it in an Australian and international context.

What is performance?

Performance (n): the action or process of performing a task or function

At first glance, performance is a straightforward concept – we all perform tasks every day. We have an intuitive understanding of performance assessment – a movie was terrible or great; a team played well or poorly. Different ways of reporting performance are also commonplace – star ratings, restaurant hats, scorecards, school reports, likes / dislikes.

Performance in healthcare however is far from straightforward. Tasks and functions are complex, numerous and interdependent. This means that spontaneous judgements of performance in healthcare are inadequate. A systematic and rigorous approach is needed if assessments are to be meaningful and fair.

Measuring the performance of complex health systems requires a balanced approach guided by a clear understanding of the various dimensions of performance.

An important first step here is developing an understanding of the key elements of healthcare delivery (what was done) – setting the scene for an assessment of performance (how well it was done).

What was done? – describing healthcare service delivery

Providers of healthcare, whether systems or individual providers, are tasked with using available resources to meet patient needs. This process can be considered in terms of four questions:

1) What is needed? Determining patient needs and expectations
2) How to meet needs? Investing and allocating resources
3) What to provide? Delivering healthcare services
4) What are the results? Monitoring patient outcomes

This chapter sets the scene providing examples of measures of patient needs, available resources, services provided, and patient outcomes in NSW (Figures 1.1 and Figure 1.2).

While informative, these data do not, on their own, provide a true assessment of performance. The remainder of the report is organised around the Bureau of Health Information’s new approach to assessing healthcare performance, outlined briefly on page 3 (and described in depth in Spotlight on Measurement). This approach is based around relational measures of performance that are able to capture the complexity of providing healthcare.
Figure 1.1: Four key questions that describe healthcare delivery

<table>
<thead>
<tr>
<th>What is needed?</th>
<th>How to meet needs?</th>
<th>What to provide?</th>
<th>What are the results?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining patient needs and expectations</td>
<td>Investing and allocating resources</td>
<td>Delivering healthcare</td>
<td>Monitoring patient outcomes</td>
</tr>
</tbody>
</table>

- Patient needs and expectations
- Resources, structures and organisation
- Healthcare services
- Patient outcomes

Figure 1.2: Examples of describing healthcare delivery

<table>
<thead>
<tr>
<th>Patient needs and expectations</th>
<th>Resources</th>
<th>Healthcare services</th>
<th>Patient outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• An estimated 4.8 million adults reported they needed to see a GP(^a)</td>
<td>• 225 public and 187 private hospitals(^b)</td>
<td>• 37,240,000 GP consultations and 4,043,000 specialist consultations(^e)</td>
<td>• 50,661 deaths(^a,\Delta)</td>
</tr>
</tbody>
</table>
| • 13,000 people 16 years and over have diabetes\(^o\) | • 20,000 public and an estimated 7,700 private hospital beds\(^a,\Omega\) | • 1,216,493 hospitalisations (overnight, public and private)\(^f\) | Top three causes of death (70% of total):
| | • 8,200 GPs, 8,600 specialists, 95,000 nurses\(^\Omega,\ell\) | • 6,000 patients with end stage renal disease received dialysis or transplant\(^f\) | 
| | • $43.3 billion in healthcare expenditure, of which $16.7 billion went towards hospitals and $8.4 billion to medical services\(^\Omega\) | | 
| | | | • 526 cases of sepsis infection contracted during elective surgery\(^\ell\) |

\(^{c}\) ABS, Private Hospitals, Australia, 2011–12.
\(^{d}\) ABS Causes of Death Australia, 2011.
\(^{e}\) ABS Deaths Data 2012
\(^{f}\) AIHW, AIHW Hospital Statistics 2012–13.
\(^{i}\) NSW Ministry of Health, extracted from SAPHaRI NSW Admitted Patient Data Collection, Centre for Epidemiology and Research (BHI analysis).
\(^{j}\) AIHW National Health Workforce Data Set, medical practitioners 2012.
\(^{k}\) Nursing and Midwifery Board of Australia, Nurse and Midwife Registrant Data: March 2013.
\(^{l}\) Australia and New Zealand Dialysis and Transplant Registry Registry 2012 Report.

Note: For more information visit the Health Statistics page at the NSW Ministry of Health website (www.health.nsw.gov.au).
An Integrated Healthcare Performance Assessment Framework

Meaningful performance assessment relates counts of patient needs, available resources, services provided, and patient outcomes to each other. Insights into performance are highlighted when we look at, for example, the volume of services produced for each unit of resources invested, the appropriateness of the care provided given the needs of population, or the results achieved in relation to the services and the resources invested.

The Bureau’s integrated healthcare performance assessment framework highlights six dynamic constructs that relate these counts in a way that reflects on performance.

The constructs are:

- **Accessibility**: Healthcare, when and where needed
- ** Appropriateness**: The right healthcare, the right way
- ** Effectiveness**: Making a difference for patients
- ** Efficiency**: Value for money
- ** Equity**: Health for all, healthcare that’s fair
- ** Sustainability**: Caring for the future

The Bureau’s framework focuses on these concepts to build a more rounded assessment of performance in healthcare (Figure 1.3).

**Why measure performance?**

In healthcare, performance measurement and reporting are vitally important, playing a dual role in providing accountability; and in catalysing and guiding improvements in care.
Figure 1.3: Bureau of Health Information’s Integrated Healthcare Performance Assessment Framework

- **Resources, structures and organisation**
- **Healthcare services**
  - **Productivity**
  - **Effectiveness:** making a difference for patients
  - **Efficiency:** value for money
  - **Sustainability:** caring for the future

- **Equity:** health for all, healthcare that’s fair

- **Patient needs and expectations**

- **Impact**
  - **Appropriateness:** the right healthcare, the right way
  - **Accessibility:** healthcare, when & where needed

- **Patient outcomes**
Data sources

*Healthcare in Focus 2013* draws data from a number of providers:

**The Commonwealth Fund**

*2013 International Health Policy Survey*

Reflecting the views of 20,045 adults in 11 countries, the 2013 Commonwealth Fund survey included people aged 18 years and over. In NSW, 1,524 adults were surveyed between March and June 2013. Results were weighted to represent the age, sex, education and regional distribution of each country’s population and for NSW separately.

Statistical tests used logistic regression to compare the performance of all other countries (except Australia) with NSW and statistically significant differences are noted, as being either higher ⩾ or lower ⩽ than NSW.

For more information on methods, see the *Healthcare in Focus 2013: Technical Supplement.*¹ (www.bhi.nsw.gov.au).

**International Survey of Adults (2010 and prior)**

The 2010 survey reflected the views of a sample of 1,550 NSW adults (18 years and older).² While the Commonwealth Fund provided core funding for the survey, 2010 was the first year the Bureau supplemented this funding to increase the sample size so it was sufficient for valid comparison of NSW with the other countries surveyed. The survey of adults has taken place, and Australia has been represented, since 2000.

The Organisation for Economic Co-operation and Development (OECD)

- Source of data on mortality, hospitalisation, procedure and expenditure for 11 countries.

**Australian Institute for Health and Welfare (AIHW)**

- Source of data on healthcare expenditure in NSW and Australia, structured to allow fair comparisons with OECD countries.

**Australian Bureau of Statistics (ABS)**

- Source of customised mortality data. Data for 2011 are classified as ‘revised’ data and 2010 data are classified as ‘preliminary’.
- Source of ABS patient experience data for NSW for 2012–13.³ The sample of 30,749 people aged 15 years or over was weighted to represent the estimated (civilian) population aged 15 years and over in private dwellings in each state and territory. A customised report was obtained for NSW.

**NSW Ministry of Health**

- NSW Adult Population Health Survey has been in place since 1997 and has a total sample ranging from 8,000–16,000 adults.⁴
- NSW Admitted Patient Data Collection (APDC) is a census of all admitted patient services provided by public and private hospitals in the state.
- Emergency Department Data Collection (EDDC) is a census of all emergency patient services provided by public hospitals with electronic data collection.
- Waiting List Collection On-line System (WLCOS) is a census of patients waiting for planned treatment. It covers public patients, either at public hospitals or contracted to private hospitals.
Interpreting the report

*Healthcare in Focus* aims to paint a timely and wide-ranging overview of the performance of organisations and sub-systems that respond to the health needs of the people of NSW. It focuses on the perspectives of patients and the general public, putting performance in an international context. Therefore the report:

- Compares the performance of the NSW healthcare system to Australia and 10 other countries participating in the Commonwealth Fund’s 2013 International Health Policy Survey.
- Includes information on the state government-funded hospital system and on primary care services which are largely a federal government policy and funding responsibility.
- Contains some sets of figures that include both public and private sector healthcare. (International data that support comparisons across countries do not distinguish public and private patients or sectors).
- Draws on information from 2013 or the most recent year for which internationally comparable data are available. Figures are footnoted where the latest available data are before 2011, as results may have subsequently changed.
- Deliberately takes a broad perspective of the system rather than addressing more granular hospital performance measures such as those covered in the Bureau’s *Hospital Quarterly* reports.
- Presents performance indicators selected on the basis of international data availability. (Therefore, the indicators do not completely align with current NSW performance priorities).

The report includes some information on services provided in hospitals, including elective surgery and emergency departments. More extensive coverage of these topics is limited by a lack of international data to support comparisons. For more detailed analysis of NSW performance in these areas, see the Bureau’s website ([www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)).

*Healthcare in Focus 2013* provides a “whole of system” perspective on healthcare in NSW, bringing together disparate information about healthcare in a meaningful way.
Contextualising performance

Healthcare in NSW

The healthcare system in NSW is complex, with responsibilities for funding, management, delivery and regulation shared across different layers of government, public and private sectors, primary and secondary care organisations, individuals and groups.\textsuperscript{5,6,7}

Statewide, total expenditure (recurrent and capital) on healthcare services in 2011–12 was $43 billion. This money was drawn from a range of sources (Figure 1.4).

The Commonwealth government funds 45% of total health expenditure in NSW. It has a range of responsibilities including:

- Medicare, the national scheme which provides free or subsidised access to clinically relevant medical, diagnostic and allied health services, as specified in the Medical Benefits Schedule (MBS). High out-of-pocket costs are partially offset by the Medicare Safety Net and Extended Medicare Safety Net.

- Pharmaceutical Benefits Scheme (PBS) which subsidises universal access to thousands of prescription medicines. (Patients pay a small co-payment. The PBS Safety Net helps offset high out-of-pocket costs.)

The state (together with local) government funds 24% of total health expenditure. In NSW, state responsibilities include:

- Management and administration of public hospitals, community and mental health services, delivery of public healthcare
- Ambulance and emergency services and patient transport and subsidy schemes
- Public dental clinics.

Individuals fund 16% of total health expenditure. Often referred to as out-of-pocket spending, this includes direct payment for services and co-payments.

Other private sources, which chiefly comprise private health insurers, fund the remaining 15% of total health expenditure.

The $43 billion of total health expenditure in 2011–12 funds an extensive range of services for the people of NSW, some of which are summarised in Figure 1.5.
Figure 1.4: Total and proportion of health expenditure ($ billions) by source of funds, NSW 2011–12.

- Commonwealth government: $19.6 billion, 45%
- State and local government: $10.2 billion, 24%
- Other Private: $6.5 billion, 15%
- Individuals: $7.0 billion, 16%

(Ñ) AIHW, Health Expenditure Australia 2011–12.
(ð) AIHW, Hospital Statistics 2011–12.

Figure 1.5: Overview of outputs in the NSW healthcare system, 2011–12.

NSW (7.3 million people)

Primary care
- GP type service: 44 million

Public health sector
- Overnight admissions: 924,308
- Day-only admissions: 736,294
- Emergency department presentations: 2,537,681
- Other non-admitted occasions of service: 21,648,188

Private hospitals
- Overnight hospitalisations: 299,744
- Day-only hospitalisations: 770,396

(Ñ) AIHW, Health Expenditure Australia 2011–12.
(ð) AIHW, Hospital Statistics 2011–12.
Contextualising performance
Why were people hospitalised in NSW?

In 2012–13, there were 1.2 million overnight hospitalisations in NSW. The most common reason for hospitalisation was injury, poisoning and other external reasons (130,498 hospitalisations, 10.7% of total), followed by pregnancy and childbirth (116,845; 9.6%) and circulatory disease (116,370; 9.6%) (Figure 1.6).

Reasons for hospitalisation are categorised using ICD–10 chapters. Those chapters with more than 15,000 hospitalisations are shown in Figure 1.6. Within ICD–10 chapters, the main cause (principal diagnosis) for the hospitalisation is shown if there were more than 5,000 hospitalisations in the year.

The most common principal diagnoses were childbirth (49,199 spontaneous and 28,358 caesarean section deliveries), rehabilitation (48,408 hospitalisations), pain in throat and chest (21,743), pneumonia (18,111), and chronic obstructive pulmonary disease (19,486).

(c) NSW Ministry of Health, NSW Admitted Patient Data Collection, extracted from SAPHaRI. Centre for Epidemiology and Research (BHI analysis). Data exclude newborns ‘without qualification days’ (i.e. well newborns).

Note: Hospitalisations refer to episodes of care. There can be multiple episodes of care in a single hospital stay. Chapters with fewer than 15,000 hospitalisations are not shown. Only principal diagnoses with > 5,000 hospitalisations are shown.
Figure 1.6: Overnight hospitalisations (public and private) by ICD10 chapters, NSW, 2012–13
In 2011–12, there was a total of 2,537,681 emergency department (ED) visits across NSW. Of these, 2,235,961 (88%) were visits to EDs with electronic data collection. The Bureau has analysed the electronic data to examine patterns of ED visits for the NSW population.

During the year, 929,509 people (13% of the population) visited an ED with electronic data collection once, 264,466 (4%) visited twice, and 181,061 (2%) visited three or more times. Almost all ED visits (2,173,621 visits, 97% of total) were for emergencies. There is a marked concentration of ED visits among a relatively small number of NSW people. The 2% of the population who visited three or more times accounted for 777,520 visits (35% of all ED visits) (Figure 1.7).

In 2012–13, 546,206 people (8% of the population) were hospitalised once; 134,403 (2% of the population) were hospitalised twice; and 93,136 (1% of the population) were hospitalised three or more times. The 1% of the population who were admitted three or more times accounted for 2.3 million hospital bed days (41% of all bed days) in the year and were admitted overnight to a public or private hospital on 338,592 occasions during the year (Figure 1.8).

The reasons for these hospitalisations were varied. The most common reason for admission was ‘factors influencing health status’ (a non-specific miscellaneous category which includes care for rehabilitation procedures, convalescence and follow-up care) which accounted for 47,679 hospitalisations, and circulatory disease (47,592 hospitalisations) (Figure 1.9).
Figure 1.8: Hospitalisation frequency and bed day use (public and private hospitals), NSW, 2012–13.

- 0 hospitalisations: 89% (6.5 million)
- 1 hospitalisation: 8% (546,206)
- 2 hospitalisations: 36% (2.0 million)
- 3+ hospitalisations: 41% (2.3 million)

Number of bed days (6.8 million bed days)

Figure 1.9: Patients with 3+ hospitalisations (93,136 people): hospitalisations (public and private), by principal diagnosis (ICD–10 Chapter), NSW, 2012–13.

- Mental and behavioural disorders: 7% (28,394 hospitalisations)
- Pregnancy, childbirth and the puerperium: 3% (11,743 hospitalisations)
- Diseases of the digestive system: 8% (30,036 hospitalisations)
- Diseases of the respiratory system: 9% (34,290 hospitalisations)
- Diseases of the musculoskeletal system and connective tissue: 5% (18,660 hospitalisations)
- Mental and behavioural disorders: 7% (28,394 hospitalisations)
- Symptoms and signs: 8% (32,287 hospitalisations)
- Diseases of the genitourinary system: 5% (18,319 hospitalisations)
- Mental and behavioural disorders: 7% (28,394 hospitalisations)
- Diseases of the skin: 2% (7,828 hospitalisations)
- Diseases of the nervous system: 3% (10,693 hospitalisations)
- Certain infectious and parasitic disease: 3% (10,319 hospitalisations)
- Endocrine, nutritional and metabolic diseases: 2% (8,703 hospitalisations)
- Injury and other external causes: 12% (39,778 hospitalisations)
- Diseases of the circulatory system: 12% (47,592 hospitalisations)
- Factors influencing health status: 12% (47,679 hospitalisations)

(c) NSW Ministry of Health, extracted from SAPHaRI. Centre for Epidemiology and Research (BHI analysis).
Measures of accessibility seek to assess the ease with which patients can obtain care. Healthcare organisations and systems should adapt their offer of services to respond to the abilities of people to ensure access. This relates to the pathway taken by patients from identifying their needs, seeking care, reaching providers, paying for care and receiving appropriate care to their needs.  

Accessibility encompasses: financial coverage and affordability, geographic coverage and availability, timeliness, unmet needs, organisational accommodation, social and cultural acceptability. For patients, the first step in obtaining quality healthcare can occur before needs are apparent. Measures of coverage provide an assessment of whether healthcare services could potentially be obtained by patients should they be needed. They encapsulate both financial and geographic coverage – that is, are services obtainable with no resulting financial hardship? Are they physically obtainable?  

Timeliness refers to the extent to which care is provided promptly after a need is recognised. Measures of timeliness include the interval between identifying a need for healthcare and actually receiving services; as well as time spent waiting, for example in General Practitioner (GP) surgeries or hospital emergency departments.

Measurement of accessibility can in some cases only be achieved when it is lacking. Poor accessibility may reflect cognitive (not knowing where to go), cultural and social (not feeling care is acceptable), organisational (care is not organised to facilitate access) and economic (related to costs of obtaining care) barriers to receiving good care.

### Accessibility: How does NSW measure up?

<table>
<thead>
<tr>
<th>Leading the way – areas of higher, or improving, performance</th>
<th>Aim for the best – areas of lower, or deteriorating, performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>In 2013, fewer people (9%) skipped recommended tests, treatments or follow-ups because of cost concerns than did so in 2010 (15%).</td>
<td>A quarter of NSW adults (23%) said their family spent more than $1,000 on medical treatments or services not covered by insurance – a higher percentage than in any comparator country except the United States.</td>
</tr>
<tr>
<td>Half of NSW adults who needed elective surgery (53%) waited less than one month for their operation – a high proportion internationally.</td>
<td>In 2013, three in 10 NSW adults (29%) said that they had skipped dental care because of cost – a higher percentage than in most comparator countries.</td>
</tr>
<tr>
<td>In 2012–13, eight in 10 NSW emergency department patients (76%) were treated within clinically recommended times – the highest proportion among Australian states.</td>
<td>About half of NSW adults who needed to see a specialist (46%) waited less than four weeks – significantly fewer than in the best performing countries, where up to 73% of patients have such short waits.</td>
</tr>
<tr>
<td>In 2013, four in 10 NSW adults (44%) said accessing primary care out-of-hours was very or somewhat easy; compared with 37% in 2010.</td>
<td></td>
</tr>
</tbody>
</table>
Accessibility – a link between...

Cost barriers

- 37% of adults in the US skipped healthcare due to costs
- 15% of adults in NSW skipped healthcare due to costs
- 4% of adults in UK skipped healthcare due to costs

Timeliness in NSW emergency departments (2012–13)

- 76% of patients are seen within the recommended time
- 64% of patients are treated, discharged, or admitted within four hours

Infographics provide a snapshot of performance, for detailed information on these measures see full report (Healthcare in Focus 2013).
Primary care coverage and medical home

Most adults have a regular doctor, far fewer have a ‘medical home’

Coverage, the ability to access services should they be needed, is at the heart of healthcare system performance. Affiliation with primary care services is perhaps the most visible indication of coverage. Primary care offers front-line services for a wide range of acute and chronic health problems, helping prevent illness and acting as an entry point to the wider healthcare system. In 2013, nine in 10 NSW adults had a regular primary care doctor (general practitioner or GP) – a higher proportion than in Sweden (55%), and the United States (77%) (Figure 2.1).

While affiliation with a regular doctor is important, in terms of performance, not all general practices are equal. Practices are better able to respond to patient needs when they are easily accessible, and provide continuity and coordination of care. These are the characteristics of what is called a ‘medical home’.

Only six in 10 NSW adults (58%) have a medical home, although this is a higher proportion than in France (44%), the United States (52%), and Canada (52%) (Figure 2.2).

Older patients and those with chronic illnesses benefit most from medical home coverage. While almost all NSW adults aged 65+ years (96%) had a regular doctor, fewer than seven in 10 (68%) had a medical home. Similarly, 94% of adults with a chronic condition had a regular doctor but only six in 10 (60%) had a medical home (Figure 2.3).

Figure 2.1: Commonwealth Fund survey 2013 Is there one doctor / GP you usually go to for your medical care? An adults have a ‘medical home’ if: they have a regular doctor or GP practice; and their regular doctor always / often knows about their medical history; and they are able to get a same-day / next-day appointment or the GP practice always / often gives a same-day response to telephoned medical questions; and one person is responsible for all care they receive from other doctors for a chronic condition or the GP practice always / often helps coordinate care received from other doctors or places.
Figure 2.2: Commonwealth Fund survey 2013 Has a medical home

Figure 2.3: Commonwealth Fund survey 2013 Primary care coverage in groups with high health needs, NSW

(Ω) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher or lower than NSW.
The healthcare system in Australia is primarily funded by a combination of public sources, private health insurance, and out-of-pocket payments made by individuals.

Two in 10 NSW adults (23%) reported that their household out-of-pocket medical expenses were $1,000 or more in the past 12 months; second only to the United States (Figure 2.4). One in 10 (11%) reported out-of-pocket dental expenses of $1,000 or more (Figure 2.5).

In many healthcare systems, patients share in health costs. While cost sharing may curtail some overuse, it has many consequences in terms of underuse or gaps in accessibility. Systems with higher proportions of out-of-pocket spending have higher levels of ‘catastrophic’ expenses, or families being impoverished due to healthcare needs.

In 2011 in NSW, $2 in every $10 spent on healthcare were paid by individuals out-of-pocket (17% of all health spending) (Figure 2.6) – a higher proportion than almost all comparator countries.

### Figure 2.4: Commonwealth Fund survey 2013
In the past 12 months, how much have you and your family spent out-of-pocket for medical treatments or services that were not covered by insurance? 

<table>
<thead>
<tr>
<th>Country</th>
<th>$1,000 or more</th>
<th>$100 – &lt; $1,000</th>
<th>&lt; $100</th>
<th>Not sure / Decline to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>2%</td>
<td>48%</td>
<td>44%</td>
<td>6%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3%</td>
<td>17%</td>
<td>66%</td>
<td>14%</td>
</tr>
<tr>
<td>France</td>
<td>6%</td>
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<tr>
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<tr>
<td>New Zealand</td>
<td>8%</td>
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<td>40%</td>
<td>7%</td>
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<tr>
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<td>11%</td>
<td>45%</td>
<td>38%</td>
<td>6%</td>
</tr>
<tr>
<td>Canada</td>
<td>14%</td>
<td>41%</td>
<td>42%</td>
<td>3%</td>
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<tr>
<td>Norway</td>
<td>17%</td>
<td>52%</td>
<td>27%</td>
<td>4%</td>
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<tr>
<td>Switzerland</td>
<td>20%</td>
<td>37%</td>
<td>27%</td>
<td>16%</td>
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<tr>
<td>Australia</td>
<td>22%</td>
<td>39%</td>
<td>28%</td>
<td>11%</td>
</tr>
<tr>
<td>NSW</td>
<td>23%</td>
<td>36%</td>
<td>29%</td>
<td>12%</td>
</tr>
<tr>
<td>United States</td>
<td>23%</td>
<td>40%</td>
<td>36%</td>
<td>2%</td>
</tr>
</tbody>
</table>

High performance: high percentage of adults with out-of-pocket spending of $1,000 or more; low performance: high percentage of adults with out-of-pocket spending of < $100.
Figure 2.5: Commonwealth Fund survey 2013 In the past 12 months, how much have you and your family spent out-of-pocket for dental care? (Ω)

<table>
<thead>
<tr>
<th>Region</th>
<th>≤ $100</th>
<th>$100 – &lt; $1,000</th>
<th>$1,000 – &lt; $10,000</th>
<th>$10,000 or more</th>
<th>Nothing</th>
<th>Not sure/Decline to answer</th>
</tr>
</thead>
<tbody>
<tr>
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<td>23</td>
<td>39</td>
<td>12</td>
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</tr>
<tr>
<td>Germany</td>
<td>7</td>
<td>28</td>
<td>21</td>
<td>38</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>9</td>
<td>24</td>
<td>26</td>
<td>30</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>10</td>
<td>24</td>
<td>20</td>
<td>44</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>10</td>
<td>35</td>
<td>9</td>
<td>42</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>11</td>
<td>29</td>
<td>19</td>
<td>35</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
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<td>9</td>
<td>13</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
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<td>18</td>
<td>33</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
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<td>14</td>
<td>34</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>14</td>
<td>38</td>
<td>13</td>
<td>33</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>16</td>
<td>37</td>
<td>11</td>
<td>24</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>22</td>
<td>55</td>
<td>2</td>
<td>15</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.6: Proportion of system’s total current health expenditure that is by individuals out-of-pocket, 2011 (Ω,Ν)

<table>
<thead>
<tr>
<th>Region</th>
<th>NSW</th>
<th>Australia</th>
<th>Other countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>7</td>
<td></td>
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</tr>
<tr>
<td>United Kingdom</td>
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<td></td>
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<td>United States</td>
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<td></td>
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<tr>
<td>Germany</td>
<td>13</td>
<td></td>
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<tr>
<td>Canada</td>
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<td>Sweden</td>
<td>16</td>
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<td></td>
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<td></td>
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<tr>
<td>Australia</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Ω) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher or lower than NSW.
(Ω) OECD, OECD Health Data 2013.
(Ω, Ν) AIHW, AIHW Health Expenditures (special request) for NSW and Australia 2011. Based on OECD System of Health Accounts. Results may differ from AIHW Health Expenditures 2011–12.
Gaps in coverage: unmet needs for care in NSW

Difficulties accessing care are increasing

Unmet health care needs, (not receiving care when there is a felt need for it), may be caused by issues such as lack of coverage, geographic and financial barriers, or timeliness. People who report unmet needs tend to be in worse health and in lower income brackets.7

According to the NSW Population Health survey, in 2010,* nearly two in 10 NSW adults (18%) reported difficulties accessing care (Figure 2.7). Difficulties accessing care were particularly high in outer regional / remote areas with nearly four in 10 adults (36%) reporting such difficulties.8

The complementary data from ABS Patient survey 2012–139 shows that, among adults in NSW:

- 913,300 reported a perceived need for care but did not visit the doctor
- 752,500 missed at least one dental visit in the previous year
- 454,000 reported missing a specialist appointment (Figure 2.8).

The difficulties that people report in obtaining care when they are sick or injured can help identify barriers to care. In the ABS survey, accessibility issues – long waits or lack of availability when care was needed – were the most common reason given for missed primary care visits (Figure 2.9).

For dental care and specialist visits, cost was the most commonly cited barrier to care. In 2012, nearly half a million NSW adults reported cost as a reason for missing a dental visit (485,500) (Figure 2.8).

---

* Results are for 2010, the most up-to-date information at the time of publication. Results may have subsequently changed.
### Figure 2.8: ABS Patient Experience survey 2012–13 Unmet healthcare needs, NSW ∆

<table>
<thead>
<tr>
<th>Reason for Unmet Needs</th>
<th>GP</th>
<th>Specialist</th>
<th>Dentist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care missed due in some part to cost</td>
<td>172,000</td>
<td>150,500</td>
<td>485,500</td>
</tr>
<tr>
<td>Waiting time long or not available when needed</td>
<td>318,300</td>
<td>45,000</td>
<td>46,300</td>
</tr>
<tr>
<td>Too busy</td>
<td>299,800</td>
<td>110,900</td>
<td>182,700</td>
</tr>
</tbody>
</table>

### Figure 2.9: ABS Patient Experience survey 2012–13 Patient-reported barriers to accessing care, by type of healthcare professional, NSW ∆

<table>
<thead>
<tr>
<th>Reason</th>
<th>GP</th>
<th>Specialist</th>
<th>Dentist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>35%</td>
<td>33%</td>
<td>19%</td>
</tr>
<tr>
<td>Transport / Distance</td>
<td>6%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Felt it would be inadequate</td>
<td>3%</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>Too busy / no time (including work, family, personal responsibilities)</td>
<td>33%</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>Dislikes (service / professional, afraid, embarrassed)</td>
<td>0%</td>
<td>8%</td>
<td>3%</td>
</tr>
</tbody>
</table>

### Table: Total population ages (15 and over): 5,926,700

<table>
<thead>
<tr>
<th>Reason for Unmet Needs</th>
<th>GP</th>
<th>Specialist</th>
<th>Dentist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number who said they needed a service</td>
<td>4,849,200</td>
<td>2,345,400</td>
<td>3,483,000</td>
</tr>
<tr>
<td>Needed service but didn’t go at least once</td>
<td>913,300</td>
<td>454,000</td>
<td>752,500</td>
</tr>
<tr>
<td>% reporting unmet need</td>
<td>19%</td>
<td>19%</td>
<td>22%</td>
</tr>
</tbody>
</table>

---

© NSW Ministry of Health, NSW Population Health survey extracted from SAPHaRI, Centre for Epidemiology and Evidence NSW.

Timely access to primary care

Primary care provides patients with access to an initial assessment of their healthcare concerns and, if needed, referrals to a wide range of specialist physicians and services. Timeliness is an important element of access – both in terms of patient expectations and in order to avoid unnecessary discomfort or worsening of a health problem.10

In 2013, three in 10 NSW adults (32%) reported they could get an appointment to see a doctor or nurse on the same-day – a lower proportion than Germany (66%) but higher than Canada (25%) (Figure 2.10).

The 2013 result (32%) represents an 11 percentage point decrease compared with 2010 (43%). This decrease echoes the decline in same-day access seen in Australia (Figure 2.11).

Four in 10 NSW adults (44%) said it was easy to obtain medical care on evenings, weekends or holidays. In comparison, out-of-hours care was more accessible in the United Kingdom, Germany and the Netherlands (Figure 2.12).

For NSW, the 2013 result represents an improvement of 7 percentage points in the proportion of adults able to access out of hours care without having to resort to going to an emergency department (Figure 2.12).

Figure 2.10: Commonwealth Fund survey 2013 Last time you were sick or needed medical attention, how quickly could you get an appointment to see a doctor or nurse?12
Figure 2.11: **Commonwealth Fund survey 2001 to 2013**  Last time you were sick or needed medical attention, how quickly could you get an appointment to see a doctor or a nurse? (% answering same day) ² ³ ⁴

Figure 2.12: **Commonwealth Fund survey 2010 and 2013**  How easy or difficult is it to get medical care in the evenings, on weekends, or holidays without going to the hospital emergency department? (% answering somewhat/very easy) ⁵ ² ³ ⁴

(2) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher ³ ⁴ or lower ³ ⁴ than NSW.

(3) Excluding respondents who said that they did not receive medical care in the past year.

(4) The Commonwealth Fund, 2010 Commonwealth Fund International Health Policy survey.

Timely access to ED care

Nearly eight in 10 ED patients treated within the recommended time

Emergency Departments (EDs) provide specialised assessment and life-saving care and are often the gateway to inpatient services for acutely unwell patients. They are open to all and coverage is limited only by geographic proximity to an ED.11

Around the world, EDs are often affected by overcrowding and delays.12 In 2013, among NSW adults who used an ED in the previous two years, one in 10 (8%) reported waiting over four hours to be treated. In comparison, the Netherlands had very few adults (1%) reporting ED waits of longer than four hours, while in Canada, a quarter (26%) of adults said their waits were longer than four hours (Figure 2.13).

The Commonwealth Fund survey data provides a broadbrush view of timeliness in accessing ED care across different healthcare systems. More specific data are available for Australia where patients arriving at an ED are allocated to one of five urgency (triage) categories. Each category has a defined maximum recommended time within which patients should receive care:

- Resuscitation (within seconds)
- Emergency (within 10 minutes)
- Urgent (within 30 minutes)
- Semi-urgent (within 60 minutes)
- Non-urgent (within 120 minutes).

In 2012–13, nearly eight in 10 NSW patients (76%) were treated within recommended times, the highest proportion among Australian states (Figure 2.14).

Across NSW hospitals, the proportion of ED patients treated within recommended times ranged from 25% to 96%. Greatest variation was seen in peer group C hospitals (Figure 2.15).

Figure 2.13: Commonwealth Fund survey 2013 The last time you went to the hospital emergency department, how long did you wait before being treated? 

<table>
<thead>
<tr>
<th>Country</th>
<th>Never treated/ left without treated</th>
<th>Not sure / Decline to answer</th>
<th>&lt; 30 mins</th>
<th>1–4 hrs</th>
<th>30–60 mins</th>
<th>&gt; 4 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>8</td>
<td>2</td>
<td>25</td>
<td>39</td>
<td>31</td>
<td>1</td>
</tr>
<tr>
<td>Switzerland</td>
<td>6</td>
<td>5</td>
<td>23</td>
<td>35</td>
<td>31</td>
<td>1</td>
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<tr>
<td>United Kingdom</td>
<td>6</td>
<td>5</td>
<td>29</td>
<td>34</td>
<td>29</td>
<td>10</td>
</tr>
<tr>
<td>New Zealand</td>
<td>7</td>
<td>6</td>
<td>19</td>
<td>30</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>Germany</td>
<td>6</td>
<td>6</td>
<td>21</td>
<td>43</td>
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<td>3</td>
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<tr>
<td>NSW</td>
<td>8</td>
<td>9</td>
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<td>45</td>
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<td>2</td>
</tr>
<tr>
<td>Norway</td>
<td>9</td>
<td>6</td>
<td>38</td>
<td>35</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Australia</td>
<td>10</td>
<td>11</td>
<td>26</td>
<td>42</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>United States</td>
<td>11</td>
<td>12</td>
<td>30</td>
<td>38</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>France</td>
<td>12</td>
<td>12</td>
<td>40</td>
<td>31</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Sweden</td>
<td>15</td>
<td>16</td>
<td>33</td>
<td>33</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
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<td>26</td>
<td>21</td>
<td>35</td>
<td>20</td>
<td>16</td>
<td>3</td>
</tr>
</tbody>
</table>

% of adults who used the emergency department in the past two years
Figure 2.14: Percentage of ED patients whose treatment began within recommended times (public hospitals), 2011–12 and 2012–13

- NSW: 76% in 2012–13, 76% in 2011–12
- Queensland: 73% in 2012–13, 67% in 2011–12
- Victoria: 72% in 2012–13, 71% in 2011–12
- Tasmania: 71% in 2012–13, 62% in 2011–12
- South Australia: 70% in 2012–13, 71% in 2011–12
- Western Australia: 64% in 2012–13, 63% in 2011–12
- Australian Capital Territory: 51% in 2012–13, 55% in 2011–12
- Northern Territory: 50% in 2012–13, 58% in 2011–12

Figure 2.15: Distribution of public hospitals by percentage of ED patients for which treatment began within recommended times, by peer group, NSW, 2012–13

- NSW public hospitals (with electronic ED data collection)
- Peer group A: (n = 18)
- Peer group B: (n = 21)
- Peer group C: (n = 44)

Notes:
- The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher or lower than NSW.
- NSW Health, Health Information Exchange. Data extracted on 14 January 2014. Peer group A hospitals include principal referral and paediatric specialist, and ungrouped acute-tertiary referral hospitals, peer group B includes major metropolitan hospitals, and peer group C includes district groups 1 and 2 hospitals that conduct elective surgery.
- Data are based on ED presentations. A single patient may have multiple presentations and will be counted more than once.
**Timely transitions from the ED**

Two-thirds of patients leave ED within four hours of arrival

Timeliness in the ED is affected by factors both within the hospital (such as ED capacity or delays in admitting patients from the ED); and outside it (such as effective community care).

The Federal Government has adopted a National Emergency Access Target (NEAT) which states that by 2015, 90% of patients presenting to a public hospital ED will physically leave the ED within four hours, regardless of whether they are admitted, transferred to another hospital or discharged. NSW performance against this target is reported by the NSW Ministry of Health, using different data definitions to those used here.

Across NSW in 2012–13, 64% of patients left the ED within four hours – an increase of four percentage points over 2011–12. Nationally, NSW had the highest proportion of ED patients seen within recommended times (Figure 2.14, p. 24), however it was outperformed by most other states in terms of patients leaving the ED within four hours (Figure 2.16).

Patients who require admission to hospital from the ED have more complex health needs than those who are treated in the ED and leave. Their length of stay can be impacted both by the complexity of their condition and bed availability in the hospital. Notably, Western Australia with the most patients leaving the ED within four hours, had the lowest percentage of ED presentations that ended in hospital admission (Figure 2.16).

In 2012–13, the median length of stay in NSW EDs for visits not ending in admission was 139 minutes, similar to most other states. Median length of stay for NSW patients requiring admission was 349 minutes (Figure 2.17). Across NSW hospitals (peer groups A–C) in 2012–13, the proportion of patients who left the ED within four hours ranged from 35% to 98% (Figure 2.18).

---

* More recent NSW data for October to December 2013 show 70% of patients left the ED within four hours (see Hospital Quarterly for more information). ¹¹
Figure 2.17: Median length of stay in ED, by admission status (public hospitals), 2012–13.

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Median Length of Stay (minutes)</th>
<th>Presentations NOT ending in admission</th>
<th>Presentations ending in admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Territory</td>
<td>141</td>
<td>403</td>
<td>131</td>
</tr>
<tr>
<td>Tasmania</td>
<td>131</td>
<td>373</td>
<td>175</td>
</tr>
<tr>
<td>Australian Capital Territory</td>
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<td>291</td>
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<tr>
<td>NSW</td>
<td>139</td>
<td>349</td>
<td>255</td>
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<tr>
<td>Victoria</td>
<td>149</td>
<td>308</td>
<td>287</td>
</tr>
<tr>
<td>South Australia</td>
<td>141</td>
<td>291</td>
<td>211</td>
</tr>
<tr>
<td>Queensland</td>
<td>137</td>
<td>287</td>
<td>122</td>
</tr>
<tr>
<td>Western Australia</td>
<td>122</td>
<td>255</td>
<td>151</td>
</tr>
</tbody>
</table>

Figure 2.18: Variation across hospitals in patients leaving the ED within four hours of arrival (public hospitals), NSW, 2012–13.

- NSW public hospitals (with electronic ED data collection)

---

(6) NSW Health, Health Information Exchange. Data extracted January 10, 2014. Peer group A hospitals include principal referral and paediatric specialist, and ungrouped acute-tertiary referral hospitals, peer group B includes major metropolitan hospitals, and peer group C includes district groups 1 and 2 hospitals that conduct elective surgery.
Patients visit specialists for a range of different reasons including diagnosis, treatment and monitoring of significant illnesses and injuries; as well as accessing dedicated services related to the health of children, pregnant women and older adults.

In 2013, among NSW adults who reported they were referred to a specialist in the previous two years, about half (46%) waited less than one month for an appointment – less than most international comparators (Figure 2.19).

About half of NSW adults (53%) receiving elective surgery* in the previous two years, reported in 2013 that they waited less than one month. However, for a minority of NSW patients (11%), waits were four months or longer – in the mid-range internationally (Figure 2.20).

The Federal Government has adopted a National Elective Surgery Target (NEST) which states that by 2016, all patients waiting for surgery should be seen within the clinically recommended times (using three urgency categories: category 1, within 30 days; category 2, within 90 days and category 3, within 365 days). Statewide administrative data for 2012–13 show that NSW met NEST on waiting times for booked surgery in all categories.12

Between 2010 and 2013, there was an increase of seven percentage points in the proportion of NSW patients reporting they received surgery within four weeks, while there was a four percentage point drop in the proportion who reported waiting less than four weeks to see a specialist. This wait, from GP referral to seeing a specialist, is not currently captured in NSW Health statistics*, however it is an important part of the total wait experienced by patients (Figure 2.21).

Figure 2.19: Commonwealth Fund survey 2013 After you were advised to see or decided to see a specialist doctor or consultant, how long did you have to wait for an appointment?  

* Elective or ‘planned’ surgery is defined as surgery that a doctor or other health professional believes to be clinically necessary, but which can be delayed for at least 24 hours. NSW Health data collections measure surgical waiting time from when patients are put on a waiting list until they receive surgery. Waits for specialist appointments are not currently recorded.
Figure 2.20: **Commonwealth Fund survey 2013** After you were advised you needed surgery, how long did you have to wait for non-emergency or elective surgery? (public and private hospitals) 📊

<table>
<thead>
<tr>
<th>Country</th>
<th>&lt; 1 month</th>
<th>1 – &lt; 4 months</th>
<th>4+ months</th>
<th>Not sure / Decline to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>81</td>
<td>16</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>65</td>
<td>21</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>United States</td>
<td>60</td>
<td>26</td>
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<td>7</td>
</tr>
<tr>
<td>NSW</td>
<td>53</td>
<td>30</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Australia</td>
<td>53</td>
<td>29</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>53</td>
<td>22</td>
<td>24</td>
<td></td>
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<tr>
<td>France</td>
<td>46</td>
<td>48</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>43</td>
<td>20</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>32</td>
<td>32</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Norway</td>
<td>39</td>
<td>36</td>
<td>21</td>
<td>5</td>
</tr>
<tr>
<td>Canada</td>
<td>37</td>
<td>41</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Sweden</td>
<td>33</td>
<td>54</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

% of patients who needed non-emergency or elective surgery

Figure 2.21: **Commonwealth Fund survey 2010 and 2013** Change in percentage of patients reporting access within four weeks to specialist appointment and to non-emergency surgery (public and private hospitals) 📊 📊

2010 and 2013

<table>
<thead>
<tr>
<th>Country</th>
<th>2010</th>
<th>2013</th>
<th>% point change</th>
<th>High performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>-12</td>
<td>-9</td>
<td>-3</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>-9</td>
<td>-8</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>-9</td>
<td>-8</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>-8</td>
<td>-8</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>-7</td>
<td>-7</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>-7</td>
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<td></td>
</tr>
<tr>
<td>NSW</td>
<td>-4</td>
<td>-3</td>
<td>-2</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>-3</td>
<td>-2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>-2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

% point change in waiting less than four weeks for specialist appointment

2010 and 2013

<table>
<thead>
<tr>
<th>Country</th>
<th>2010</th>
<th>2013</th>
<th>% point change</th>
<th>High performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>-15</td>
<td>-11</td>
<td>-4</td>
<td></td>
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<tr>
<td>New Zealand</td>
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<td>United States</td>
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<td>-6</td>
<td>-5</td>
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<tr>
<td>Norway</td>
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<td>-1</td>
<td>0</td>
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<tr>
<td>Sweden</td>
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<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
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<td>Germany</td>
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</tr>
<tr>
<td>NSW</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(😊) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher or lower than NSW.

(ån) The Commonwealth Fund, 2010 Commonwealth Fund International Health Policy survey.
Joint replacement and cataract surgery

Waits for hip, knee and eye procedures are long and lengthening

Long waiting times for elective hip and knee replacements and cataract procedures, can impact patient’s functional status and quality of life. Access to elective surgery is often measured in terms of *median waits*. This refers to the number of days that the *middle* patient waited i.e. half of all patients had a shorter wait and half had a longer wait.

Compared internationally, NSW has longer median waiting times for these three types of elective surgery. Waiting times for hip and knee replacement, and for cataract surgery between 2002 and 2012 increased in NSW, and the gap between NSW and other jurisdictions is increasing (Figure 2.22 and Figure 2.23).*

Elective surgery waits can be categorised by urgency. In 2012–13, about eight in 10 hip, knee and cataract procedures (82%) were classified in the non-urgent category and therefore should have received surgery within 365 days. A week-by-week profile of completed waits for these procedures in NSW public hospitals is shown in Figure 2.24. For cataract surgery, 96% of procedures were done within the target period of one year, while 90% of hip replacements and 87% of knee replacements were completed within the recommended time.

* Elective surgery waits, more broadly in NSW are measured within three urgency categories. In July – September 2013, the median wait for urgent surgery was 10 days, semi-urgent 43 days and non-urgent, 215 days.14

---

*Figure 2.22: Median waiting time for cataract surgery, available jurisdictions (public and private hospitals), 2002–2012*
Figure 2.23: Median waiting times for hip and knee replacement surgery (public and private hospitals), 2002 and 2012.\(^{\text{a,b}}\)

<table>
<thead>
<tr>
<th>Country</th>
<th>Year 2002</th>
<th>Year 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>280</td>
<td>297</td>
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<tr>
<td>New Zealand</td>
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<tr>
<td>Australia</td>
<td>111</td>
<td>99</td>
</tr>
<tr>
<td>NSW</td>
<td>131</td>
<td>116</td>
</tr>
</tbody>
</table>

\(^{\text{a,b}}\) OECD, OECD Health Data 2002–2012 or nearest. Values for New Zealand are 2003 and 2012 and for United Kingdom 2002 and 2011.

Figure 2.24: Number of weeks waited by patients for hip replacement, knee replacement and cataract surgery, NSW (public hospitals), 2012–13.\(^{\text{c}}\)

- **Within 52 weeks (365 days)**: 96% of cataract, 87% of knee replacement, 90% of hip replacement.


\(^{\text{A}}\) AIHW, Australian Hospital Statistics 2012–13.

\(^{\text{E}}\) NSW Health, Waiting List Collection On-Line System (extracted 14 October 2013).
Avoidable ED presentations

Three in 10 ED visits due to difficulties accessing GPs

Across many healthcare systems there is a concern that people turn to the ED for conditions that could have been treated by their GP if primary care had been accessible when needed. The use of ED for primary care services is thought to contribute to delays in ED.\textsuperscript{15}

In 2013, among NSW adults who visited an ED in the previous two years, three in 10 (33\%) said their last visit could have been to their regular doctor if he or she had been available. This is lower than in Canada (46\%) but higher than France (24\%) (Figure 2.25).

According to complementary data from the ABS Patient Experience survey, the main reason for visits to the ED that were not urgent was the time of day (57\%) – supporting the argument that accessibility of primary care is an issue in inappropriate ED presentations (Figure 2.26).

A different perspective on gaps or lack of accessibility of healthcare is given by the number of patients who leave the ED without treatment. Leaving without treatment suggests that care may not have been patient-centred or the wait was considered too long.

For some 100,000 of the 2.3 million ED visits in NSW in 2012–13, the patient left without receiving treatment (4\% of visits). Over time however the proportion of visits in which the patient did not wait for care has been falling (Figure 2.27).

\begin{footnotesize}
\begin{center}
\begin{figure}[h!]
\begin{center}
\begin{tikzpicture}
\begin{axis}[
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    height=6cm,
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    ymin=0,
    ymax=100,
    legend style={at={(0.5,1.05)},anchor=north},
    yticklabel style={/pgf/number format/1000 sep={,}},
    xtick=data,
    xticklabels={France, New Zealand, Australia, Netherlands, Norway, Germany, NSW, United Kingdom, Switzerland, Sweden, United States, Canada},
    xticklabel style={rotate=90,anchor=east},
    xticklabel style={align=center},
    every node near coord/.style={/pgf/number format/1000 sep={,}},
    nodes near coords align={anchor=west},
    nodes near coords={\pgfmathprintnumber{\pgfplotspointmeta}},
    nodes near coords style={font=\footnotesize,anchor=west},
    bar width=10pt,
    cycle list name=colormark list 1,
]
\addplot coordinates{(France,24) (New Zealand,26) (Australia,27) (Netherlands,29) (Norway,30) (Germany,30) (NSW,33) (United Kingdom,34) (Switzerland,36) (Sweden,41) (United States,44) (Canada,48)};
\addplot coordinates{(France,22) (New Zealand,31) (Australia,33) (Netherlands,37) (Norway,31) (Germany,24) (NSW,33) (United Kingdom,37) (Switzerland,36) (Sweden,44) (United States,49) (Canada,45)};
\legend{2013,2010}
\end{axis}
\end{tikzpicture}
\end{center}
\caption{Commonwealth Fund survey 2010 and 2013. The last time you went to the hospital emergency department, was it for a condition that you thought could have been treated by the doctors or staff at the place where you usually get medical attention? \textsuperscript{a,b}}
\end{figure}
\end{center}
\end{footnotesize}
Figure 2.26: ABS Patient Experience survey 2012–13 Reason for going to ED instead of GP on most recent visit to the ED (other than urgent or referred), NSW

- Time of day/day of week: 57%
- GP does not have required equipment/facilities: 11%
- Waiting time for GP appointment too long: 6%
- Closer than GP when needed: 4%
- Trust/confidence in hospital: 3%
- Emergency department recommended by someone: 3%
- Medical history at hospital/previous relationship: 2%
- Cheaper/cost: 2%

Figure 2.27: Percentage of ED visits for which the patient did not wait for care by quarter, NSW, 2008–2013

- Number of cases who did not wait = 27,671
- Number of ED presentations 2008 (Jul-Sep) = 482,888
- 5.7%

- Number of cases who did not wait = 21,214
- Number of ED presentations 2013 (Apr-Jun) = 573,092
- 3.7%

---

(Ø) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher or lower than NSW.

(¢) The Commonwealth Fund, 2010 Commonwealth Fund International Health Policy survey.


Cost-related barriers to care

Cost concerns a reason to skip recommended care for 15% people

Gaps in financial coverage of healthcare can have important consequences on access to care. In Australia, financial coverage is provided by a mix of public and private sources.

In 2013, 15% of NSW adults reported cost barriers to seeing a doctor, getting a medical test or filling a prescription. This was higher than the United Kingdom and lower than the United States (Figure 2.28).

More specifically, while in 2013, one in 10 NSW adults (9%) said they had skipped a medical test, treatment or follow-up because of cost concerns. This is an improvement over the 2010 result, when 15% of NSW adults skipped these services (Figure 2.29).

In 2013, nearly three in 10 (29%) NSW adults reported not visiting the dentist due to cost – higher than the United Kingdom and Germany (Figure 2.30).

Figure 2.28: Commonwealth Fund survey 2013 During the past 12 months, was there a time when you had a medical problem but skipped the specified care recommended by a doctor because of cost? 

![Pie chart showing cost-related barriers in Australia, United Kingdom, and the United States.](image-url)
Figure 2.29: **Commonwealth Fund survey 2001–13** During the past 12 months, was there a time when you had a medical problem but skipped a medical test, treatment or follow-up that was recommended by a doctor because of cost? (% answering yes)?

![Graph showing data for various countries from 2001 to 2013](image)

- **Australia**: 15%
- **Canada**: 9%
- **New Zealand**: 9%
- **United States**: 15%
- **United Kingdom**: 25%
- **United States**: 20%
- **New Zealand**: 10%
- **United States**: 5%
- **New Zealand**: 0%

---

Figure 2.30: **Commonwealth Fund survey 2013** During the past 12 months, was there a time when you skipped dental care or dental check-ups because of the cost?

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes</th>
<th>No</th>
<th>Not sure / Decline to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>62</td>
<td>92</td>
<td>20</td>
</tr>
<tr>
<td>Germany</td>
<td>66</td>
<td>90</td>
<td>20</td>
</tr>
<tr>
<td>Switzerland</td>
<td>11</td>
<td>88</td>
<td>20</td>
</tr>
<tr>
<td>Sweden</td>
<td>12</td>
<td>87</td>
<td>20</td>
</tr>
<tr>
<td>Netherlands</td>
<td>18</td>
<td>78</td>
<td>20</td>
</tr>
<tr>
<td>France</td>
<td>29</td>
<td>79</td>
<td>20</td>
</tr>
<tr>
<td>Canada</td>
<td>20</td>
<td>78</td>
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</tr>
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<td>Norway</td>
<td>18</td>
<td>75</td>
<td>20</td>
</tr>
<tr>
<td>Australia</td>
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<td>69</td>
<td>20</td>
</tr>
<tr>
<td><strong>NSW</strong></td>
<td>29</td>
<td>70</td>
<td>20</td>
</tr>
<tr>
<td>New Zealand</td>
<td>32</td>
<td>67</td>
<td>20</td>
</tr>
<tr>
<td>United States</td>
<td>33</td>
<td>67</td>
<td>20</td>
</tr>
</tbody>
</table>

---

(Ω) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher or lower than NSW.
Measures of appropriateness relate firstly to *what* was delivered – whether services were tailored to the clinical needs of patients and conform to recognised best clinical practice. Secondly, they relate to *how* services were delivered. People expect to be involved in decisions about their care, for providers to be respectful and sensitive to their cultural and religious values, for dignity and privacy to be protected, for communication to be clear, and for care to be provided without undue disruption. They also expect services that are delivered with due skill and compassion.

Appropriateness encapsulates questions of whether the ‘right’ services were provided – right in terms of clinically indicated, evidence-based and relevant; and in the ‘right way’ – with sufficient technical competence, matching patient preferences and values. It is quantified primarily through the use of process measures, but crucially focuses on whether the processes delivered matched patients’ needs and were delivered according to their reasonable expectations.

Appropriateness measures include:

- Assessments of whether services are evidence-based or in line with current best practice. This includes **underuse** (medically necessary care not provided); **overuse** (medically unnecessary care provided); and **misuse** (care not provided correctly).

- Assessments of responsiveness which focus on how people are treated when seeking healthcare, the environment in which they are treated and the extent to which services are tailored to patient circumstances, values and expectations.

- Continuity measures which assess whether care is uninterrupted, integrated and coordinated across practitioners, services and organisations.

- Assessments of patient engagement, or the extent to which patients and their carers participate in their own healthcare.

### Appropriateness: How does NSW measure up?

<table>
<thead>
<tr>
<th>Leading the way – areas of higher, or improving, performance</th>
<th>Aim for the best – areas of lower, or deteriorating, performance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appropriateness in mental healthcare</strong> is improving; both in provision of recommended community follow-up within seven days of discharge and in reduced seclusion events.</td>
<td>Caesarean section rates are high and continue to increase – 32% of births in NSW are caesarean sections.</td>
</tr>
<tr>
<td>In 2013, one in 10 adults reported experiencing a medical error in the previous two years – fewer than most countries surveyed.</td>
<td>Preventive care is not uniformly provided – survey based reports of blood pressure checks and pap tests (cervical cancer screening) were lower than in many comparator countries.</td>
</tr>
<tr>
<td>Comparing internationally, hospitalised adults in NSW were most likely to report that the hospital made arrangements for follow-up care post discharge – 81% reporting such arrangements were made.</td>
<td>Responsiveness of GPs, in terms of involving patients, spending time with them and coordinating their care, decreased between 2010 and 2013. Latest results (2013) are mid-range internationally.</td>
</tr>
</tbody>
</table>
Childbirth

Caesarean section rate in NSW is twice as high as in Sweden

32% increase in babies born by caesarean in NSW

242 babies delivered by caesarean per thousand in 2001

319 babies delivered by caesarean per thousand in 2011

Births in private and public NSW hospitals

around 4 in 10 are by caesarean in private hospitals

around 3 in 10 are by caesarean in public hospitals

Planning post-hospital care

Hospital arranges follow-up care

For 8 out of 10 patients in NSW

For 5 out of 10 patients in Germany

Healthcare professional discussed medication

For 9 out of 10 patients in NSW

For 6 out of 10 patients in France

Infographics provide a snapshot of performance, for detailed information on these measures see full report (Healthcare in Focus 2013).
Health promotion and prevention

NSW adults least likely to get blood pressure check

Health promotion and prevention activities provide cost effective and sustainable ways to reduce the burden of sickness in the community.\(^1\) The medical delivery of these services is concentrated in primary care settings and includes vaccinations, screening and counselling.

When asked about a range of preventive treatments, between four and six in 10 NSW adults reported receiving these services – placing the state mid-range internationally (Figure 3.1).

In 2013, six in 10 NSW adults (63%) said they had their blood pressure checked in the previous year, and fewer than half (46%) had their cholesterol checked. While blood pressure monitoring was the most common of these preventive measures received in NSW, the state’s result was the lowest internationally.

In 2013, four in 10 NSW adults (39%) said they had been reminded to make a preventive healthcare appointment in the past year, and nearly six in 10 NSW adults aged 65+ years (57%) received a seasonal flu shot (Figure 3.1).

Counselling on health behaviours is a key component of health promotion. Over half of NSW adults said their doctor discussed change to healthy eating (50%) or exercise (51%) with them. Fewer adults (30%) reported their doctor discussed alcohol use, however NSW was among the best performers internationally (Figure 3.2).

Figure 3.1: Commonwealth Fund survey 2013 Health checks summary

<table>
<thead>
<tr>
<th>Service</th>
<th>Lowest</th>
<th>NSW</th>
<th>Australia</th>
<th>Highest</th>
<th>Range of results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood pressure checked</td>
<td>49%</td>
<td>68%</td>
<td>89% United States</td>
<td>57%</td>
<td>20-100</td>
</tr>
<tr>
<td>Cholesterol checked</td>
<td>45%</td>
<td>63%</td>
<td>63% NSW</td>
<td>57%</td>
<td>20-100</td>
</tr>
<tr>
<td>Reminders to make appointment</td>
<td>42%</td>
<td>49%</td>
<td>57% Germany</td>
<td>56%</td>
<td>20-100</td>
</tr>
<tr>
<td>Seasonal flu shot (65+)</td>
<td>27%</td>
<td>34%</td>
<td>34% Norway</td>
<td>57%</td>
<td>20-100</td>
</tr>
</tbody>
</table>
Figure 3.2: **Commonwealth Fund survey 2013** During the past two years, have you and your doctor or other clinical staff at the place you usually go to for care, talked about:

<table>
<thead>
<tr>
<th>Country</th>
<th>Healthy Eating (%)</th>
<th>Exercise (%)</th>
<th>Alcohol Use (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>67.1</td>
<td>70.4</td>
<td>32.0</td>
</tr>
<tr>
<td>Australia</td>
<td>53</td>
<td>52</td>
<td>27</td>
</tr>
<tr>
<td>NSW</td>
<td>50</td>
<td>51</td>
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</tr>
<tr>
<td>Canada</td>
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<td>53</td>
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</tr>
<tr>
<td>New Zealand</td>
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<td>51</td>
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<td>21</td>
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<td>Germany</td>
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<td>Sweden</td>
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<td>41</td>
<td>12</td>
</tr>
</tbody>
</table>

(©) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Estimate statistically significantly higher © or lower than NSW ©.
Cancer screening

Just over half of women (aged 50 to 69 years) had a mammogram

Cancer places a significant burden on the people of NSW. In 2011, there were 14,681 cancer-related deaths (Figure 1.2 p. 2). For some cancers, regular screening can detect disease in its early stages – increasing treatment options and improving outcomes.

Breast screening (by mammogram) is currently recommended every two years for women aged 50 to 74 years. According to patient survey data in 2013, just over half (55%) of NSW women aged 50 to 69 years received a mammogram in the previous two years. One in 10 (12%) said they had never been screened (Figure 3.3).

Breast screening (by mammogram) is currently recommended every two years for women aged 50 to 74 years. According to patient survey data in 2013, just over half (55%) of NSW women aged 50 to 69 years received a mammogram in the previous two years. One in 10 (12%) said they had never been screened (Figure 3.3).

Cervical cancer screening is recommended every two years for women aged 18 to 70 years. Only half of NSW women aged 20 to 69 years (52%) had a pap test in the previous two years — more women in Germany, Canada, France and the United States were screened for cervical cancer (Figure 3.4).

Men and women are at increased risk of developing bowel cancer after age 50 and screening every two years is recommended. When asked whether they had been screened for bowel and colon cancer in the previous five years, half of NSW adults aged 50–75 years (49%) said they had (Figure 3.5).

*Screening guidelines by country in target age group and frequency. Further, many countries have registry data that capture screening. Breastscreen Australia calculates that 51% of NSW women aged 20 to 69 years were screened between January 2010 and December 2011.*

---

**Figure 3.3: Commonwealth Fund survey 2013** About how long has it been since you had mammogram or breast cancer screening?  

<table>
<thead>
<tr>
<th>Country</th>
<th>Less than 2 years ago</th>
<th>2 to 3 years ago</th>
<th>More than 3 years ago</th>
<th>Not sure/Decline to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
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<td>Sweden</td>
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<td>3</td>
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<tr>
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<td>2</td>
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<tr>
<td>Norway</td>
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<td>2</td>
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<td>Canada</td>
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<td>Switzerland</td>
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<td>Netherlands</td>
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<tr>
<td>United Kingdom</td>
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<td>20</td>
</tr>
</tbody>
</table>

% of women aged 50 to 69
<table>
<thead>
<tr>
<th>Country</th>
<th>Never</th>
<th>More than 5 years ago</th>
<th>2 to 5 years ago</th>
<th>Less than 2 years ago</th>
</tr>
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<tbody>
<tr>
<td>Germany</td>
<td>72</td>
<td>6</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>France</td>
<td>69</td>
<td>17</td>
<td>9</td>
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<tr>
<td>United States</td>
<td>69</td>
<td>13</td>
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<tr>
<td>Canada</td>
<td>64</td>
<td>14</td>
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<tr>
<td>Australia</td>
<td>59</td>
<td>17</td>
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<tr>
<td>New Zealand</td>
<td>57</td>
<td>16</td>
<td>11</td>
<td>5</td>
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<tr>
<td>Switzerland</td>
<td>55</td>
<td>25</td>
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<tr>
<td>Norway</td>
<td>53</td>
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<td>7</td>
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<tr>
<td>Sweden</td>
<td>52</td>
<td>19</td>
<td>10</td>
<td>17</td>
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<tr>
<td>NSW</td>
<td>52</td>
<td>19</td>
<td>10</td>
<td>17</td>
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<tr>
<td>Netherlands</td>
<td>33</td>
<td>31</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>28</td>
<td>16</td>
<td>9</td>
<td>29</td>
</tr>
</tbody>
</table>

**Figure 3.4: Commonwealth Fund survey 2013** About how long has it been since you had a pap test / cervical smear? (1)

<table>
<thead>
<tr>
<th>Country</th>
<th>Never</th>
<th>More than 10 years ago</th>
<th>5 to 10 years ago</th>
<th>Less than 5 years ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
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<td>30</td>
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<td>7</td>
</tr>
<tr>
<td>United States</td>
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<td>26</td>
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<td>Australia</td>
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<td>Canada</td>
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<td>37</td>
<td>2</td>
<td>1</td>
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<td>NSW</td>
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<td>6</td>
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<tr>
<td>Germany</td>
<td>48</td>
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<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Netherlands</td>
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<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Switzerland</td>
<td>32</td>
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<td>5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>28</td>
<td>60</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>New Zealand</td>
<td>27</td>
<td>68</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Norway</td>
<td>18</td>
<td>65</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Sweden</td>
<td>18</td>
<td>71</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

**Figure 3.5: Commonwealth Fund survey 2013** About how long has it been since you had bowel or colon cancer screening? (1)

(1) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher (1) or lower than NSW (1).
Diabetes mellitus occurs when the pancreas does not produce enough insulin (type 1) or the body is resistant to insulin (type 2). Careful control of blood sugar levels, cholesterol, blood pressure and weight help prevent serious ill-health, disability and premature death. Long-term complications of diabetes include renal, circulatory, neurological and ophthalmic disease.

According to survey data in 2013, seven in 10 NSW adults (71%) diagnosed with diabetes had their cholesterol checked and eight in 10 (80%) had their blood pressure checked. Blood pressure checks for NSW were the lowest among the countries surveyed; the United States performed the best with nearly all (97%) diabetic adults checked (Figure 3.6).

Looking across the suite of questions, NSW diabetics reported their doctors were more likely to review behaviours (diet, exercise and smoking) compared with most other systems. Eight in 10 NSW diabetics reported having diet (82%) or exercise (76%) discussed with them (Figure 3.6).

An ‘annual cycle of care’ is a set of patient care processes recommended by the RACGP. Medicare claims data show that only two in 10 NSW diabetics (22%) received all the required tests in the cycle of care in 2011–12; an increase of three percentage points since 2008–09. Delivery of appropriate care varies across Australia, with 16% of the estimated diabetic population getting the annual cycle of care in the Australian Capital Territory, compared with 29% in Tasmania (Figure 3.7).
Figure 3.6: Commonwealth Fund survey 2013 Health check summary for diabetic adults (1)

Figure 3.7: Proportion of people with diabetes receiving a complete annual cycle of care, 2008–09 and 2011–12 (2)

(1) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher (2) or lower than NSW (3).

Medication management

Essential safety processes

Medication-related errors and adverse events are a significant risk to patients and can be reduced through providing information and regular medication reviews.

Overall, NSW performed in the middle to upper range internationally on medication management. Results were consistently higher than France, but lower than the United Kingdom and Canada.

In 2013, among NSW adults on two or more medications, seven in 10 (74%) said their doctor or pharmacist reviewed their medications in the previous year and a similar proportion (68%) reported their doctor or pharmacist informed them of possible side effects.

Less than half of adults in NSW (45%) reported having all three aspects of medication review completed (medication review, explaining side effects and a written list of medications) (Figure 3.8).

NSW adults with a diagnosed chronic condition were more likely to have medication reviews completed than those with no chronic condition (Figure 3.9).

Medication reviews are also essential for patients receiving hospital care. In 2013, almost nine in 10 NSW adults who had been hospitalised overnight (86%) said that the purpose of medications was discussed with them. NSW performs well on this measure (Figure 3.10).

---

**Figure 3.8:** Commonwealth Fund survey 2013  In the past 12 months, has a doctor or pharmacist...

- a) reviewed with you all the medications you take?  
  - Lowest: 0%  
  - Australia: 38%  
  - Highest: 76%  
  - NSW: 74%  
  - United Kingdom: 85%  

- b) explained potential side effects of any medication that was prescribed?  
  - France: 19%  
  - United Kingdom: 75%  
  - Highest: 79%  
  - NSW: 68%  
  - Lowest: 44%  

- c) given you a written list of all your prescribed medications?  
  - France: 19%  
  - United Kingdom: 45%  
  - Highest: 63%  
  - NSW: 46%  
  - Lowest: 8%
Figure 3.9: *Commonwealth Fund survey 2013* Medication review summary by prevalence of chronic condition, NSW (1)

![Bar chart showing medication review summary by prevalence of chronic condition, NSW.](chart1.jpg)

Figure 3.10: *Commonwealth Fund survey 2013* When you left the hospital did someone discuss with you the purpose of taking each of your medications? (1)

![Bar chart showing discussion with patients on medication purpose by country.](chart2.jpg)

(1) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher or lower than NSW (1).
Medical errors

One in 10 adults experienced a medical error

Appropriate care is delivered in a technically competent manner that minimises medical mistakes. The impact of mistakes may not always be health-related. Mistakes can also affect patients’ confidence and trust.

In 2013, one in 10 NSW adults (11%) reported experiencing a medical, medication or lab error in the previous two years. NSW performs better than most international comparators on this measure (Figure 3.11).

Medicines are the most commonly provided healthcare treatment and are associated with a higher incidence of errors and adverse events than other interventions. In NSW, only 3% of adults reported being given the wrong medication or wrong dose by a doctor, nurse, hospital or pharmacist in the previous two years (Figure 3.11).

A similar proportion (5%) said that they thought a medical mistake was made in their treatment or care, in the previous two years and 4% of those who had a diagnostic or test performed, reported being given incorrect results (Figure 3.11).

Patients were more likely to report errors the more doctors they saw. NSW adults who saw four or more doctors were more than twice as likely to report medical errors, medication errors or any error compared with those who saw fewer doctors. There was also a significant difference between seeing one and two doctors, although the impact was less pronounced (Figure 3.12).

Figure 3.11: Commonwealth Fund survey 2013 In the past two years, have you experienced the following?

<table>
<thead>
<tr>
<th>Error Type</th>
<th>Lowest</th>
<th>NSW</th>
<th>Australia</th>
<th>Highest</th>
<th>Range of Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>21% Norway</td>
<td>15% Norway</td>
<td>5%</td>
<td>7% United Kingdom</td>
<td>4% United Kingdom</td>
<td>4% United Kingdom</td>
</tr>
<tr>
<td>13% Norway</td>
<td>8% Norway</td>
<td>3%</td>
<td>4% United Kingdom</td>
<td>2% Germany</td>
<td>11% United Kingdom</td>
</tr>
<tr>
<td>11% United Kingdom</td>
<td>10% United Kingdom</td>
<td>4%</td>
<td>6% Netherlands</td>
<td>4%</td>
<td>9% United Kingdom</td>
</tr>
<tr>
<td>Had a time you thought a medical mistake was made in your treatment or care?</td>
<td>15% Norway</td>
<td>5%</td>
<td>7% United Kingdom</td>
<td>4% United Kingdom</td>
<td>4% United Kingdom</td>
</tr>
<tr>
<td>Been given the wrong medication or wrong dose?</td>
<td>8% Norway</td>
<td>3%</td>
<td>4% United Kingdom</td>
<td>2% Germany</td>
<td>11% United Kingdom</td>
</tr>
<tr>
<td>Been given incorrect results for diagnostic or lab test?</td>
<td>6% Netherlands</td>
<td>4%</td>
<td>6% Netherlands</td>
<td>4%</td>
<td>9% United Kingdom</td>
</tr>
<tr>
<td>Any medical, medication or lab error (% yes)</td>
<td>21% Norway</td>
<td>15%</td>
<td>8% Norway</td>
<td>4% United Kingdom</td>
<td>4% United Kingdom</td>
</tr>
</tbody>
</table>
Figure 3.12: Commonwealth Fund survey 2013 In the past two years, did any of the following errors occur, NSW? 

![Bar chart showing percentages of adults answering yes to specified errors](image)

- Medical error: One doctor seen - 2%, Two or three doctors seen - 6%, Four or more doctors seen - 22%
- Wrong medication or dose: One doctor seen - 1%, Two or three doctors seen - 4%, Four or more doctors seen - 13%
- Any medical, drug or test of error made: One doctor seen - 5%, Two or three doctors seen - 13%, Four or more doctors seen - 34%

(Ω) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Estimate statistically significantly higher Ω or lower than NSW Ω.
Mental health care

Half of psychiatric inpatients received timely post-discharge follow-up

People leaving hospital after an admission for an episode of mental illness are at risk of readmission if they do not receive adequate follow up. The Council of Australian Government’s National Action Plan for Mental Health identified follow up within seven days of inpatient services as a key area for improvement.6

In 2011–12, half of psychiatric inpatients in NSW (52%) received post-discharge follow-up within one week. There has been a nine percentage point increase since 2005–06. There was consistent improvement across all states and territories (Figure 3.13).

Reducing the use of restraint and seclusion in mental health care is also a key priority area.7 In 2012–13 in NSW, there were eight seclusion events per 1,000 bed days – a 25% improvement from 2008–09. Events ranged from fewer than one seclusion event per 1,000 bed days in the Australian Capital Territory to nearly 20 in Tasmania. There was a decline of four percentage points in NSW, a similar decrease to most other states (Figure 3.14).

Figure 3.13: Patients receiving community follow-up within seven days of discharge from a psychiatric admission, 2005–06 to 2011–12 a
Figure 3.14: Rate of seclusion events in public sector hospitals 2009–10 to 2012–13

(Z) AIHW (2013), Mental Health Services in Australia.
Caesarean sections

NSW has a high rate of births by caesarean section

Caesarean section is the surgical delivery of a baby, and is indicated when there is risk to the health of the mother or baby from a vaginal delivery. While appropriate for some, this surgery involves risk and requires more resources.

In 2011, 319 of every 1,000 live births in hospital in NSW were caesarean sections – a 32% increase since 2001. NSW rates are among the highest internationally (Figure 3.15).

There is variation in caesarean section rates across Australian states, between public and private hospitals in NSW.

In NSW in 2011, of the 92,305 babies born, the majority 68,624 (74%) were in public hospitals. Of the public hospital deliveries, 29% were via caesarean, compared with 43% of deliveries in private hospitals (Figure 3.16).

Across NSW hospitals in 2010–11, caesarean section rates varied from 18.3% to almost 47.4% of births. Rates were higher in private hospitals. Variation in caesarean section rates should be interpreted in light of a range of factors including the type of services offered by a hospital* and based on whether the procedure was considered an emergency or non-emergency.

Figure 3.17 does not reveal any clear pattern between the rate of deliveries that were caesarean sections and the proportion of those caesarean sections that were emergencies.

---

* Maternity services in NSW are categorised using the following criteria:
  Level 1: Postnatal only. Level 2: Normal risk delivery only, as Level 1, plus able to cope with sudden unexpected complications until transfer. Level 3: As Level 2, plus may deliver selected moderate risk pregnancies in consultations. Level 4: As Level 3, plus care for mothers and babies at moderate risk. Level 5: As Level 4, plus may deliver selected high risk pregnancies and has Level 4 neonatal service and midwifery on site. Level 6: Care of normal, moderate and high risk deliveries. Obstetric and Anaesthetic Registrar on site 24 hours (hospitals with more than 3,000 births per year).
Figure 3.16: Proportion of deliveries in public and private hospitals by caesarean section, state and territory, 2011 ñ

![Proportion of deliveries in public and private hospitals by caesarean section, state and territory, 2011](image)

% caesarean section deliveries

Tasmania: 29.2, Victoria: 29.4, Western Australia: 29.6, South Australia: 33.3, NSW: 42.5, Australian Capital Territory: 42.6, Queensland: 45.3, Northern Territory: 47.1

Figure 3.17: Hospital variation in percentage of deliveries by caesarean section (public and private hospitals) NSW 2010–11 ñ

![Hospital variation in percentage of deliveries by caesarean section](image)

- Lower proportion of c-sections that were emergencies
- Higher proportion of c-sections that were emergencies

0 5 10 15 20 25 30 35 40 45 50

% of deliveries that were by caesarean section

Level 3 hospitals*: 29.2, Level 4 hospitals*: 29.4, Level 5 hospitals*: 29.6, Level 6 hospitals*: 33.3, Private hospitals: 42.5, Public hospitals: 42.6

OECD, OECD Health Statistics 2013.
NSW Ministry of Health, Adult Admitted Patient Collection, extracted from SAPHaRI, Centre for Epidemiology and Evidence NSW (BHI Analysis).
AIHW, Mothers and Babies 2011.
NSW Health, Mothers and Babies 2010.

Note: Hospitals were grouped according to whether they were above or below median rate of caesarean sections that were emergencies (43%).
Engaging patients in their healthcare helps to ensure better quality care, fewer errors and more positive attitudes towards the healthcare system.\textsuperscript{10}

In 2013, six in 10 NSW adults with a regular General Practitioner (GP)\textsuperscript{*} (58\%) said that their doctor always spends enough time with them. Between 2010 and 2013, the proportion of NSW adults reporting their GP spent enough time with them dropped 16 percentage points. Germany, Australia, the Netherlands and Switzerland also recorded decreases of over 10 percentage points (Figure 3.18).

Similarly over half of NSW adults with a regular GP reported that their care provider always knew their medical history (56\%) (Figure 3.20).

For all three of these measures, NSW consistently performed below Germany and New Zealand, in the same range as Canada and Australia overall, and higher than Sweden.

* The respondents answering questions regarding primary care provision were only those who had a regular GP or a regular place of care. In the text this is shortened to having a regular GP.
Figure 3.19: **Commonwealth Fund survey 2013** When you need care or treatment, how often does the regular doctor / GP or medical staff you see involve you? \(^{(a)}\)

![Chart](image)

% of adults who have a regular place or doctor where they usually go to for their medical care

**New Zealand**
- Always: 75%
- Often: 13%
- Sometimes: 8%
- Rarely or never: 2%
- Not sure / Decline to answer: 1%
- Not applicable: 2%

**Germany**
- Always: 70%
- Often: 13%
- Sometimes: 5%
- Rarely or never: 3%
- Not sure / Decline to answer: 2%
- Not applicable: 1%

**United States**
- Always: 65%
- Often: 19%
- Sometimes: 10%
- Rarely or never: 5%
- Not sure / Decline to answer: 2%
- Not applicable: 1%

**Netherlands**
- Always: 63%
- Often: 19%
- Sometimes: 11%
- Rarely or never: 4%
- Not sure / Decline to answer: 2%
- Not applicable: 1%

**Australia**
- Always: 63%
- Often: 21%
- Sometimes: 11%
- Rarely or never: 2%
- Not sure / Decline to answer: 1%
- Not applicable: 2%

**United Kingdom**
- Always: 61%
- Often: 26%
- Sometimes: 11%
- Rarely or never: 5%
- Not sure / Decline to answer: 2%
- Not applicable: 1%

**Canada**
- Always: 59%
- Often: 23%
- Sometimes: 11%
- Rarely or never: 5%
- Not sure / Decline to answer: 2%
- Not applicable: 1%

**NSW**
- Always: 58%
- Often: 24%
- Sometimes: 11%
- Rarely or never: 2%
- Not sure / Decline to answer: 2%
- Not applicable: 1%

**Switzerland**
- Always: 53%
- Often: 27%
- Sometimes: 13%
- Rarely or never: 4%
- Not sure / Decline to answer: 2%
- Not applicable: 1%

**Norway**
- Always: 51%
- Often: 24%
- Sometimes: 9%
- Rarely or never: 5%
- Not sure / Decline to answer: 2%
- Not applicable: 1%

**France**
- Always: 51%
- Often: 25%
- Sometimes: 12%
- Rarely or never: 8%
- Not sure / Decline to answer: 2%
- Not applicable: 1%

**Sweden**
- Always: 45%
- Often: 25%
- Sometimes: 9%
- Rarely or never: 6%
- Not sure / Decline to answer: 3%
- Not applicable: 1%

\(^{(a)}\) The Commonwealth Fund, 2010 Commonwealth Fund International Health Policy survey.

\(^{(c)}\) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher \(\sigma\) or lower than NSW \(\sigma\).
Clear communication between patients and healthcare professionals is an essential component of appropriateness. It has been shown to have a positive effect on patients’ health and wellbeing.10

In 2013, nearly seven in 10 NSW adults with a regular doctor or place of care (65%) reported always having things explained in a way that was easy to understand – a decrease from almost eight in 10 (79%) in 2010. The Netherlands, Switzerland and Australia also experienced falls of 10 percentage points or more, while Germany improved by that margin (Figure 3.21).

Communicating with patients about what to do when they go home is important both in terms of patient engagement and timely responses to possible complications. In 2013, eight in 10 NSW adults who had stayed in a hospital overnight (76%) received written information about what to do, and what symptoms to watch out for, when they got home. This represents a strong relative performance, nevertheless, two in 10 NSW adults (20%) did not receive written information upon hospital discharge (Figure 3.22).

According to the ABS patient experience survey, a majority of adults said health professionals showed respect for what they had to say (Figure 3.23).

**Figure 3.21: Commonwealth Fund survey 2010 and 2013** When you need care or treatment, how often does your regular doctor / GP or medical staff explain things in a way that is easy to understand? (% answering always) 4.10

<table>
<thead>
<tr>
<th>Country</th>
<th>2013</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>New Zealand</td>
<td>78</td>
<td>80</td>
</tr>
<tr>
<td>United States</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>67</td>
<td>71</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>67</td>
<td>60</td>
</tr>
<tr>
<td>France</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
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<td></td>
</tr>
<tr>
<td>Switzerland</td>
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<td></td>
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<td>56</td>
</tr>
<tr>
<td>Sweden</td>
<td>56</td>
<td>47</td>
</tr>
<tr>
<td>Norway</td>
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<tr>
<td>Sweden</td>
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<td>Netherlands</td>
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<td>Switzerland</td>
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<td>Norway</td>
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<td>59</td>
</tr>
<tr>
<td>Sweden</td>
<td>56</td>
<td>56</td>
</tr>
</tbody>
</table>

% of adults who have a regular GP or GP practice answering *always*
Figure 3.22: Commonwealth Fund survey 2013 When you left the hospital, did you receive written information about what to do when you returned home and what symptoms to watch for? (Ω)

![Bar Chart](chart1.png)

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Not sure/Decline to answer (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>92</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>79</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Canada</td>
<td>78</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>New Zealand</td>
<td>77</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>NSW</td>
<td>76</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>Australia</td>
<td>73</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>France</td>
<td>70</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>69</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>Switzerland</td>
<td>68</td>
<td>33</td>
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<tr>
<td>Germany</td>
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<td>39</td>
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</tr>
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<td>Norway</td>
<td>59</td>
<td>42</td>
<td>4</td>
</tr>
<tr>
<td>Sweden</td>
<td>58</td>
<td>42</td>
<td>4</td>
</tr>
</tbody>
</table>

% of adults who were hospitalised overnight in the past two years

Figure 3.23: ABS Patient Experience survey 2011–12 Thinking about the healthcare professionals you have seen in the last year, how often did they show respect for what you had to say? (℮)

![Bar Chart](chart2.png)

<table>
<thead>
<tr>
<th>Professional</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>77</td>
<td>14</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>NSW</td>
<td>79</td>
<td>12</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Hospital doctor or specialist</td>
<td>72</td>
<td>15</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>NSW</td>
<td>77</td>
<td>13</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Medical specialist</td>
<td>81</td>
<td>11</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>NSW</td>
<td>82</td>
<td>11</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>General practitioner</td>
<td>77</td>
<td>15</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>NSW</td>
<td>78</td>
<td>15</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

% of persons aged 15+ years who used the service

Modern healthcare is complex, with many patients requiring care from a range of professionals and services. Patients want to experience care in a coordinated and seamless way.

In 2013, four in 10 NSW adults who have a regular place of care (37%) reported that their GP always helps coordinate their care – a decrease of 17 percentage points from 2010. Internationally, 2013 results ranged from 18% in Sweden to 50% in New Zealand (Figure 3.24).

Continuity of care and safety depend upon information flow between professionals. Among NSW adults who needed to see a specialist, three quarters (76%) said the specialist had their basic medical information. There was little variability across countries (Figure 3.25).

Information flow from specialists to the GP following an appointment was more variable. For NSW, the proportion of adults who reported their doctor or regular place of care was well informed about their specialist appointment (69%) or hospital visit (72%) was in the mid-range internationally (Figure 3.25).

In terms of coordination with community services following discharge from hospital, most NSW adults who were hospitalised in the previous two years said the hospital made arrangements for follow-up care (81%) – a strong result internationally (Figure 3.25).

NSW adults with any chronic condition were more likely to report good care coordination compared with adults without a chronic condition (Figure 3.26).

Figure 3.24: Commonwealth Fund survey 2010 and 2013 How often does your regular doctor / GP or someone in your doctor’s / GP’s practice help coordinate or arrange the care you receive from other doctors and places? (% answering always) 

<table>
<thead>
<tr>
<th>Country</th>
<th>2013</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>50</td>
<td>37</td>
</tr>
<tr>
<td>Germany</td>
<td>57</td>
<td>37</td>
</tr>
<tr>
<td>United States</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Canada</td>
<td>47</td>
<td>50</td>
</tr>
<tr>
<td>Australia</td>
<td>40</td>
<td>53</td>
</tr>
<tr>
<td>NSW</td>
<td>37</td>
<td>54</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>Netherlands</td>
<td>36</td>
<td>22</td>
</tr>
<tr>
<td>Switzerland</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>Norway</td>
<td>27</td>
<td>33</td>
</tr>
<tr>
<td>Sweden</td>
<td>18</td>
<td>15</td>
</tr>
</tbody>
</table>

% of adults who have a regular GP or GP practice answering always
Figure 3.25: Commonwealth Fund survey 2013 Continuity of care summary.$^{(3)}$

- Specialist has your basic medical information: 81% New Zealand, 76% Sweden & Switzerland, 69% Netherlands, 69% Germany, 81% United Kingdom.
- GP informed after specialist visit: 75% Netherlands, 69% Germany, 72% United Kingdom, 71% Sweden.
- Doctor / place of care informed about the care you received in the hospital: 81% United Kingdom, 72% Netherlands, 55% Sweden.
- Hospital made arrangements for follow-up care: 81% United Kingdom, 81% Germany, 52% Switzerland.

Figure 3.26: Commonwealth Fund survey 2013 Care coordination by presence of a chronic condition for NSW $^{(4)}$

- Someone in GP’s practice helps coordinate care: 47% Any chronic condition, 28% No chronic condition.
- After you left the hospital, did the doctors or staff at the place where you usually get medical care seem informed and up-to-date: 76% Any chronic condition, 64% No chronic condition.

---

(3) The Commonwealth Fund, 2010 Commonwealth Fund International Health Policy survey.
(4) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey, estimate statistically significantly higher $^{(3)}$ or lower than NSW $^{(3)}$. 

Gaps in appropriateness: coordination issues

More coordination problems for those who see more doctors

Patients expect their information to be shared reliably between the professionals who care for them. Issues such as coordination can be difficult to measure and may only be revealed when they are lacking. For example, conflicting advice, or test results that are not available, are indicators of discontinuity in the provision of healthcare.\[^{11}\]

In 2013, 16% of NSW adults who had been to see a doctor in the previous two years reported receiving conflicting advice from different healthcare professionals. Internationally, the proportion of adults receiving conflicting advice ranged from 7% in the United Kingdom to 19% in Netherlands and the United States (Figure 3.27).

NSW had the lowest proportion of adults (6%) reporting there was a time when test results or medical records were not available at the time of their scheduled appointment. The United States was the worst performing country with 17% of adults reporting tests not available (Figure 3.28).

Those who saw more doctors, and were most likely to need coordination, were the most likely to report gaps. NSW adults who saw four or more doctors were twice as likely to report conflicting advice (41%) or the absence of medical information at their scheduled appointment (16%) compared with those who saw two or three doctors (21% and 7% respectively) (Figure 3.29).

---

**Figure 3.27:** Commonwealth Fund survey 2013 In the past two years, when receiving care for a medical problem, was there ever a time when you received conflicting information from different doctors or health care professionals? \(^{10}\)
Figure 3.28: **Commonwealth Fund survey 2013** In the past two years, when receiving care for a medical problem, was there ever a time when test results or medical records were not available at the time of your scheduled medical care appointment? (1, 2, 3)

<table>
<thead>
<tr>
<th>Country</th>
<th>% of adults</th>
<th>Yes</th>
<th>No</th>
<th>Not sure / Decline to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>6%</td>
<td>93%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>7%</td>
<td>90%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Norway</td>
<td>7%</td>
<td>89%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Australia</td>
<td>7%</td>
<td>92%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Germany</td>
<td>6%</td>
<td>90%</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>9%</td>
<td>89%</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Sweden</td>
<td>9%</td>
<td>82%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>France</td>
<td>10%</td>
<td>89%</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>10%</td>
<td>88%</td>
<td>9%</td>
<td>2%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>11%</td>
<td>86%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Canada</td>
<td>11%</td>
<td>67%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>United States</td>
<td>17%</td>
<td>81%</td>
<td>7%</td>
<td>2%</td>
</tr>
</tbody>
</table>

(1) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher (1) or lower than NSW (2).
(2) Adults with responses of not applicable were removed.

---

Figure 3.29: **Commonwealth Fund survey 2013** Tests not available or receiving conflicting advice by number of doctors seen for NSW (3)

<table>
<thead>
<tr>
<th>Number of Doctors Seen</th>
<th>% of adults (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One doctor seen</td>
<td>9</td>
</tr>
<tr>
<td>Two or three doctors</td>
<td>21</td>
</tr>
<tr>
<td>Four or more doctors</td>
<td>41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>You received conflicting information from different doctors or healthcare professionals</th>
<th>Test results or medical records were not available at the time of your scheduled medical care appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of adults who had seen a doctor in the past two years</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

(3) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher (1) or lower than NSW (2).
(4) Adults with responses of not applicable were removed.
Effectiveness
Making a difference for patients

Patients expect that the care given to them will improve their health, quality of life and functioning. This relates to how effective healthcare is at addressing health problems, maximising health and quality of life and whether it is delivered without causing undue harm.

Effectiveness assesses the extent to which services provided reduced the incidence, duration, intensity or consequences of health problems. It includes:

- Measures that assess whether the healthcare services provided made a discernible change to patients’ health and functional status
- Assessments of safety outcomes – whether there were any adverse events
- Measures of public trust and confidence in healthcare professionals, organisations and systems.

**Effectiveness: How does NSW measure up?**

<table>
<thead>
<tr>
<th>Leading the way – areas of higher, or improving, performance</th>
<th>Aim for the best – areas of lower, or deteriorating, performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 2010 and 2013, the proportion of adults saying the healthcare system works pretty well increased from 24% to 50%.</td>
<td></td>
</tr>
<tr>
<td>Breast cancer survival is high in NSW compared with other countries, and premature mortality from breast cancer is decreasing.</td>
<td></td>
</tr>
<tr>
<td>Half of people using community mental health services said they were definitely helped by the services received – a further 35% were somewhat helped.</td>
<td></td>
</tr>
<tr>
<td>Hospitalisation rates for medical or surgical complications are higher in NSW than in comparator countries.</td>
<td></td>
</tr>
<tr>
<td>Only four in 10 adults with a chronic health problem said they felt very confident that they could manage it – although comparator countries report similar results.</td>
<td></td>
</tr>
<tr>
<td>Between 2010 and 2013, the proportion of adults rating GP care as excellent decreased from 77% to 69% – the steepest fall internationally.</td>
<td></td>
</tr>
<tr>
<td>Hospitalisations for post-operative pulmonary embolism and deep vein thrombosis are relatively high in NSW.</td>
<td></td>
</tr>
</tbody>
</table>
Effectiveness – a link between…

Whole system views

2010

- 24% The system works well and only minor changes are necessary
- 51% Some good things in our system, but fundamental changes are needed
- 25% So much wrong with it, need to completely rebuild it.

2013

- 50% The system works well and only minor changes are necessary
- 39% Some good things in our system, but fundamental changes are needed
- 8% So much wrong with it, need to completely rebuild it.

Specific patient outcomes

Years of life lost due to heart attacks before the age of 70
Premature mortality due to heart attack improved by 50% between 2001 to 2011

- 148 years lost for every 100,000 people in 2001
- 73 years lost for every 100,000 people in 2011

Improved by 50%

Hospitalisations for complications following surgical and medical care

- Germany: 382 per 100,000 people
- NSW: 314 per 100,000 people
- France: 111 per 100,000 people

Infographics provide a snapshot of performance, for detailed information on these measures see full report (Healthcare in Focus 2013).
Assessing whether healthcare interventions work, or are effective, can be approached from a range of perspectives. While objective measures of effectiveness are important, perhaps the most salient perspective is that of the patient. When considering the overall effectiveness of the healthcare system, patient perspectives can justifiably be widened to include all citizens.

In 2013, the Commonwealth Fund survey asked adults in 11 countries about their overall view of the healthcare system. In NSW, half of all adults (50%) said that the healthcare system worked pretty well; and around one in 10 said that there was so much wrong with the system that it needed a complete rebuild. Only the United Kingdom outperformed NSW.

Between 2010 and 2013 the proportion of NSW adults reporting that the system worked pretty well increased by 26 percentage points from 24% to 50% (Figure 4.2).

In 2013, seven in 10 NSW adults (69%) said the care they received from their GP or clinic was very good or excellent – a decrease from eight in 10 (77%) in 2010. Ratings of overall care have declined between 2010 and 2013 across most international comparator systems (Figure 4.3).
Effectiveness

HEALTHCARE IN FOCUS 2013: Chapter 4 Effectiveness

Figure 4.2: Commonwealth Fund survey 2010 and 2013 Which of the following statements comes closest to expressing your overall view of the healthcare system in this country?  

- (a) The Commonwealth Fund, 2010 Commonwealth Fund International Health Policy survey.
- (b) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher (∗) or lower (‡) than NSW.

Figure 4.3: Commonwealth Fund survey 2010 and 2013 Overall, how do you rate the medical care that you received in the past 12 months from your GP’s practice or clinic? (% answering excellent or very good)  

- (a) The Commonwealth Fund, 2010 Commonwealth Fund International Health Policy survey.
- (b) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher (∗) or lower (‡) than NSW.
Effectiveness in diabetes and heart disease care
Fewer than four in 10 feel confident managing health problems

Assessments of effectiveness ask questions about whether interventions work. Interventions include a wide range of services that affect patient outcomes in the short-term (such as pharmaceutical treatments); medium-term (supporting patients to manage their own care); and long-term (such as preventive care and behaviour change).

For short-term outcomes, in 2013 among NSW adults with diabetes, heart disease or high cholesterol, most (85%) said that their blood pressure was in the normal range – or under control. This was higher than many comparator countries (Figure 4.4).

In terms of providing support for self-management, among NSW adults with diabetes, heart disease or high cholesterol, four in 10 (37%) said they felt very confident in managing their health problems – a level of effectiveness that is mid-range internationally (Figure 4.5).

In the long-term, effectiveness of public health and prevention efforts can be assessed, at least in part, by prevalence of modifiable risk factors. Across NSW as a whole, there is a mixed picture, with an overall improvement in inadequate exercise, high risk alcohol use and smoking, but prevalence remains high. Meanwhile there has been a 27% increase in obesity (Figure 4.6).

Figure 4.4: Commonwealth Fund survey 2013 Last time your blood pressure was checked, was it under control, in the normal range?

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes, it was under control</th>
<th>No, high blood pressure</th>
<th>Don’t know / Decline to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>86</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>NSW</td>
<td>85</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>84</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>France</td>
<td>84</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>United States</td>
<td>84</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Australia</td>
<td>83</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Sweden</td>
<td>83</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Norway</td>
<td>82</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Germany</td>
<td>73</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>71</td>
<td>22</td>
<td>7</td>
</tr>
<tr>
<td>Switzerland</td>
<td>67</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>60</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>% of adults with diabetes, heart disease, hypertension or high cholesterol</td>
<td>0</td>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>
Figure 4.5: Commonwealth Fund survey 2013 How confident are you that you can control and manage your health problems? 17

<table>
<thead>
<tr>
<th>Country</th>
<th>Very confident</th>
<th>Confident</th>
<th>Not very confident</th>
<th>Not at all confident</th>
<th>Don’t know / Decline to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>43</td>
<td>48</td>
<td>7</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>42</td>
<td>45</td>
<td>8</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>42</td>
<td>49</td>
<td>8</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>41</td>
<td>51</td>
<td>8</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>38</td>
<td>52</td>
<td>8</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>37</td>
<td>50</td>
<td>11</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>36</td>
<td>55</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>31</td>
<td>53</td>
<td>9</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>24</td>
<td>51</td>
<td>21</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>22</td>
<td>48</td>
<td>20</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>20</td>
<td>63</td>
<td>11</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>19</td>
<td>74</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

% of adults with diabetes, heart disease or high cholesterol

Figure 4.6: Trend in prevalence of health risks, NSW, 2002 and 2012 5

- Inadequate physical activity
- Alcohol consumption at levels posing lifetime risk
- Smoke daily or occasionally
- Obese

(Ω) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher or lower than NSW.

(c) NSW Ministry of Health, Population Health survey extracted from SAPHaRI, Centre for Epidemiology and Evidence NSW.
Patient reported outcome measures (PROMs) give a unique perspective on effectiveness of care – delivering information only a patient can provide. PROMs are particularly valuable in mental health where outcomes and effectiveness can otherwise be difficult to measure. In 2010 and 2011 the NSW Health patient survey was tailored for use by people accessing mental health services. The survey asked users of community mental health services whether as a result of the services they received:

- Overall, were you helped by the services you received?
- Are you better in your work, school or other usual activities?
- Are you able to get along better with your family and people close to you?
- Do you feel better prepared to deal with daily problems?

Most patients indicated that the services they received had a positive impact (Figure 4.7).

Analysis of the survey data also revealed specific elements of care most strongly associated with outcomes.

Figure 4.8 shows that, among patients who said that they were definitely doing better in their work, school or other activities as a result of services received, 68% said that their care was completely responsive to their needs. Conversely among those who said they were not doing better in their work school or other activities, 32% said their care was not responsive.

Similarly, the question Did staff help you deal with your problems? when answered negatively, was strongly associated with negative reported outcomes across all four PROMs.

Figure 4.7: NSW Health Patient Survey 2010 and 2011 Patient reported outcomes, community mental health services

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes, definitely</th>
<th>Yes, somewhat</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you better in your work, school, or other usual activities?</td>
<td>36</td>
<td>42</td>
<td>22</td>
</tr>
<tr>
<td>Do you feel better prepared to deal with daily problems?</td>
<td>42</td>
<td>43</td>
<td>16</td>
</tr>
<tr>
<td>Are you able to get along better with your family and people close to you?</td>
<td>45</td>
<td>40</td>
<td>15</td>
</tr>
<tr>
<td>Overall, were you helped by the services you received?</td>
<td>54</td>
<td>35</td>
<td>11</td>
</tr>
</tbody>
</table>
Of the 54% who reported they were definitely helped by the services they received...

- 70% said their care was completely responsive to their needs.
- 68% said staff always helped them deal with their problems.
- 66% said staff definitely helped make arrangements if they needed another visit.
- 71% said they were always given reassurance and support about their ability to recover.
- 70% said they definitely understood their treatment plan.
- 57% said doctors or nurses or healthcare professionals definitely gave their family or someone close to them all the information they needed to help them recover.
- 59% said someone always told them about self-help or support groups.
- 57% said they definitely were told what danger signals about their condition to watch out for.

Of the 42% who reported they were definitely able to get along better with family and people close to them...

- 66% said their care was completely responsive to their needs.
- 68% said staff always helped them deal with their problems.
- 60% said they were always given reassurance and support about their ability to recover.
- 68% said they definitely understood their treatment plan.
- 60% said doctors or nurses or healthcare professionals definitely gave their family or someone close to them all the information they needed to help them recover.
- 67% said they definitely were told what danger signals about their condition to watch out for.

Of the 36% who reported they were definitely doing better in work, school and other usual activities...

- 69% said their care was completely responsive to their needs.
- 32% said their care was not responsive to their needs.
- 52% said staff did not help make arrangements if they needed another visit.
- 44% said they were not given reassurance and support about their ability to recover.
- 59% said someone did not tell them about self-help or support groups.
- 64% said they were not told what danger signals about their condition to watch out for.

Of the 45% who reported they were definitely feeling better prepared to deal with daily problems...

- 72% said their care was completely responsive to their needs.
- 70% said staff always helped them deal with their problems.
- 71% said they were always given reassurance and support about their ability to recover.
- 73% said they definitely understood their treatment plan.
- 67% said they definitely were told what danger signals about their condition to watch out for.

Of the 22% who reported they were not doing better in work, school and other usual activities...

- 40% said their care was completely responsive to their needs.
- 37% said their care was not responsive to their needs.
- 30% said staff did not help make arrangements if they needed another visit.
- 44% said they were not given reassurance and support about their ability to recover.
- 39% said someone did not tell them about self-help or support groups.
- 60% said they were not told what danger signals about their condition to watch out for.

Of the 11% who reported they were not helped by the services they received...

- 69% said their care was completely responsive to their needs.
- 32% said their care was not responsive to their needs.
- 52% said staff did not help make arrangements if they needed another visit.
- 44% said they were not given reassurance and support about their ability to recover.
- 59% said someone did not tell them about self-help or support groups.
- 64% said they were not told what danger signals about their condition to watch out for.

Of the 19% who reported they were not able to get along better with family and people close to them...

- 40% said their care was completely responsive to their needs.
- 37% said their care was not responsive to their needs.
- 30% said staff did not help make arrangements if they needed another visit.
- 44% said they were not given reassurance and support about their ability to recover.
- 39% said someone did not tell them about self-help or support groups.
- 60% said they were not told what danger signals about their condition to watch out for.

Of the 15% who reported they were not feeling better prepared to deal with daily problems...

- 50% said their care was completely responsive to their needs.
- 40% said their care was not responsive to their needs.
- 44% said staff did not help make arrangements if they needed another visit.
- 44% said they were not given reassurance and support about their ability to recover.
- 59% said someone did not tell them about self-help or support groups.
- 64% said they were not told what danger signals about their condition to watch out for.

Of the 11% who reported they were not helped by the services they received...

- 69% said their care was completely responsive to their needs.
- 32% said their care was not responsive to their needs.
- 52% said staff did not help make arrangements if they needed another visit.
- 44% said they were not given reassurance and support about their ability to recover.
- 59% said someone did not tell them about self-help or support groups.
- 64% said they were not told what danger signals about their condition to watch out for.

Of the 22% who reported they were not doing better in work, school and other usual activities...

- 40% said their care was completely responsive to their needs.
- 37% said their care was not responsive to their needs.
- 30% said staff did not help make arrangements if they needed another visit.
- 44% said they were not given reassurance and support about their ability to recover.
- 39% said someone did not tell them about self-help or support groups.
- 60% said they were not told what danger signals about their condition to watch out for.

Of the 15% who reported they were not feeling better prepared to deal with daily problems...

- 50% said their care was completely responsive to their needs.
- 40% said their care was not responsive to their needs.
- 44% said staff did not help make arrangements if they needed another visit.
- 44% said they were not given reassurance and support about their ability to recover.
- 59% said someone did not tell them about self-help or support groups.
- 64% said they were not told what danger signals about their condition to watch out for.

Note Based on analysis of all community mental health patient respondents.
Unplanned hospital readmissions can point to suboptimal patient management or poor care coordination. Some unplanned readmissions may however be unavoidable, occurring when a patient’s condition unexpectedly deteriorates.

In 2011, the Commonwealth Fund focused on ‘sicker adults’, which refers to people who are likely to have had direct experience with the health system in the recent past. In 2011, almost one in 10 of NSW sicker adults (9%) who had been hospitalised or had surgery in the previous two years, reported that following hospital discharge, they were either readmitted or visited the emergency department because of complications (Figure 4.9).

Administrative data show that proportionally, the reasons for hospitalisation that were most likely to result in an unplanned readmission in NSW were cancer, anaemia and diseases of the blood, mental health conditions and endocrine conditions, such as diabetes. Two in 10 hospitalisations for cancer (21%) and anaemia (20%) resulted in unplanned readmissions (Figure 4.10).

Figure 4.9: Commonwealth Fund survey 2011 After you were discharged, were you readmitted to a hospital or did you have to go to an ED within a month as a result of complications that occurred during your recovery? $^\dagger$

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes, readmitted to hospital or ED or both</th>
<th>Not sure / Declined to answer</th>
<th>Had no complication / No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>94</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>France</td>
<td>92</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Australia</td>
<td>90</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>NSW</td>
<td>89</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Sweden</td>
<td>89</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Netherlands</td>
<td>89</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Switzerland</td>
<td>89</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Norway</td>
<td>88</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>New Zealand</td>
<td>88</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>United States</td>
<td>88</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>87</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>87</td>
<td>12</td>
<td>1</td>
</tr>
</tbody>
</table>
Figure 4.10: Most frequent recorded reasons for hospitalisation, that was followed by an unplanned hospital readmission (public and private), NSW, 2011–12.

(II) The Commonwealth Fund, The Commonwealth Fund’s 2011 International survey of Sicker Adults in Eleven Countries. Sicker adults reported at least one of the following: fair / poor self-rated health, chronic condition, hospitalisation or surgery in the previous two years.

(c) NSW Ministry of Health, extracted from SAPHaRI, Centre for Epidemiology and Evidence NSW (BHI analysis).
Complications of surgical or medical care can follow primary care, hospital care or community care. Rates can serve as short-term indicators of gaps in effectiveness. It is recognised however that not all complications are avoidable and rates should be interpreted with caution. In 2011, there were 100 deaths in NSW attributed to complications of surgical or medical care.3

Between 2001 and 2011, NSW saw a 26% increase in rates of hospitalisations for complications – from 256 to 314 per 100,000 population. Over that period, NSW had higher rates than most comparator countries (Figure 4.11).

Across the state in 2011–12, the most commonly recorded complications (by principal diagnosis), were wound infections (4,626 hospitalisations) representing 20% of the total (Figure 4.12).

Sepsis after elective surgery is a severe complication that can lead to multiple organ dysfunction and death. It usually results from less severe, localised infections, which should be avoided or promptly treated. Many cases of postoperative sepsis can be prevented through the appropriate use of prophylactic antibiotics, sterile surgical techniques and good postoperative care.

In 2011–12, there were 526 cases of postoperative sepsis recorded in NSW at a rate of 1,055 per 100,000 surgical discharges. Between 2005–06 and 2011–12, there was a 17% increase in the post-operative sepsis rate. More recent data shows a decrease in rates from a high of 1,063 per 100,000 people in 2009–10 (Figure 4.13).
**Figure 4.12:** Number of hospitalisations (public and private) by type of complications of surgical or medical care, NSW, 2012–13.

<table>
<thead>
<tr>
<th>Complication</th>
<th>Number of Hospitalisations</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection and inflammatory reaction due to internal joint prosthesis</td>
<td>993 (4%)</td>
<td></td>
</tr>
<tr>
<td>Cardiac and vascular prosthetic devices, implants and grafts</td>
<td>1,291 (6%)</td>
<td></td>
</tr>
<tr>
<td>Internal joint prosthesis</td>
<td>1,515 (7%)</td>
<td></td>
</tr>
<tr>
<td>Haemorrhage and haematoma complicating a procedure</td>
<td>3,184 (14%)</td>
<td></td>
</tr>
<tr>
<td>Wound infection following a procedure</td>
<td>4,626 (20%)</td>
<td></td>
</tr>
<tr>
<td>All complications</td>
<td>23,013 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

OECD, OECD Health Data 2013.

NSW Ministry of Health, extracted from SAPHaRI, Centre for Epidemiology and Evidence NSW (BHI analysis).

**Figure 4.13:** Post-operative sepsis rate (public and private), males and females, NSW, 2005–06 to 2011–12.

OECD, OECD Health Data 2013.

NSW Ministry of Health, extracted from SAPHaRI, Centre for Epidemiology and Evidence NSW (BHI analysis).
Mind the effectiveness gap – adverse events

Higher rates of post–operative events in NSW

Adverse events are unintended incidents caused by healthcare that sometimes can lead to patient harm.

Three important types of adverse events are post–operative pulmonary embolism and deep vein thrombosis, and severe lacerations from childbirth. The rate of post–operative pulmonary embolism (PE) and deep vein thrombosis (DVT) can be reduced through the use of appropriate preventive measures (such as use of anticoagulants), PE and DVT are more likely to occur following surgery for hip and knee replacements.4

In 2011–12, there were 2,486 PEs or DVTs recorded in NSW, a rate of 1,150 per 100,000 hospital discharges. Rates were higher in NSW than in other comparator countries (Figure 4.14).

Third and fourth degree tears are severe vaginal lacerations extending from the perineum to the anal sphincter and anus occurring during spontaneous or assisted vaginal delivery. Vaginal tears are associated with pain, incontinence, and impaired sexual function. These types of tears can be reduced by employing appropriate labour management and care standards. A third- or fourth-degree trauma is more likely to occur in the case of first vaginal delivery, high birth weight or instrumental delivery.4

Between 2002 and 2011 third and fourth degree tears in NSW have increased from 1.4% to 2.0% of births. While this represents a marked increase, other states and territories have seen larger increases (Figure 4.15).

Figure 4.14: Hospitalisations (public and private) for post–operative pulmonary embolism and deep vein thrombosis, 2011 (or most recent)4–9

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>548</td>
<td>564</td>
<td>564</td>
<td>564</td>
<td>564</td>
<td>564</td>
<td>564</td>
<td>564</td>
<td>564</td>
<td>564</td>
<td>564</td>
</tr>
<tr>
<td>Germany</td>
<td>600</td>
<td>650</td>
<td>650</td>
<td>650</td>
<td>650</td>
<td>650</td>
<td>650</td>
<td>650</td>
<td>650</td>
<td>650</td>
<td>650</td>
</tr>
<tr>
<td>Switzerland</td>
<td>440</td>
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<td>440</td>
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</tr>
<tr>
<td>Canada</td>
<td>719</td>
<td>735</td>
<td>735</td>
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<td>735</td>
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<td>735</td>
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</tr>
<tr>
<td>Sweden</td>
<td>780</td>
<td>800</td>
<td>800</td>
<td>800</td>
<td>800</td>
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<td>800</td>
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<tr>
<td>New Zealand</td>
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<td>934</td>
<td>934</td>
<td>934</td>
<td>934</td>
</tr>
<tr>
<td>Australia</td>
<td>1,150</td>
<td>1,266</td>
<td>1,266</td>
<td>1,266</td>
<td>1,266</td>
<td>1,266</td>
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<td>1,266</td>
<td>1,266</td>
<td>1,266</td>
<td>1,266</td>
</tr>
<tr>
<td>Australia (2013)</td>
<td>1,013</td>
<td>1,013</td>
<td>1,013</td>
<td>1,013</td>
<td>1,013</td>
<td>1,013</td>
<td>1,013</td>
<td>1,013</td>
<td>1,013</td>
<td>1,013</td>
<td>1,013</td>
</tr>
</tbody>
</table>
Figure 4.15: Proportion of births resulting in third and fourth degree vaginal tears, 2002–2011

(©) OECD, OECD Health Data 2013.
(©) AIHW, AIHW Mothers and Babies 2011.
(©) NSW Ministry of Health, extracted from SAPHaRI, Centre for Epidemiology and Evidence NSW.
Potentially preventable hospitalisations are admissions that could have been avoided, either by preventive measures or by access to timely and appropriate healthcare. In the case of chronic diseases, hospitalisations may also represent a missed opportunity to halt disease development, years or even decades earlier.

In the short-term, hospitalisations for acute diabetic complications (such as ketoacidosis or diabetic coma) are considered potentially preventable. While it is not possible to eliminate all hospitalisations or complications, rates can be reduced when the condition is well-managed. In 2011 in NSW, the hospitalisation rate for short-term diabetes complications was higher than in many international comparators (Figure 4.16).

More broadly, across a range of chronic conditions considered potentially preventable, NSW had lower rates of hospitalisations, than those recorded across Australia. Between 2008–09 and 2011–12, the rate of potentially preventable hospitalisations for chronic disease in NSW decreased from 13.9 to 10.4 per 1,000 population (Figure 4.17).

Potentially avoidable deaths (or mortality) can reflect the overall effectiveness of prevention and treatment efforts over a longer time horizon. Potentially avoidable deaths include: (i) potentially preventable deaths that can be reduced through primary prevention efforts such as immunisation and screening, and (ii) deaths from potentially treatable conditions that are amenable to therapy or treatment. In NSW between 1994 and 2007*, there was a 40% decline in potentially avoidable mortality (Figure 4.18).

Figure 4.16: Hospitalisation rate for short-term diabetes complications (age-sex standardised), 2011*

<table>
<thead>
<tr>
<th>Country</th>
<th>Age-sex standardised hospitalisations per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>9</td>
</tr>
<tr>
<td>Germany</td>
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</tr>
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<td>Sweden</td>
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<td>Norway</td>
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<td>Canada</td>
<td>20</td>
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<td>France</td>
<td>22</td>
</tr>
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<td>New Zealand</td>
<td>23</td>
</tr>
<tr>
<td>Australia</td>
<td>24</td>
</tr>
<tr>
<td>NSW</td>
<td>26</td>
</tr>
<tr>
<td>Other countries</td>
<td>30</td>
</tr>
</tbody>
</table>

* Results are for the most up-to-date information at the time of publication. Results may have subsequently changed.
Figure 4.17: Potentially preventable hospitalisations due to chronic conditions, 2008–09 and 2011–12

![Graph showing hospitalisations per 1,000 population by state or territory in 2008–09 and 2011–12.](image)

- **NSW** (2011–12): 26.0
- **NSW** (2008–09): 13.9
- **Australian Capital Territory** (2011–12): 11.7
- **Tasmania** (2011–12): 12.6
- **Western Australia** (2008–09): 10.7
- **South Australia** (2008–09): 11.3
- **Victoria** (2008–09): 11.4
- **Northern Territory** (2008–09): 21.0

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>2008–09</th>
<th>2011–12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Capital Territory</td>
<td>8.5</td>
<td>11.7</td>
</tr>
<tr>
<td>Tasmania</td>
<td>9.1</td>
<td>12.6</td>
</tr>
<tr>
<td>Western Australia</td>
<td>10.4</td>
<td>13.9</td>
</tr>
<tr>
<td>Australia</td>
<td>10.7</td>
<td>16.5</td>
</tr>
<tr>
<td>South Australia</td>
<td>11.3</td>
<td>15.5</td>
</tr>
<tr>
<td>Victoria</td>
<td>11.4</td>
<td>15.3</td>
</tr>
<tr>
<td>Queensland</td>
<td>12.5</td>
<td>18.5</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>21.0</td>
<td>26.0</td>
</tr>
</tbody>
</table>

Figure 4.18: Potentially avoidable mortality (preventable and amenable), NSW, 1994–2007

![Graph showing age-standardised rate of premature deaths per 100,000 population by year from 1994 to 2007.](image)

- **Total**
- **Preventable causes**
- **Amenable causes**

- **1994**
- **2001**
- **2007**

---


(2) Canadian Institute for Health Information, Health indicators.

(3) NSW Ministry of Health, Centre for Epidemiology and Evidence. Health Statistics New South Wales. Mortality from amenable causes involves deaths that could be potentially avoided through efforts such as effective disease treatment or screening. Mortality from preventable causes focus on deaths from conditions that may be avoided through primary prevention efforts (such as, injury prevention, vaccination).
Short and long-term effectiveness – AMI mortality

Heart attack care among the best and continuing to improve

A heart attack (acute myocardial infarction or AMI) occurs when the blood supply to part of the heart is interrupted. The interruption is most commonly due to a coronary artery affected by atherosclerosis. The disruption to cardiac blood flow results in death of heart cells and if blood supply is not restored quickly, the heart muscle suffers permanent damage.

In 2011, heart attacks accounted for 3,401 deaths in NSW (7% of all deaths), compared with 5,010 deaths in 2000 (11% of all deaths).\(^2,6\)

In terms of premature mortality, there was a 50% decrease in potential years of life lost to heart attack in NSW between 2001 and 2011. Taking a long-term view of effectiveness of healthcare services in preventing premature deaths, fewer years of life were lost in NSW than in other countries (Figure 4.19).

A shorter-term view of effectiveness in caring for heart attack patients is provided by looking at deaths within 30 days of a hospitalisation. Nine per cent of people admitted to hospital with a heart attack in NSW died within 30 days of admission – a rate similar or lower than that reported in other countries (Figure 4.20).

In a detailed study released in December 2013,\(^7\) data on variation across NSW hospitals in 30-day mortality following hospitalisation for a heart attack showed that, when taking into account comorbidities and other confounders, there were seven hospitals with higher than expected mortality, and three hospitals with lower than expected mortality (Figure 4.21).

Figure 4.19: Potential years of life lost (< 70 years), acute myocardial infarction, 2001–2011\(^\text{c, A}\)
Figure 4.20: Case-fatality in adults aged 45+ years within 30 days of admission for AMI, 2011

Figure 4.21: AMI 30-day risk standardised mortality ratio, NSW public hospitals, July 2009 – June 2012

(⊙) OECD, OECD Health Statistics 2013.
(Â) ABS, ABS causes of death (customised report).
(c) NSW Ministry of Health, SAPHaRI, Centre for Epidemiology and Evidence NSW.
(fl) Bureau of Health Information, The Insights Series: 30-day mortality following hospitalisation, five clinical conditions, NSW, July 2009–June 2012.
Cancer is characterised by uncontrolled growth and spread of abnormal cells. In 2011, there were 14,681 cancer deaths (malignant neoplasms) in NSW.3

Potential years of life lost (PYLL) is a summary measure of premature mortality – as such it is a long-term indicator of effectiveness, albeit one that is difficult to directly attribute clearly to any healthcare organisation or professional. Across NSW between 2001 and 2011, potential years of life lost to cancer fell by 14%. Internationally NSW performs well, with one of the lowest rates of premature mortality (Figure 4.22).

Standardised mortality rates, while reflecting aspects of effectiveness, are blunt measures that often reflect the population burden of disease rather than performance. Greater insight is gathered from relative survival data which report the proportion of patients alive five years after diagnosis (after taking into account other causes of death). For patients diagnosed in 2002–2006*, NSW five-year relative survival following a breast cancer diagnosis was high in international terms (Figure 4.23).

Cancer is, in essence, a group of different diseases. Cancers of the prostate, bowel, breast, skin and lung are the most common in NSW. Figure 4.24 shows that across the state between 2006 and 2011, there was a decrease in the years of life lost to all of these cancers – the steepest declines were for breast (12%) and prostate (13%) cancer.

Figure 4.22: Potential years of life lost (< 70 years), cancer, 2001–2011 *

* Results are for the most up-to-date information at the time of publication. Results may have subsequently changed.
Figure 4.23: Breast cancer five-year relative survival 2006–2011 (or nearest available)\(^\circ\) - \(^\gamma\)

![Bar chart showing five-year relative survival for various countries over the years 2006 to 2011.](image)

Figure 4.24: Potential years of life lost (< 70 years) cancer, 2006–2011, NSW\(^\Delta\)

![Bar chart showing potential years of life lost for different types of cancer from 2006 to 2011.](image)

\(^\circ\) OECD, OECD Health Statistics 2013.

\(^\Delta\) ABS, ABS causes of death (customised report).

Performance encompasses value for money, acknowledging that a system or organisation that achieves more valued outcomes for each dollar or human resource invested is performing better.

_Efficiency_ is often cast in terms of output efficiency – or the relationship between inputs (resources invested in healthcare) and outputs (volumes of services produced). Output efficiency (sometimes referred to as _productivity_) means using resources to maximise the production of goods or services. As such, productivity is an instrumental component of efficiency, a prerequisite to transforming resources to maximise or optimise outcomes.

In a healthcare context however, it is important to go beyond this focus on throughputs to develop the more meaningful concept of _outcome efficiency_. Acknowledging that ‘more services are not necessarily better’, outcome efficiency incorporates the idea of an optimal production of health for the investments put into the system.

Measurement of efficiency can in some cases only be achieved when it is lacking. _Waste and inefficiency_ can include poor integration of care, unnecessary bureaucracy and administration and duplication of services.

### Efficiency: How does NSW measure up?

<table>
<thead>
<tr>
<th>Leading the way – areas of higher, or improving, performance</th>
<th>Aim for the best – areas of lower, or deteriorating performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW gets good value for its healthcare dollar – no comparator country spent less and had lower premature mortality.</td>
<td>Medical tests are unnecessarily duplicated – as reported by 11% of NSW adults.</td>
</tr>
<tr>
<td>Average length of stay in hospitals (public and private) are consistently lower than in comparator countries, across a range of conditions.</td>
<td>Around one in 10 joint replacements have to be repeated – 12% of hip replacements and 7% of knee replacements are revisions, although NSW has a relatively low revision rate compared with other Australian states.</td>
</tr>
<tr>
<td>More efficient care for asthma – hospitalisation rates are decreasing, with shorter stays and fewer readmissions.</td>
<td>Consistently over a five year period, 5% of ED visits were re-presentations – that is, they were a patient’s second visit in a 48 hour period.</td>
</tr>
</tbody>
</table>
Efficiency – a link between...

Healthcare services and Patient outcomes

5,000 years lost for every 100,000 people

Lower spending and poorer health than NSW

Higher spending and poorer health than NSW

$0 spent on health per person

$14,000 spent on health per person

No country has lower spending and better health than NSW

Higher spending and better health than NSW

Infographics provide a snapshot of performance, for detailed information on these measures see full report (Healthcare in Focus 2013).
Value for money

No country spent less and had lower premature mortality

Life expectancy or rates of premature mortality are widely used as broad-brush indicators of health system performance. Some insight into efficiency is provided when such health outcome measures are viewed in relation to input measures, such as health expenditures per person.

In 2011, NSW’s total current health expenditure in NSW was $40 billion. This corresponds to $5,503 per person. A majority of expenditure went towards hospital care (44%), and on services provided by physicians’ offices (16%). (Figure 5.2).

Another broad system level measure that offers insight into health system efficiency is the level of administrative costs. High costs can be seen as a diversion of funds away from productive use. The proportion of total health expenditure spent on administration in NSW was 1.6% – lower than in most comparator countries (Figure 5.3).

---

* Potential Years of Life Lost (PYLL) is a summary measure of premature mortality. The calculation for PYLL involves adding up deaths occurring at each age and multiplying this with the number of years of life to live until a selected age limit (70 years).

** Expenditures are presented in $AU Australian dollars for all countries, expenditures are adjusted using a measure of purchasing power parity, which shows how much the same good or service will cost across countries.
Figure 5.2: Percentage of current health expenditure by main type of provider, 2011

![Graph showing percentage of current health expenditure by main type of provider, 2011.]

Figure 5.3: Percentage of current health expenditure on administration, 2011

![Graph showing percentage of current health expenditure on administration, 2011.]

*OECD, OECD Health Data 2013. Most recent values for potential years of life lost are for 2009 for Canada, France, New Zealand and for 2010 for Sweden, Switzerland, US and UK.*

*AIHW, AIHW Health Expenditures (special request) for NSW and Australia 2011. Data represent all expenditure in NSW (Commonwealth government; state government, private insurance and out-of-pocket). Values are based on OECD system of health accounts and may differ from AIHW published results.*

*ABS, ABS Cause of Death (customised report).*
Across Australian states, hospitals consume 30–44% of total current health expenditure. Examining variation in hospital expenditures and processes can contribute to an understanding of overall system efficiency.

Variation in the average cost of providing care for an admitted patient is often used to gauge the efficiency of hospital care. Average costs are adjusted to take into account the complexity of patients’ healthcare needs. In 2011–12, the average cost of an acute separation for NSW was estimated to be $5,455. Average costs range from $4,985 in Victoria to $6,575 in the Australian Capital Territory (Figure 5.4).

Hospital efficiency in treating patients can also be assessed using the relative stay index (RSI). The RSI is the average length of patient stays compared with the length of stay expected, given patient needs. Assuming the service quality and outcomes are not affected, a relative stay index below one (< 1) is desirable.

In 2011–12, NSW had a higher than expected length of stay for the patients receiving care (RSI > 1) for both medical and surgical hospitalisations (Figure 5.5).

Figure 5.4: Recurrent hospital cost per case-mix adjusted separation, selected public hospitals, 2011–12.
### Figure 5.5: Relative stay index, indirectly standardised, patients in public hospitals, by medical, surgical hospitalisations, 2011–12

<table>
<thead>
<tr>
<th></th>
<th>Relative stay index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria</td>
<td>0.90</td>
</tr>
<tr>
<td>Queensland</td>
<td>0.66</td>
</tr>
<tr>
<td>Tasmania</td>
<td>1.06</td>
</tr>
<tr>
<td>Australian Capital Territory</td>
<td>1.00</td>
</tr>
<tr>
<td>Australia</td>
<td>0.95</td>
</tr>
<tr>
<td>Western Australia</td>
<td>1.02</td>
</tr>
<tr>
<td>South Australia</td>
<td>1.05</td>
</tr>
<tr>
<td>NSW</td>
<td>1.06</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>1.10</td>
</tr>
</tbody>
</table>

Notes:
- (Z) AIHW, *Australian Hospital Statistics 2011–12*.
- (U) AIHW, *Health Expenditure Australia, 2011–12*. 

---

**Efficiency**

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Length of stay – circulatory disease

NSW has short hospital stays

Average length of stay (ALOS) can be used as a proxy for efficiency in hospitals. All other things being equal, a shorter stay will reduce costs per hospitalisation.

For three major circulatory diseases, acute myocardial infarction (AMI, heart attack), congestive heart failure and cerebrovascular disease (stroke), the average length of stay in NSW was shorter than many comparator countries (Figure 5.6).

Factors that may influence length of stay at a healthcare system level, include guidelines and payment systems; while at a hospital level physician practice differences have been shown to be influential.7

While NSW as a whole has relatively short ALOS, there was variation across hospitals in the state. For heart attack hospitalisations ALOS ranged from 1–19 days, for heart failure from 1–15 days and for stroke from 1–22 days. Compared with heart attack stays, variation was more marked for heart failure and stroke hospitalisations (Figures 5.7).

Importantly, a shorter length of stay may not always be better for patients, particularly if it results in complications or negatively impacts the comfort and recovery of patients.

---

Figure 5.6: Average length of stay for heart attack, congestive heart failure and stroke (public and private hospitals), 2011 (or most recent) 4,5,6

[Bar chart showing average length of stay in days for different countries and conditions, with descending order: United States, Norway, Australia, Netherlands, France, Sweden, Canada, Germany, Switzerland, United Kingdom, New Zealand.]

---
Figure 5.7: Public hospital variation Average length of stay, 2011–12, NSW

Heart attack

Heart failure

Stroke

Note: OECD, OECD Health Data 2013.
NSW Ministry of Health, extracted from SAPHaRI, Centre for Epidemiology and Evidence NSW. Overnight acute episodes only, and hospitals with admitted patients for diagnosis given.
NSW consistently recorded low average length of stay (ALOS) across a range of musculoskeletal (arthritis of the hip and knee) and respiratory (asthma, pneumonia and chronic obstructive pulmonary disease) conditions (Figure 5.8).

For asthma, where NSW had relatively low ALOS, time series data show that between 2001 and 2011 there was a 13% decrease in ALOS (Figure 5.9).

To better understand performance, ALOS data can be examined alongside rates of hospitalisation and unplanned readmissions. An efficient system would treat more patients outside hospital for conditions such as asthma, and for those who were hospitalised, ALOS would be as short as possible without worsening outcomes.

Taking asthma as an example, NSW recorded an improvement in performance over a decade with fewer hospitalisations, fewer unplanned readmissions and shorter lengths of stay (Figure 5.10).

Figure 5.8: Variation in average length of stay, 2011 (or most recent)
Figure 5.9: Average length of stay for asthma, 2001–02 to 2011–12

Figure 5.10: Changes in asthma-related hospitalisations, average length of stay and readmissions NSW, 2001–02 to 2011–12

(© OECD, OECD Health Data 2013.
(© NSW Ministry of Health, extracted from SAPHaRI, Centre for Epidemiology and Evidence.)
Right care, first time

Around one in 10 hip and knee replacements are revisions

Efficiency is complex and multifaceted and so can be difficult to define and measure meaningfully, either at a system or an organisational level. However it is often possible to explore factors affecting efficiency in various parts of the health sector by examining inefficiencies or waste. Waste, in this context can include duplication of services, errors, inefficient processes and over-priced inputs.\(^8\)

In 2013, one in 10 NSW adults (11%) said that they had experienced a duplication in medical testing – placing the state mid-range among international comparators (Figure 5.11).

Revision rates for joint replacement surgery (that is the proportion of hip and knee replacement surgeries that were repeat procedures – due to prosthesis failure) can also be used as an indicator of inefficiency. In 2011–12, 12.0% of hip replacements and 6.8% of knee replacements were revisions. NSW had relatively low revision rates compared with other Australian states (Figure 5.12).

Emergency department (ED) visits that are followed by an unplanned re-presentation to an ED within 48 hours may likewise indicate sub-optimal care. Among all unplanned ED visits from 2006–2012, 5% were re-presentations, that is they were a patient’s second emergency ED visit within 48 hours. While the overall number of ED presentations increased by 23% between 2006 and 2012, the percentage of visits that were re-presentations has remained stable. (Figure 5.13).

Figure 5.11: Commonwealth Fund survey 2013 In the past two years, when receiving care for a medical problem, was there ever a time doctors ordered a medical test that you felt was unnecessary because the test had already been done? \(^7\)

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes</th>
<th>No</th>
<th>Not sure / Decline to answer</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>4</td>
<td>84</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5</td>
<td>89</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>New Zealand</td>
<td>6</td>
<td>93</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Canada</td>
<td>7</td>
<td>91</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Norway</td>
<td>8</td>
<td>89</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Australia</td>
<td>9</td>
<td>90</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>NSW</td>
<td>11</td>
<td>85</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>France</td>
<td>11</td>
<td>87</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Netherlands</td>
<td>14</td>
<td>81</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Germany</td>
<td>15</td>
<td>80</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>United States</td>
<td>15</td>
<td>82</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Switzerland</td>
<td>18</td>
<td>75</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>
Figure 5.12: Revision rates for hip and knee replacement surgery, states and territories 2011–12 (a)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Victoria</th>
<th>NSW</th>
<th>Queensland</th>
<th>Australian Capital Territory</th>
<th>Tasmania</th>
<th>Western Australia</th>
<th>South Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip replacement</td>
<td>11.7</td>
<td>12.0</td>
<td>13.6</td>
<td>14.0</td>
<td>14.2</td>
<td>15.0</td>
<td>15.4</td>
</tr>
<tr>
<td>Knee replacement</td>
<td>7.5</td>
<td>6.8</td>
<td>7.2</td>
<td>7.6</td>
<td>8.8</td>
<td>7.8</td>
<td>10.6</td>
</tr>
</tbody>
</table>

% of procedures

Figure 5.13: Percentage of emergency presentations that were re-presentations within 48 hours, by quarter NSW, 2006–2012 (c)

- Percentage of presentations that represent within 48 hours
- Number of presentations

(Ω) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Percentages may not add up to 100 due to rounding, estimate statistically significantly higher or lower than NSW.
(a) Australian Orthopedic Association, Analysis of State and Territory Health Data All Arthroplasty, Supplementary report 2013.
(c) NSW Ministry of Health, extracted from SAPHaRI, Centre for Epidemiology and Evidence NSW (BHI analysis).
**Hospital bed occupancy**

**Bed occupancy rates in mid-range internationally**

Hospital bed occupancy rates* provide an indication of the extent to which hospital bed resources are maximised, while ensuring there are available beds for admitting new patients in a timely manner and preventing bed shortages. Occupancy rates higher than 90% have been associated with higher rates of adverse events and longer waiting times in the ED.⁹

High occupancy rates can either reflect long average lengths of stay or high turnover. Low occupancy is a sign of potential inefficiency in resource use. A conventional target to balance maximising use with limiting delays in admission is 85% occupancy.¹⁰

NSW has an occupancy rate of 87% based on all public and private hospital separations, and the average estimated bed count for 2011–12. This is in the mid-range internationally (Figure 5.14).

In NSW, occupancy rates for private hospitals tend to be slightly lower than in public hospitals. However the inclusion of same day stays (which are higher in private hospitals) in the calculation of rates, may contribute to this difference (Figure 5.15).

Across NSW, Local Health Districts (LHDs) occupancy rates for June 2013 varied from a low of 59% (Far West LHD) to a high of 98% (St Vincent’s Health Network) (Figure 5.16).

**Balancing performance**

Occupancy rates are lower in rural LHDs than in urban LHDs. While low occupancy can indicate inefficiency, this is often a deliberate choice made to boost performance in other areas such as accessibility, appropriateness and equity. Looking across a range of dimensions, overall performance could be assessed to be stronger in rural LHDs, despite lower efficiency.

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* Occupancy rate is based on the average number of patient days for overnight and same day admitted patients in 2011–12, divided by 365 days, divided by the average number of hospitals beds.
Figure 5.15: Estimated occupancy rates, reported patient days, and beds (public and private), NSW and Australia, 2011–12

<table>
<thead>
<tr>
<th></th>
<th>Patient days</th>
<th>Estimated beds</th>
<th>Occupancy rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NSW</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8,887,856</td>
<td>27,851</td>
<td>87.4</td>
</tr>
<tr>
<td>Public</td>
<td>6,434,979</td>
<td>20,073</td>
<td>87.8</td>
</tr>
<tr>
<td>Private</td>
<td>2,452,877</td>
<td>7,778</td>
<td>86.4</td>
</tr>
<tr>
<td><strong>Australia</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27,736,250</td>
<td>86,641</td>
<td>87.7</td>
</tr>
<tr>
<td>Public</td>
<td>18,991,036</td>
<td>58,420</td>
<td>89.1</td>
</tr>
<tr>
<td>Private</td>
<td>8,745,214</td>
<td>28,221</td>
<td>84.9</td>
</tr>
</tbody>
</table>

(℮) OECD, OECD Health Data 2013.
(â) ABS, Private acute and psychiatric hospitals, states and territories 2011–12.

Figure 5.16: Occupancy rates (public hospitals) by Local Health District, NSW, June 2013

<table>
<thead>
<tr>
<th>Local Health District</th>
<th>Occupancy rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>St Vincent’s Health Network</td>
<td>97.8</td>
</tr>
<tr>
<td>South Western Sydney LHD</td>
<td>96.0</td>
</tr>
<tr>
<td>Central Coast LHD</td>
<td>95.5</td>
</tr>
<tr>
<td>South Eastern Sydney LHD</td>
<td>92.5</td>
</tr>
<tr>
<td>Northern NSW LHD</td>
<td>92.5</td>
</tr>
<tr>
<td>Illawarra Shoalhaven LHD</td>
<td>91.5</td>
</tr>
<tr>
<td>Mid North Coast LHD</td>
<td>90.4</td>
</tr>
<tr>
<td>Northern Sydney LHD</td>
<td>89.8</td>
</tr>
<tr>
<td>Sydney Children’s Hospital Network</td>
<td>89.6</td>
</tr>
<tr>
<td>Sydney LHD</td>
<td>89.2</td>
</tr>
<tr>
<td>Nepean Blue Mountains LHD</td>
<td>88.2</td>
</tr>
<tr>
<td><strong>Total NSW</strong></td>
<td><strong>87.7</strong></td>
</tr>
<tr>
<td>Western Sydney LHD</td>
<td>87.4</td>
</tr>
<tr>
<td>Hunter New England LHD</td>
<td>79.3</td>
</tr>
<tr>
<td>Western NSW LHD</td>
<td>74.2</td>
</tr>
<tr>
<td>Murrumbidgee LHD</td>
<td>70.6</td>
</tr>
<tr>
<td>Southern NSW LHD</td>
<td>67.5</td>
</tr>
<tr>
<td>Far West LHD</td>
<td>58.6</td>
</tr>
</tbody>
</table>

(℮) OECD, OECD Health Data 2013.
(â) ABS, Private acute and psychiatric hospitals, states and territories 2011–12.
Use of resources

Systems with more doctors deliver more timely care

At a system level it would be reasonable to expect that more doctors would be linked with shorter waiting times to see General Practitioners (GPs) or specialists.

In 2011–12, NSW had 164 specialists per 100,000 people – a relatively low number internationally. Around the same time in 2013, NSW had a relatively low proportion of patients with waits of less than four weeks to see a specialist. In contrast, Switzerland, the United States and Germany had a high number of specialists per 100,000 population and patients there were most likely to be seen promptly by a specialist (Figure 5.17).

Across Australia, there appears to be a similar relationship; regions with a higher number of GPs have higher proportions of people seen quickly for urgent care. NSW has the highest number of full time equivalent GPs (104 per 100,000 population) but is in the mid-range for waiting times to get an appointment with a GP (Figure 5.18).

Figure 5.17: Specialists per 100,000 population (2011), and percentage of population waiting less than four weeks to see a specialist after being advised to (2013)

* Occupancy is based on the average number of patient days for overnight and same day admitted patients in 2011–12, divided by 365 days, divided by the average number of hospitals beds.
Balancing performance

While high levels of investment in doctors may dampen measures of efficiency, it is important to recognise that they can, at the same time, have a positive effect on timeliness and accessibility.

(Ω) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey.
(Ž) AIHW, Australian Hospital Statistics 2011–12.
(℮) OECD, OECD Health Data 2013. (values for Netherlands and Sweden are for 2010 for specialist density).
Equity in health assesses whether everyone in a population has the opportunity to reach their full health potential. Ensuring equitable care is part of ensuring equity in health, where care is provided:

- on the basis of clinical need, regardless of personal characteristics such as age, gender, race, ethnicity, income, socioeconomic status or geographic location.

- in a way that reduces systematic differences or disparities in health services use and health outcomes between populations or groups.

Equity is not synonymous with equality. Equity in healthcare includes the notion of ‘fairness’ – those with greater need, need more care, while those with equal needs should receive similar levels of care regardless of their personal characteristics.¹

This chapter focuses on income- and insurance-associated gaps across a range of performance measures.

This entails stratifying the population into two or more groups (for example, those with and without private health insurance) and examining differences in outcomes, reception of care or survey responses between the groups.

Information on equity in healthcare in NSW, beyond our focus on income- and insurance-associated gaps, is available from the NSW Ministry of Health, in particular:


Among patients who were told they needed elective surgery

64% with insurance waited less than a month for elective surgery

42% with no insurance waited less than a month for elective surgery

Among people with existing health problems

96% with above average income felt confident to manage them

82% with below average income felt confident to manage them

Infographics provide a snapshot of performance, for detailed information on these measures see full report (Healthcare in Focus 2013).
Treating patients equitably – on the basis of clinical need – is a fundamental goal of the NSW public healthcare system.

Population groups with greater health needs, such as people with a chronic condition, use more services than people with no chronic condition. In 2013, 44% of NSW adults said they had been told by a doctor they had a chronic health condition.* They were more likely than those with no chronic condition to report being on prescription medication, visiting the emergency department (ED), being hospitalised overnight, having elective surgery or seeing a specialist (Figure 6.1).

Identifying vulnerable populations in NSW

Poorer had more health problems, used similar range of services

Compared with other income groups**, NSW adults with below-average income were more likely to have two or more chronic conditions, to report fair or poor health, or to report that their health limits their daily activities. Despite this, the range of health services used was similar (Figure 6.2).

Profiling income groups, adults with below-average income were more likely to be aged 65+ years, and were less likely to have private insurance compared with those in the above-average income group (Figure 6.3).

---

* Chronic conditions were based on respondents reporting they had been told by a doctor they had: asthma or other respiratory disease, cancer, heart disease, diabetes, depression, hypertension or high cholesterol.

** To determine the respondent’s income group, respondents are told the average income in their country and asked about their income by comparison.
Figure 6.2: Health problems and health services use by income group, NSW 2013)

<table>
<thead>
<tr>
<th>Health problems</th>
<th>Below-average income</th>
<th>Average income</th>
<th>Above-average income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two or more chronic conditions</td>
<td>20</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Fair or poor self rated health</td>
<td>15</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Health limits daily activities</td>
<td>15</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Hospitalised overnight</td>
<td>15</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Consulted a specialist</td>
<td>24</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Visited an emergency department</td>
<td>13</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Had elective surgery</td>
<td>13</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>On prescription medication</td>
<td>49</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>

Healthcare use: used service at least once in past two years

Figure 6.3: Profile of age, residential location and private insurance by income group, NSW 2013)

<table>
<thead>
<tr>
<th>Age categories</th>
<th>Below-average income</th>
<th>Average income</th>
<th>Above-average income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages 65 and over</td>
<td>27</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Rural (outside major cities)</td>
<td>34</td>
<td>33</td>
<td>28</td>
</tr>
<tr>
<td>Private insurance</td>
<td>32</td>
<td>38</td>
<td>71</td>
</tr>
</tbody>
</table>

(Ω) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey.
Income-associated gaps
Poorer less likely to feel they can self-manage chronic conditions

Assessing equity in healthcare delivery often involves examining differences in accessibility, appropriateness and effectiveness between groups within a healthcare system. International surveys provide an opportunity to place such differences in context — allowing comparisons of the ‘gap’ between population subgroups within each country.

For example, seven in 10 NSW adults with above-average income* (67%) reported they could get a primary care appointment the same or next day, while only five in 10 NSW adults with below-average income (52%) could do so. Along with the United States, NSW had the highest income-associated gap for this measure (Figure 6.4).

In 2013, almost all NSW adults in the above-average income group who had a chronic condition reported they felt confident they could manage it (96%), compared with 82% in the below-average income group. This gap of 14 percentage points was the highest internationally (Figure 6.5).

In 2013, compared with adults with above-average income, those with below-average income were less likely to have blood pressure checks, and say that their GP involves them as much as they would like. However, below-average income adults were more likely to say they felt the system worked well and only minor changes are necessary (Figure 6.6).

---

* To determine the respondent’s income group, respondents are told the average income in their country and asked about their income by comparison.

---

**Figure 6.4: Commonwealth Fund survey 2013**

Last time you were sick or needed medical attention, how quickly could you get an appointment to see a doctor or a nurse? Did you get an appointment the same or next day? ᵃ

<table>
<thead>
<tr>
<th>Country</th>
<th>Above-average income</th>
<th>Below-average income</th>
<th>Percentage-point difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>75</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>72</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>70</td>
<td>70</td>
<td></td>
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<tr>
<td>Netherlands</td>
<td>65</td>
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<td>France</td>
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</tr>
<tr>
<td>United Kingdom</td>
<td>56</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>55</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>54</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>52</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>43</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>43</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>36</td>
<td>36</td>
<td></td>
</tr>
</tbody>
</table>

% of adults who reported getting a GP appointment the same day or next day

---

öt 04 06 08
0 0 10 20 30 40 50 60 70 80 90 100

---

³
Figure 6.5: Commonwealth Fund survey 2013  How confident are you that you can control and manage your health problems? (Ω)

Figure 6.6: Commonwealth Fund survey 2013  Summary of responses by income status (Ω)

(Ω) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Estimate for below-average income group is compared to above average income group and statistically significantly differences are noted.
Insurance-associated gaps

Those with private insurance more likely to report short waits

The ‘insurance-associated gap’ in healthcare, offers another lens through which to look at differences in performance. In this case, between those who have private health insurance compared with those who do not.

For example, among NSW adults without private insurance, four in 10 who needed elective or non-emergency surgery (42%) waited less than a month, compared with over six in 10 of those with private insurance (64%). Looking internationally, this gap was less pronounced in New Zealand, and there was no significant gap in Canada (Figure 6.7).

Insurance-associated gaps in receiving appropriate care, such as having blood pressure checks, are also significant for NSW. In 2013, about half of NSW adults without private insurance (52%) had their blood pressure checked in the last year, compared with eight in 10 with insurance (79%) (Figure 6.8).

In 2013, timely access to elective surgery and blood pressure checks represented two of the largest gaps between people with and without private insurance in NSW. NSW adults who have private health insurance were also more likely to report GPs being responsive to their non-medical needs, and feel confident they can manage existing health problems (Figure 6.9).

The likelihood of getting a flu shot for seniors aged 65+ years did not differ based on insurance status. Despite better performance across a range of measures, people with private insurance were less likely to view the overall system as working pretty well (Figure 6.9).

Figure 6.7: Commonwealth Fund survey 2013 After you were advised you needed surgery, how many days, weeks or months did you have to wait for non-emergency or elective surgery?"
Figure 6.8: Commonwealth Fund survey 2013 In the past year, have you had your blood pressure checked?

![Bar chart showing the percentage of adults reporting blood pressure checked in past year by insurance status for NSW, Australia, New Zealand, and Canada. The chart indicates a significant difference between private insurance and no private insurance groups.]

<table>
<thead>
<tr>
<th>Country</th>
<th>No Private Insurance</th>
<th>Private Insurance</th>
<th>% of adults reporting blood pressure checked in past year</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>52</td>
<td>79</td>
<td>27</td>
</tr>
<tr>
<td>Australia</td>
<td>58</td>
<td>82</td>
<td>24</td>
</tr>
<tr>
<td>New Zealand</td>
<td>72</td>
<td>79</td>
<td>6</td>
</tr>
<tr>
<td>Canada</td>
<td>81</td>
<td>88</td>
<td>7</td>
</tr>
</tbody>
</table>

Figure 6.9: Commonwealth Fund survey 2013 Responses by insurance status, NSW 2013

- Could get an appointment to see a doctor or nurse on the same day or next the last time you were sick: 53% No Private Insurance, 62% Private Insurance, 64% Private insurance group significantly different.
- Waited less than one month after you were advised you needed surgery to receive elective surgery (adults who needed elective surgery in the past two years): 42% No Private Insurance, 64% Private Insurance, 64% Private insurance group significantly different.
- Had a flu shot in the past year (aged 65 and over): 57% No Private Insurance, 58% Private Insurance, 58% Private insurance group significantly different.
- Had your blood pressure checked by a doctor or nurse in the past year: 52% No Private Insurance, 79% Private Insurance, 79% Private insurance group significantly different.
- The doctor or medical staff you see always spend enough time with you (adults who have a regular GP/place): 48% No Private Insurance, 72% Private Insurance, 72% Private insurance group significantly different.
- The doctor or medical staff you see always involve you as much as you want to be in decisions about your care (adults who have a regular GP/place): 48% No Private Insurance, 76% Private Insurance, 76% Private insurance group significantly different.
- You feel confident that you can control and manage your health problems (adults with diabetes, heart disease, hypertension or high cholesterol): 61% No Private Insurance, 95% Private Insurance, 95% Private insurance group significantly different.
- You feel on the whole, the system works pretty well and only minor changes are necessary to make it work better: 57% No Private Insurance, 46% Private Insurance, 46% Private insurance group significantly different.

(1) The Commonwealth Fund, 2013 Commonwealth Fund International Health Policy survey. Estimate for below-average income group is compared to above average income group and statistically significantly differences are noted.
Performing well today is important, but current performance must be considered in terms of impact on the ability to perform tomorrow. Sustainability is a concept not unique to health. Broadly speaking, sustainability refers to a capacity to continue an activity or a process indefinitely.¹

Key areas considered in sustainability in healthcare include; economic sustainability, future investments and workforce sustainability.

Economic sustainability looks at drivers of health expenditure increases. Sustainability in healthcare use also involves factoring demographic trends into long-term planning and costs. At the same time, health human resources have to be developed, nurtured and protected from burnout.

Meaningful assessment therefore should consider whether performance is sustainable and how organisational capacity is managing to adapt to changes in circumstances.

A broader assessment of sustainability in future performance reporting may also include:

- Stability in funding and the extent to which funding flows are secure
- The ability to care for staff and maintain a skilled workforce to meet the demand for healthcare services in the future
- Adaptability in terms of the capacity of the system to:
  - adjust to meet changing health needs – for example through innovation, learning and investment
  - develop and adopt improvements in clinical processes
  - adopt innovations and technological development.
Caring for the future

- Ageing patients
- Increasing healthcare costs
- Evolving technology
- Ageing nurses
- Changing work practices

Infographics provide a snapshot of performance, for detailed information on these measures see full report (Healthcare in Focus 2013).
Changes in investments and workforce
An ageing nursing workforce and an influx of young doctors

Internationally, healthcare spending continues to outpace the rate of growth in overall government spending. In NSW, this is seen by the rising percentage that healthcare makes up of the Gross State Product (GSP) – increasing from 7% to 9% in a decade. This has been accompanied by a population that is growing and living longer (Figure 7.1).

Many factors affect the long-term sustainability of a healthcare system beyond ageing. These include wider determinants of health and wellbeing; the burden of disease; innovation, effectiveness and efficiencies in models of delivering care; community expectations; and the health workforce. Changing demographic factors have been shown to have had a modest contribution to the growth in health spending.2

Sustainability in healthcare is about more than what drives increases in costs. In terms of workforce sustainability, a high or increasing proportion of the workforce that are new entrants and/or a low or decreasing proportion of the workforce that is close to retirement is desirable³. In 2011 in NSW, two in 10 medical practitioners (19%) were aged 60+ years – a similar proportion to 2011. However between 2002 and 2011, the proportion of medical practitioners aged under 30 years nearly doubled. In contrast, the proportion of the nursing workforce over 60 years doubled between 2003 and 2012 (Figure 7.2).

Financial indicators that gauge sustainability include measures of investment that either: reduce the burden of disease or achieve early disease detection (public health, prevention); or investigate ways to deliver better healthcare (research and development), and improve service efficiency. Between 2004–05 and 2011–12, public health costs in NSW have remained fairly stable at just under 2% of total (recurrent) expenditure, and investments in research have increased from 2% to 3.4% (Figure 7.3).

<table>
<thead>
<tr>
<th>Expenditure</th>
<th>2001</th>
<th>2011</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Gross State Product on healthcare</td>
<td>7.15%</td>
<td>9.03%</td>
<td>26%</td>
</tr>
<tr>
<td>Healthcare cost per person ($AU constant dollars)</td>
<td>$4,113</td>
<td>$5,759</td>
<td>40%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demographics</th>
<th>2001</th>
<th>2011</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>6.3 million</td>
<td>6.9 million</td>
<td>10%</td>
</tr>
<tr>
<td>65 years and over</td>
<td>13%</td>
<td>15%</td>
<td>15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Life expectancy at birth</th>
<th>2001</th>
<th>2011</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>77.3 years</td>
<td>79.9 years</td>
<td>3%</td>
</tr>
<tr>
<td>Females</td>
<td>82.6 years</td>
<td>84.2 years</td>
<td>2%</td>
</tr>
</tbody>
</table>
Figure 7.2: Healthcare workforce by age, NSW, 2003 and 2012 (or most recent)\(^6\)

![Bar chart showing healthcare workforce by age, NSW, 2003 and 2012](chart.png)

Figure 7.3: Percentage of recurrent (public and private) health expenditure on public health and research, NSW, 2004–05 and 2011–12\(^7\)

![Bar chart showing percentage of recurrent expenditure on public health and research, NSW, 2004–05 and 2011–12](chart2.png)

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\(^6\) ABS, Census 2001 and 2011.

\(^7\) ABS, Life Tables, States, Territories and Australia, 2001 and 2011.


\(\(\uparrow\)\) AIHW, Health Expenditure Australia 2011–12.

\(\(\downarrow\)\) AIHW, Health Expenditure Australia 2004–05.
References

Setting the Scene


Accessibility


**Appropriateness**


### Effectiveness


### Efficiency


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**Equity**


**Sustainability**


Acronyms

ABS – Australian Bureau of Statistics
ALOS – Average Length of Stay
APDC – Admitted Patient Data Collection
EDDC – Emergency department data collection
AMI – Acute myocardial infarction
AIHW – Australian Institute of Health and Welfare
COPD – Chronic Obstructive Pulmonary Disease
DVT – Deep vein thrombosis
ED – Emergency department
GP – General practitioner
GSP – Gross State Product
HIE – Health Information Exchange
ICD-10-AM – International Classification of Diseases, Tenth Revision, Australian Modification
MBS – Medical Benefits Schedule
NSW – New South Wales
OECD – Organisation for Economic Cooperation and Development
PBS – Pharmaceutical Benefits Scheme
PE – Pulmonary Embolism
PPH – Potentially preventable hospitalisations
PROM – Patient reported outcome measures
PYLL – Potential years of life lost
RACGP – Royal Australian College of General Practitioners
SAPhAri – Secure Analytics for Population Health Research and Intelligence
UK – United Kingdom
US – United States
WLCOS – Waiting List Collection On-line
Acknowledgements

The Bureau of Health Information (the Bureau) has been established to be the main source of information for NSW people about the performance of their public system. A NSW-based board-governed organisation, the Bureau is led by Chairperson Professor Bruce Armstrong AM and Chief Executive Jean-Frédéric Lévesque MD, PhD. The Bureau would like to thank our expert international advisors and reviewers, including many colleagues at the NSW Ministry of Health and the Clinical Excellence Commission.

The Bureau would like to thank our expert advisors and reviewers, including Jeremy Veillard from the Canadian Institute for Health Information, as well as many colleagues at the NSW Ministry of Health and the Clinical Excellence Commission. The Bureau of Health Information project team comprised of:

- Lisa Corscadden
- Dr Kim Sutherland
- Douglas Lincoln
- Dr Kerrin Bleicher
- Jill Kaldor
- Carolynn Fredericks
- Dr Diane Hindmarsh
- Suzanne Schindeler
- Tom Chen

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Communications and Stakeholder Engagement

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- Anna Sale
- Faruk Ahmed

Project Support

- Louise Fanning
- Ros O’Sullivan
About the Bureau

The Bureau of Health Information provides the community, healthcare professionals and the NSW Parliament with timely, accurate and comparable information on the performance of the NSW public health system in ways that enhance the system’s accountability and inform efforts to increase its beneficial impact on the health and wellbeing of the people of NSW.

The Bureau is an independent, board-governed statutory health corporation. The conclusions in this report are those of the Bureau and no official endorsement by the NSW Minister for Health, the NSW Ministry of Health or any other NSW statutory health corporation is intended or should be inferred.

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