

## The Insights Series

# Healthcare performance across the life span

Volume 1: Utilisation and experiences of care  
of people aged 55 years and over



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# Foreword

The Bureau of Health Information is privileged to be a principal partner in The Commonwealth Fund International Health Policy Survey. The survey is increasingly used in developed healthcare systems to provide insights into performance — placing results in a broad context and allowing for benchmarking and comparisons to be made across countries, and at sub-national levels where appropriate. Originally drawing comparisons across healthcare systems in five countries — Australia, Canada, New Zealand, the United Kingdom and the United States — the survey's reach has now expanded to include results from eleven countries.

In 2014, the Commonwealth Fund Survey focused, for the first time, on 'older adults' — people aged 55 years and over. BHI funded an enhanced New South Wales sample in order to report meaningfully on performance in the state. This investment provided us with an opportunity to develop insights into healthcare experiences of older adults. We capitalised on this opportunity in three different ways:

- First, we examined how NSW performed relative to Australia and 10 other countries.
- Second, we examined NSW results by age strata — looking for variation in reported experiences of care across three age groups spanning the period from late middle age until death.
- Third, we examined the Commonwealth Fund Survey data alongside information from other sources on utilisation and experiences of care.

This edition of the Insights series includes findings from all three of these approaches. The international perspective, while covered here, is explored more fulsomely in our annual performance report *Healthcare in Focus 2014*, which is published concurrently with this report.

We describe and report on a range of measures but cannot always explain patterns of results. For example, we found that the oldest age group in our analyses — those aged 75+ years — reflected more favourably on primary care services than the other age groups. It is not possible for us to determine, however, whether this is a result of lower expectations of quality and performance among people in the group; an unwillingness to complain about health and healthcare services; or a case of services being responsive to those with the greatest need and appropriately providing enhanced levels of care to older patients.

This report does not draw comparisons between people aged 55 years and over with those aged under 55 years. It is not a reflection of how people age, or of how well or how comprehensively the system provides services to the aged. Instead, it provides a picture of the trajectory of changes in care across part of the life span. With a focus on general measures of utilisation and experiences of care, it uses routine metrics to reflect on differences in the utilisation, timeliness and perceptions of care as people move beyond their 55th birthday.

*Healthcare performance across the life span, Volume 1* represents a first step for BHI in building an understanding of patterns of utilisation and experiences of care through the life cycle. Volume 2, which will focus on those at the beginning of their lives — children and young people — is planned for release in early 2016.

## **Dr Jean-Frédéric Lévesque**

Chief Executive, Bureau of Health Information

# Summary

In 2014, there were about 2 million people aged 55 years and over living in New South Wales, comprising 28% of the total population. *Healthcare performance across the life span* draws on information from six different data sources to explore patterns in experiences of care and utilisation of hospital-based services — comparing across three age groups (55–64 years; 65–74 years; 75+ years).

## Experiences of care

Overall, people in the oldest age group (75+ years) reflected more positively on their experiences in primary care; those in the 65–74 year age group reflected more positively on hospital care; and those in the 55–64 year group were significantly less positive about emergency department (ED) care.

### Commonwealth Fund International Health Policy Survey

People aged 55 + years; public and private healthcare; reference for significance testing 65–74 year age group.

People in the oldest age group (75+ years) answered more positively about accessibility and appropriateness in primary care. Many (71%) indicated they have a ‘medical home’ — a term to describe general practices or clinics that are easily accessible and provide continuity and coordination of care for their patients. The group was also more positive about access to out-of-hours care, although only 33% described it as ‘very easy’.

Most people aged 75+ years said their GP always: spent enough time with them (81%); knew important information about their medical history (85%); and helped coordinate their care (63%). On questions of communication, they said their GP always: encouraged them to ask questions (68%); explained things in a way that was easy to understand (81%); and was responsive in terms of providing answers to telephone queries the same day (61%).

While questions about accessibility of primary care were answered more positively by people in the 75+ year group in NSW, the international results showed that the state as a whole was outperformed by five or more countries on most accessibility measures.

For the 15 questions where NSW performed well internationally, there were few significant differences between age groups. However, NSW had a high proportion of people who said cost concerns prompted them to skip medication — and the age group analysis showed that those in the youngest group (55–64 years) were most likely to report such barriers.

### Emergency Department Patient Survey (EDPS)

People who visited a NSW emergency department; public hospitals; reference for significance testing 65–74 year age group.

The EDPS results show the youngest age group (55–64 years) were consistently less positive about their experiences of care in the ED.

People aged 75+ years were less likely to say that their ED visit was for a condition that could have been treated by a GP — supporting the idea that access to primary care is better for the oldest adults.

### Adult Admitted Patient Survey (AAPS)

Adult patients admitted to NSW public hospitals; reference for significance testing 65–74 year age group.

Overall, results were polarised around age. For seven of the 20 questions analysed, results for both the younger (55–64 years) and the older (75+ years) age groups were significantly less positive than the reference group (65–74 years).

In each age group, almost two in 10 people said they experienced a complication or negative effect during or shortly after their hospital stay; and a similar proportion said their discharge from hospital was delayed.

## Utilisation of care

In line with expectations, people in the oldest age group received more healthcare services per person.

### Emergency Department Data Collection (EDDC)

Administrative database, ED visits made to EDs with electronic data collection (96% of ED visits); public hospitals; no significance testing.

Across all age groups, there was a concentration of ED visits among relatively few people. Within the 75+ year group, 6% of people accounted for 44% of ED visits.

Time to start treatment in the ED did not differ in line with patient age. Appropriately, results aligned more closely with urgency categories than with age group.

Overall, there was a clear age gradient with people aged 75+ years more likely to visit the ED, to have multiple visits, to be admitted to hospital from the ED, and therefore spend more time in the ED. In fewer than half (47%) of ED visits made by people aged 75+ years, patients left within four hours.

### Admitted Patient Data Collection (APDC)

Administrative database, all patient episodes; public and private hospitals; no significance testing.

As in the ED data, hospital utilisation was concentrated among a relatively small number of patients. Within the 75+ year group, 5% of people accounted for 45% of acute overnight bed days.

Reasons for hospitalisation changed with age, with an increasing proportion attributed to circulatory diseases. Those aged 75+ years had the highest proportion of injury-based hospitalisations.

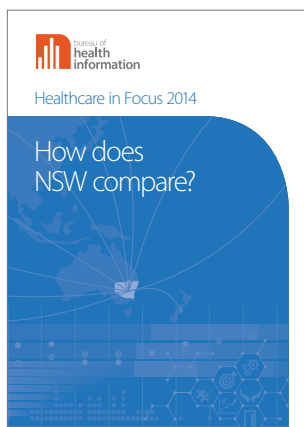
Among people who died in 2013, those aged 75+ years were least likely to have been hospitalised or visit the ED in the last 30 days of life.

### Waiting List Collection On-line System (WLCOS)

Administrative database, all patients waiting to be admitted for planned surgery; public hospitals; no significance testing.

There was little variation across age groups in either the receipt of surgical procedures within clinically recommended time frames or in the median waiting time for urgent and semi-urgent surgery. Median waits for non-urgent surgery were, however, longest for the 75+ years age group.

## Same data. Different insights.



### Looking out

*Healthcare in Focus 2014* is a compendium of performance measures. It features Commonwealth Fund survey results on the views and experiences of healthcare among people aged 55+ years, setting the NSW results in an international context.



### Looking in

*Healthcare performance across the lifespan, Volume 1* explores older patients' experiences and utilisation of healthcare. It features Commonwealth Fund survey results in three age groups: 55 – 64 years; 65 – 74 years and 75+ years.

**VOLUME 2 COMING IN 2016...** *The Insights Series: Healthcare performance across the life span, Volume 2*

# Introduction

New South Wales is ageing. In 2014, there were two million people aged 55+ years and around one million aged 65+ years living in NSW. The number of people aged 65+ years is expected to more than double by 2050, making it the fastest-growing population group in NSW.<sup>1</sup>

These demographic changes are largely due to sustained increases in life expectancy resulting from public health and medical advances over many decades. People are not only living longer, they are generally healthier. Compared to previous generations, age-related illnesses and disabilities occur at a later life stage.

Despite these achievements, providing healthcare for people as they age is a pressing concern across developed countries. The costs of providing healthcare to older adults are sizeable and it is anticipated that health will be a major driver for ageing-related expense growth in NSW over the next 40 years.<sup>1</sup> Importantly though, experience elsewhere has shown that factors other than population ageing — such as utilisation patterns and costs of new technologies — are the major contributors to rising healthcare costs.<sup>2</sup>

Ageing has a variable effect on health and wellbeing. Its impact is shaped by a range of genetic and environmental factors including social activity and support, body weight, and lifestyle and health behaviours such as diet and smoking.<sup>3</sup> Many health problems become more prevalent as people advance in years. Most adults in their 60s and early 70s remain fit, active, and able to care for themselves. However, after the age of 75 many become increasingly affected by chronic diseases and frailty begins to emerge.

## Three age groups

This report provides information about healthcare provided to NSW people aged 55+ years, split into three age groups:

### 1. People aged 55–64 years

Sometimes called ‘late middle age’, people in this age group are generally active in the workforce and many are still engaged in raising families. Characteristics of ‘good’ ageing — mobility, alertness, engagement — have been associated with specific predictive factors measurable in people in their 50s.<sup>4,5</sup> Physiological signs, symptoms and diagnoses that emerge in this age group are harbingers for future health issues.

### 2. People aged 65–74 years

The term ‘young-old’ is sometimes used to describe older adults who are retired from traditional work, but remain physically, mentally and socially active. Most in this group consider themselves to be healthy, although chronic diseases become increasingly prevalent.

### 3. People aged 75+ years

People in this group, termed ‘old’ (and sometimes demarcated into ‘old-old’ for those aged 85+ years) are, as time elapses, increasingly affected by chronic diseases and functional impairments (e.g. vision, hearing, mobility, strength).<sup>6,7</sup> In this group, frailty emerges as a significant issue.

## Context: policy and improvement initiatives

In NSW, there is a whole-of-government approach to helping people remain healthy and independent for as long as possible: *The NSW Ageing Strategy: Smarter, Stronger, Healthier, Safer*. Ageing is also a key consideration in a number of health policy areas, including the *NSW State Health Plan — Towards 2021* and the *Rural Health Plan — Towards 2021*.

A range of relevant safety and quality improvement initiatives led in NSW by the Clinical Excellence Commission (CEC) and the Agency for Clinical Innovation (ACI), and nationally by the Australian Commission on Safety and Quality in Health Care (ACSQHC), are outlined in Figure 1.



Figure 1 Selected safety and quality improvement initiatives in NSW

#### **NSW Falls Prevention Program (CEC)**

Aims to lower the incidence and severity of falls among older people and reduce their social, psychological and economic impact on individuals, families and the community.

#### **Pressure Injury Prevention Project (CEC)**

Aims to foster best practice in the prevention and management of pressure injuries within NSW health facilities.

Enhances patient safety by promoting pressure injury prevention and management among health care professionals and patients.

#### **TOP 5 (CEC)**

Supports and encourages the use of carer knowledge about hospitalised patients with dementia to improve patient outcomes and carer and staff experiences.

#### **Medication Safety and Quality Unit (CEC)**

Supports the safe use of medicines by identifying and addressing emerging medication safety risks. It oversees: Continuity of Medication Management, High-Risk Medicines, Medication Safety Self-Assessment and VTE Prevention.

#### **AMBER Care Bundle Project (CEC)**

A systematic multidisciplinary approach for when clinicians are uncertain whether a patient will recover. It encourages clinicians, patients and families to continue with treatment if they wish, while talking openly about putting in place plans for end of life care.

#### **Minimum Standards for the Management of Hip Fracture in the Older Person (ACI)**

Aims to improve the outcomes of patients with fractured hips requiring surgery and management.

#### **Chronic Disease Management Program (ACI)**

Provides care coordination and self-management support to help people with chronic disease better manage their condition and access services.

Aims to improve health outcomes, prevent complications and reduce the need for hospitalisation.

Actively seeks to enrol and support people with complex needs who are at high risk of hospitalisation, including frail elderly people.

#### **Building Partnerships: A Framework for Integrating Care for Older People with Complex Health Needs (ACI)**

Aims to support local health districts and local agency partnerships to redesign and implement improved models of care for older people.

#### **The Care of the Confused Older Persons Program (ACI)**

A collaboration between ACI and the National Health and Medical Research Council Cognitive Decline Partnership Centre which aims to improve the experiences and outcomes of confused older people in hospital.

#### **Framework for the Statewide Model for Palliative and End-of-Life Care Service Provision (ACI)**

Aims to inform the development of a comprehensive model of care for equitable palliative and end-of-life care service provision in NSW.

#### **National Consensus Statement: Essential elements for safe high-quality end-of-life care (ACSQHC)**

Describes the elements of delivering safe and high-quality end-of-life care.

# About this report

## Conceptual framework and structure

Conceptual frameworks are analytical tools that structure an area of research or assessment, define the scope of enquiry, identify key concepts and organise them into a logical structure. BHI has a framework that assesses healthcare performance in terms of six dimensions: accessibility, appropriateness, effectiveness, efficiency, equity and sustainability.<sup>8</sup>

The report is organised according to data source, with results presented thematically for three of these dimensions: accessibility, appropriateness and effectiveness.<sup>9-13</sup>

**Accessibility:** whether patients' and populations' healthcare needs are met; timeliness of care.

- Quality services available when and where needed

**Appropriateness:** whether evidence-based and guideline-compliant services are provided in a technically proficient way; the extent to which healthcare services are responsive to patients' expectations and needs.

- Good information
- Skilled, respectful workforce
- Seamless services that cater for diversity
- Support and work in partnership with carers
- Technically proficient and safe care.

**Effectiveness:** whether healthcare services address patients' problems and improve their health.

- Complications of care and medical errors
- Independence and ability to stay at home as long as possible
- Death and dying well.

## Scope of the report

*Healthcare performance across the life span, Volume 1* uses a range of data sources to explore aspects of healthcare performance relevant to older people in NSW. With greater levels of interaction with services, older people are expert informants who can help assess performance — particularly in terms of the accessibility, appropriateness and effectiveness of care.

The report is neither a comprehensive evaluation of policy nor a formative assessment of system or hospital performance with regards to care of the elderly. It describes how healthcare services are utilised — i.e. why and how often people were hospitalised or visited an ED — and patients' experiences of care.

For many of the measures, NSW results have been put into an international context in BHI's annual performance report, *Healthcare in Focus 2014*.<sup>14</sup> That report compares NSW results from the Commonwealth Fund International Health Policy Survey of Older Adults with results from Australia and 10 other countries. A summary of these comparisons is shown on pages 8–9 of this report, and more detail is available on BHI's interactive data portal Healthcare Observer.

To help interpret the results, graphs are annotated with icons that signify whether the data refer to public hospitals only or to both public and private hospitals:



Public hospitals



Private hospitals

This first volume focuses on adults aged 55 years and over (55+ years) while a second volume, planned for publication in 2016, will focus on children and young people.

## Data and methods

### 2014 Commonwealth Fund International Health Policy Survey of Older Adults

This survey reflected the experiences of 25,530 adults aged 55+ years in 11 countries: Australia, Canada, Germany, France, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States. The response rate was 31% for Australia. In NSW, 2,800 adults were surveyed between March and May 2014. NSW results were weighted to represent the age, sex, education level and regional distribution of the state. Survey responses were dichotomised and logistic regression was used to estimate odds ratios by age group in NSW, with appropriate adjustment for survey weights. Non-response categories such as 'not sure' were excluded from reporting and analyses. SAS procedure SURVEYLOGISTIC was used for the analysis.<sup>15</sup> Differences between age groups (using 65–74 years as the reference category) were tested at a 5% significance level.

### NSW Ministry of Health datasets

Three key data sources were drawn on for utilisation and waiting time data: the NSW Admitted Patient Data Collection (APDC) (includes all admitted patient services provided by public and private hospitals in the state); the Emergency Department Data Collection (EDDC) (includes all ED services provided by public hospitals with electronic data collection); and the Waiting List Collection On-line System (WLCOS) (a count of patients waiting for planned treatment that covers public patients, either at public hospitals or contracted to private hospitals).

### NSW Patient Survey Program

Adult Admitted Patient Survey results are based on 35,962 respondents (of which 26,765 or 74% were aged 55+ years) who were admitted to larger public hospitals between January and December 2013 (overall response rate 49%). Emergency

Department Patient Survey results are based on 25,854 respondents (of which 13,119 or 51% were aged 55+ years) who visited an ED in a NSW public hospital between April 2013 and March 2014 (overall response rate 30%). Responses were adjusted via weighting in order to represent each hospital's patient population by age group and stay type (AAPS) or mode of separation (EDPS). Significance testing used the method described for the 2014 Commonwealth Fund International Health Policy Survey of Older Adults.

### Describing reasons for ED visits

Clinical information in the EDDC is heterogeneous. There are several different computer programs used across the state's hospital EDs. Different programs use different classifications to record the clinical information, including ICD-9, ICD-10, and SNOMED-CT. Information about presenting complaints is recorded by medical, nursing or clerical personnel at the point of care rather than by trained clinical information managers. Historically, this has hampered efforts to capture reasons for presentation to EDs. For this project, the reason for each ED visit, defined as the principal diagnosis at presentation as recorded in SNOMED-CT, ICD-9-CM and superseded ICD10-AM versions, were mapped to ICD-10-AM V6 and then grouped.

### Hospitalisations and ED visits near end of life

The number of deaths in 2013 by age group, and the number of hospitalisations and emergency visits to an ED within 30 days of death, were calculated using linked APDC, EDDC, and NSW Register of Births, Deaths and Marriages (RBDM) data. Multiple, contiguous episodes and transfers were considered as a single period of care. For counts of people with no hospitalisations or ED visits, the difference between the total number of deaths reported by the Australian Bureau of Statistics (ABS) in 2013, and the number of deaths among patients who had at least one hospitalisation or emergency ED visit near end of life (as documented in the NSW Ministry of Health datasets), was calculated.

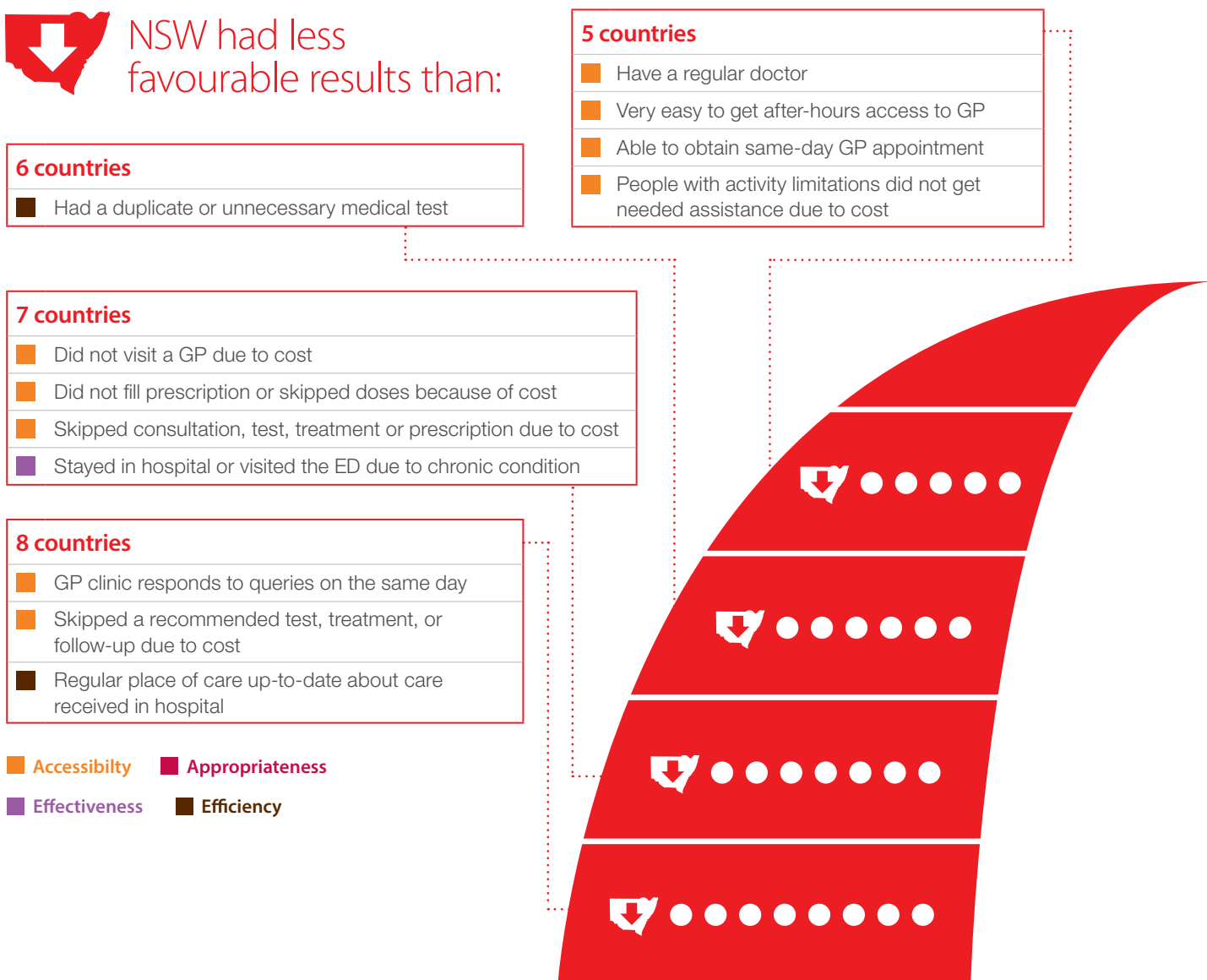
# Overview of international survey findings

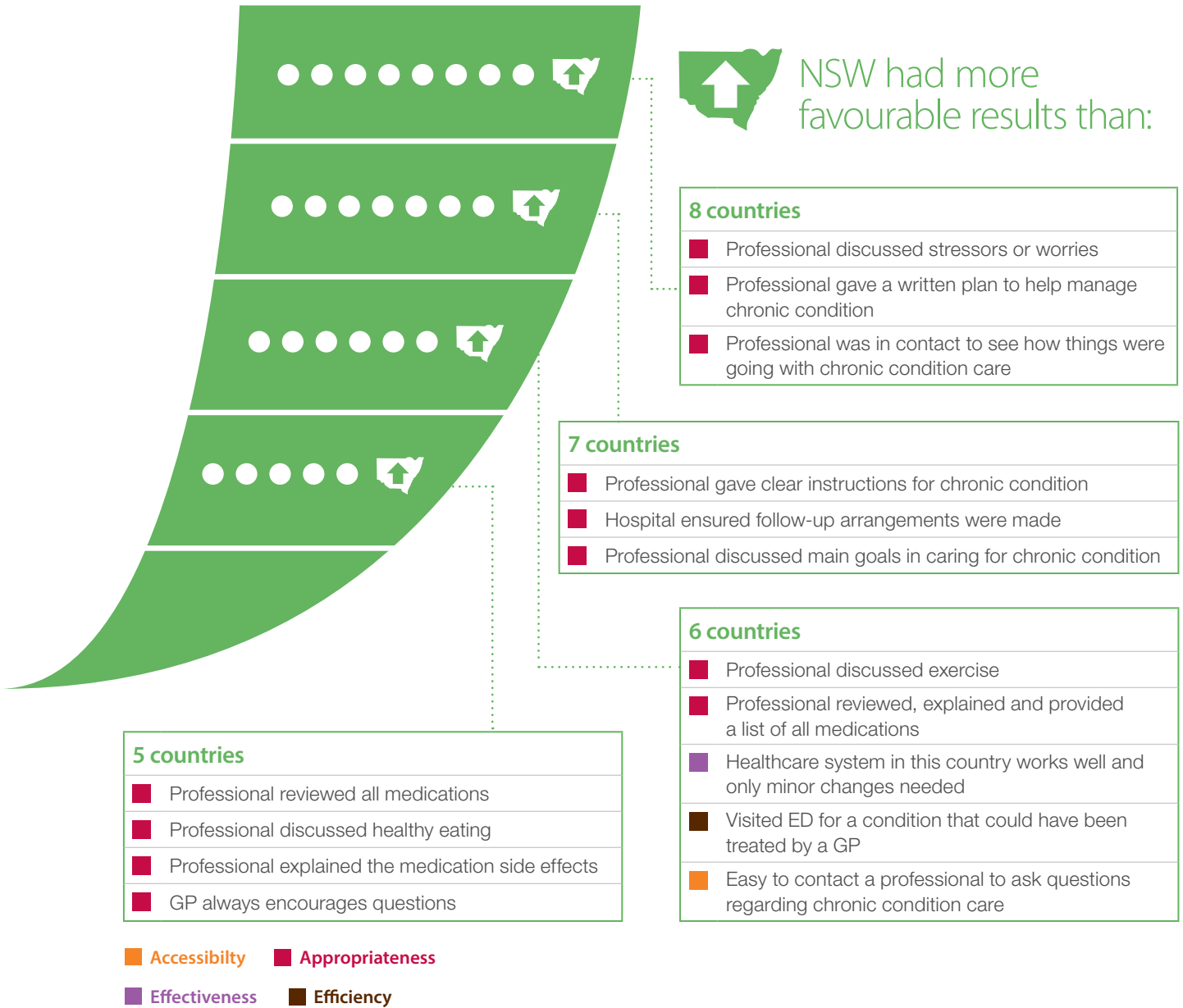
## NSW in an international context: compared with Australia and 10 other countries

In 2014, the Commonwealth Fund International Health Policy Survey focused, for the first time, on people aged 55+ years. The survey includes questions on access, timeliness and cost of care, coordination and continuity of care, and medication safety.

These pages summarise the NSW results in an international context. Figure 2 is based on 42 questions used to report on NSW performance in the BHI report *Healthcare in Focus 2014*. It shows the number of countries that had less favourable or more favourable results than NSW — highlighting areas where NSW does well and areas for potential improvement.

Figure 2 Survey questions for which NSW results were significantly higher or lower than five or more comparator countries, by performance dimension and number of comparators that were different, 2014





There were 15 questions for which NSW had more favourable results than five or more countries. Questions regarding appropriateness — particularly those addressing issues such as communication — featured prominently in the areas of strong performance.

NSW had less favourable results than five or more countries for 12 questions. Potential areas for improvement for NSW included primary care access and cost barriers to care.

These international results can be used to help interpret the findings in the remainder of the report, answering questions such as: Where NSW performance is relatively strong, is it consistently strong across all age groups? Is strong performance for a particular age group less compelling when viewed in comparison to other jurisdictions?

# Overview of international survey findings

## NSW results by age group

The 2014 Commonwealth Fund International Health Policy Survey collected views from people aged 55+ years in NSW, setting the results in an international context (pages 8–9). Results on this page use the same dataset, featuring those questions with statistically significant variation across age groups within NSW\* (Figure 3).

### Accessibility

#### Quality services when and where needed.

People in the oldest age group were more likely to: have a medical home<sup>#</sup> (59% of 55–64 years age group; 62% of 65–74 years age group; 71% of 75+ years age group); say they were able to make a same-day appointment when needed (35%; 41%; 56%); and say it was very easy to get out-of-hours care when needed (17%; 17%; 33%). People in the 55–64 years group were more likely to say that in the preceding year, there was a time when they did not fill a prescription for medicine or skipped doses because of cost concerns (8%; 4%; 3%).

### Appropriateness

**Good information.** Among people who contacted their GP surgery during regular office hours, those aged 75+ years were more likely to say they always obtained a response on the same day (38%; 48%; 61%). They were also more likely to say specialists always involved them in decisions about their treatment or care (62%; 64%; 75%).

**Seamless services.** People in the 75+ years group were more likely to say their GP helped coordinate their care (50%; 54%; 63%).

**Skilled, respectful workforce.** People in the oldest age group were more likely to say that their GP always: knew important information about their medical history (61% 69%; 85%); spent enough time with them (61%; 69%; 81%); explained things in a way

that was easy to understand (62%; 69%; 81%); and encouraged them to ask questions (51%; 57%; 68%).

**Technically proficient and safe care.** Among people who were taking two or more medications, seven in 10 said potential side effects were explained to them (69%; 71%; 65%) and that they were given a written list of prescribed medications (68%; 64%; 65%). Eight in 10 said they had a medication review (82%; 81%; 76%). However, a sizeable minority said they were unsure about when or how much of their medication to take at some point in the previous year (15%; 15%; 13%).

### Effectiveness

**Staying at home.** Among people who had hypertension, diabetes or asthma, those in the youngest age group were less likely to have stayed overnight in a hospital or visited an ED because of their condition in the previous year (proportion with no hospitalisations/ED visits: 90%; 84%; 86%).

Among people with at least one chronic condition, those in the oldest age group were more likely to say that a healthcare professional contacted them between appointments to see how things were going (26%; 27%; 35%). Similarly, those in the older age group were more likely to say their treatment plan helped to control or manage their condition (60%; 59%; 69%).

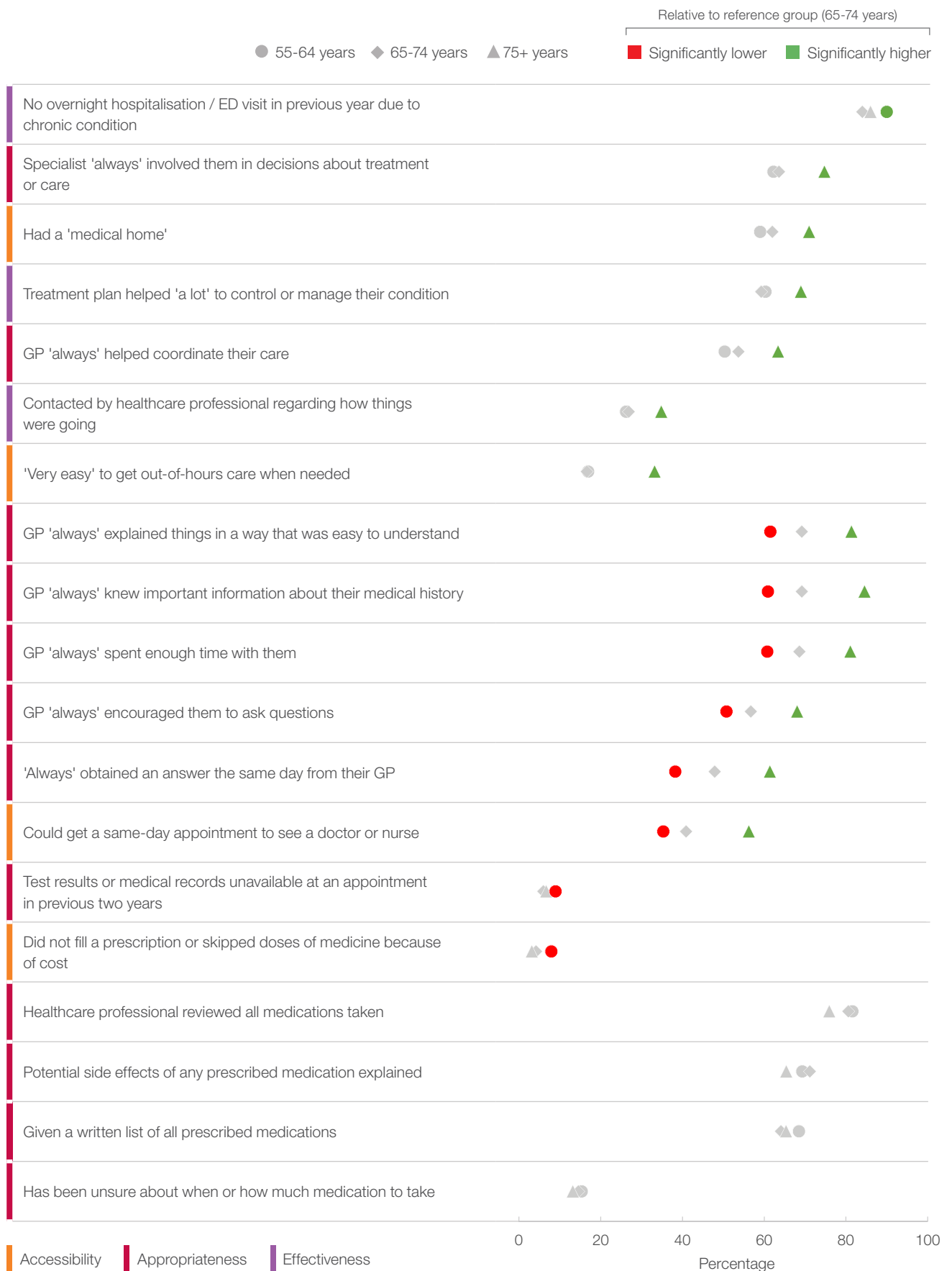
### Patterns and variation

The greatest variation across age groups was seen in questions about GPs: specifically, whether they always knew the patient's medical history (24 percentage point range). The least variation was seen in the question about test results or medical records not being available at the time of their scheduled appointment (3 percentage points).

\* Significance testing used the 65–74 year age group as the reference category. Results for all questions are available on BHI's online portal Healthcare Observer. The medication safety indicators in Figure 3 are provided regardless of the presence or absence of statistically significantly different results.

# A medical home is a general practice or clinic that provides ongoing, accessible, comprehensive, coordinated, whole person care. Having a medical home has been associated with improved patient engagement and better outcomes.

Figure 3  Commonwealth Fund International Health Policy Survey results, by age group, NSW, 2014



# Use of emergency departments

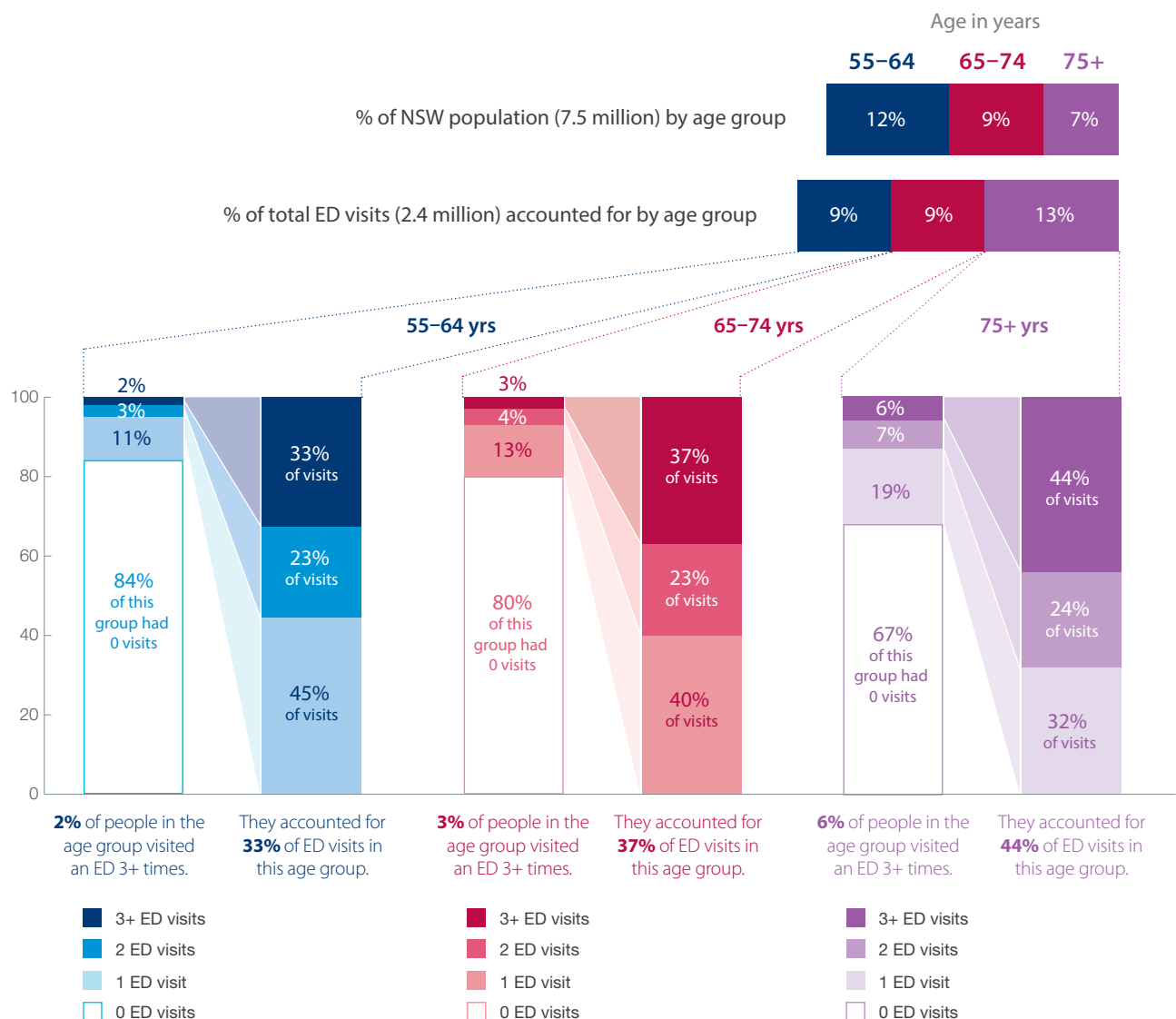
Between July 2013 and June 2014 (2013–14) there were 2,442,484 emergency visits to EDs across NSW.\* In total, people aged 55+ years made 751,228 ED visits during the year (31% of the total visits), while they constitute 28% of the NSW population.

Within the 55+ years cohort, as age increased a higher proportion of older adults visited the ED. During 2013–14, 16% of people aged 55–64 years visited an ED one or more times, compared with 20% of those aged 65–74 years and 34% of those aged 75+ years.

In each age group there is a concentration of ED visits among a relatively small number of patients. Overall, about 3% of adults aged 55+ years visited an ED three or more times, and they accounted for 292,184 visits (39% of ED visits among those aged 55+ years).

Within the three age groups, the ED visit concentration was most marked in the 75+ year group, with 33,840 people (6%) visiting an ED three or more times, accounting for 141,411 visits (44% of visits made by the group). These 141,411 visits represented 6% of total

Figure 4  Patterns of emergency visits to EDs, by age group (public hospitals), NSW, 2013–14



\* Includes facilities for which electronic data are reported, covering approximately 96% of NSW ED activity in 2013–14. In 2013–14, there was a total of 2,556,033 visits across NSW to EDs with electronic data collection. 4% of visits were non-emergencies, such as a planned return visit, attending an outpatient clinic or a pre-arranged admission to hospital.



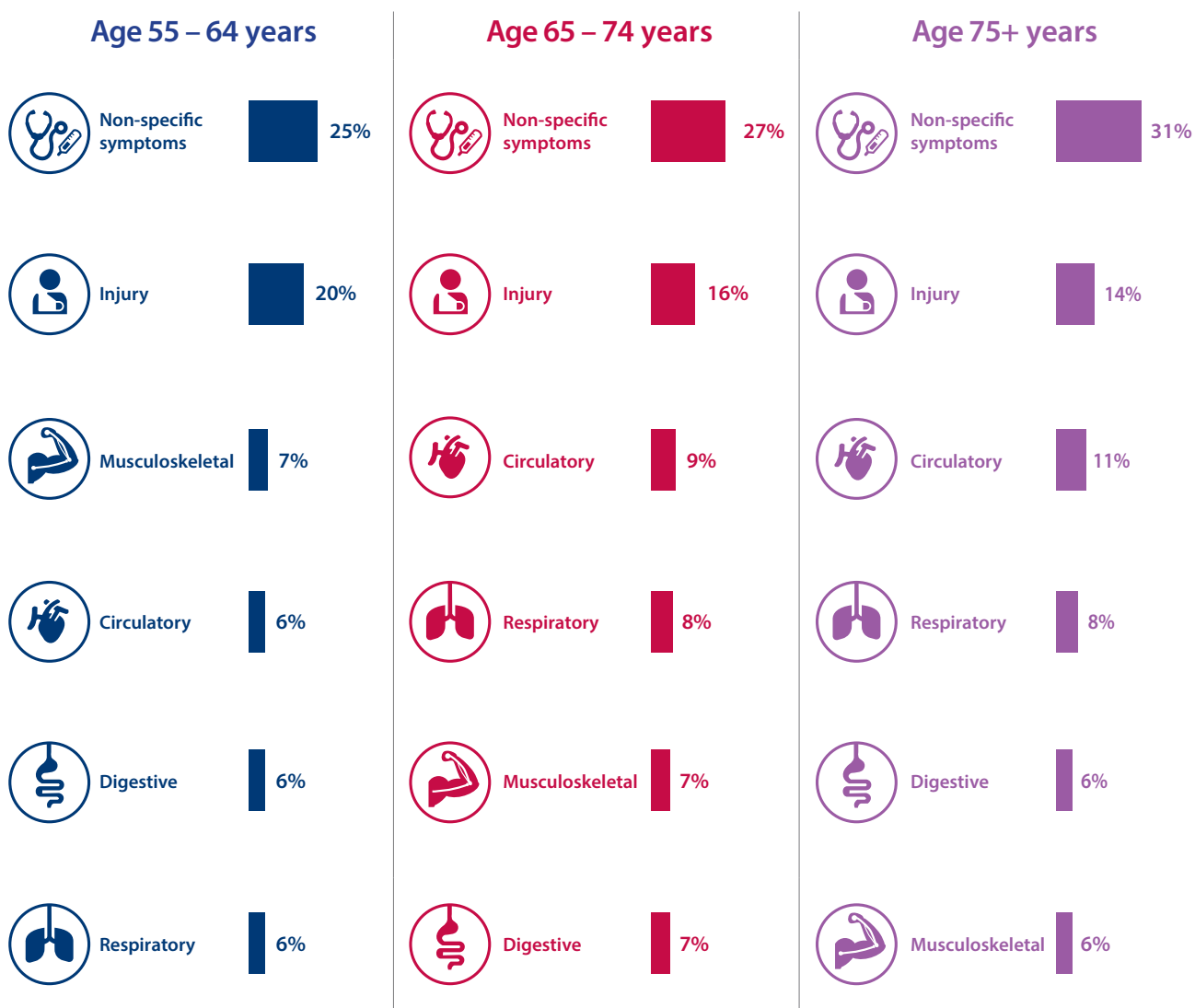
(all age) ED visits across the state during the year 2013–14 (Figure 4).

Older adults visit an ED for a range of reasons — some are categorised as non-specific symptoms, while others are designated to specific disease groups. Almost three in 10 ED visits made by people aged 55+ years (28%) were for the non-specific category ‘symptoms and signs’. Within this category, additional coding showed many of the symptoms and signs were related to the circulatory/respiratory

(73,397 visits, 35% of non-specific symptoms) and digestive systems (35,406 visits, 17% of non-specific symptoms). These three systems, alongside trauma and injury and diseases of the musculoskeletal system, were the most prevalent disease groups.

The proportion of ED visits for circulatory and respiratory diseases increased with age, whereas the proportion of ED visits for trauma and injury decreased with increasing age (Figure 5).

Figure 5  Most commonly recorded reasons for ED presentation by age group (public hospitals), NSW, 2013–14



## Timeliness of emergency department care

Emergency departments (EDs) provide specialised assessment and life-saving care for acutely unwell patients, often acting as an entry point to inpatient services. They are open to all and coverage is limited only by geographical proximity to an ED.

Upon arrival at an ED, patients are allocated to one of five urgency (or triage) categories. Each category has a recommended time frame within which patients should start to receive care:

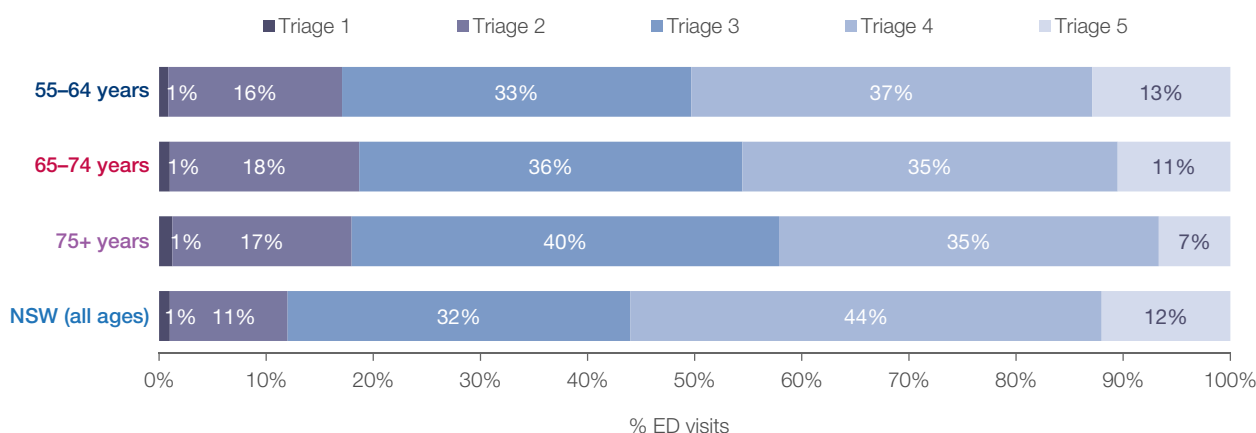
- Resuscitation (triage 1): within 2 minutes
- Emergency (triage 2): within 10 minutes
- Urgent (triage 3): within 30 minutes
- Semi-urgent (triage 4): within 60 minutes
- Non-urgent (triage 5): within 120 minutes.

In 2013–14, there were 751,228 emergency visits to NSW EDs by adults aged 55+ years. Of these: 1% were assigned to triage category 1; 17% to triage 2; 37% to triage 3; 36% to triage 4; and 10% to triage 5. Across age groups, a higher proportion of patients in the 75+ years group were triaged to more urgent categories 1–3 (Figure 6).

Timeliness can be assessed by measures of median waits and 95th percentiles. For a particular group of patients, the median wait is the length of time the ‘middle’ patient waited, i.e. half had a shorter wait and half had a longer wait. Median waits in the ED differ across triage categories, reflecting clinical priorities. Across the 55+ years age group as a whole, the median time to start treatment\* for those assigned to triage category 2 was 8 minutes, triage 3 was 21 minutes, triage 4 was 29 minutes and triage 5 was 23 minutes. Median times to treatment were similar across all three age groups, with the exception of triage 4 waits for the 75+ year group which was 3 minutes longer than the 55–64 year group (Figure 7).

The 95th percentile for visits in each urgency category marks the time period within which 95% patients started to receive treatment. For the 55+ years age group as a whole, the 95th percentile time to start treatment for patients assigned to triage category 2 was 34 minutes; to triage 3 was 104 minutes; to triage 4 was 150 minutes; and to triage 5 was 141 minutes. The 95th percentile times, like the median times, were similar across age groups (Figure 8) — suggesting that urgency, appropriately, has the most impact on timeliness in starting treatment in the ED.

Figure 6  Emergency visits by triage category and age group (public hospitals), NSW, 2013–14



\* Time to start treatment is calculated as the difference between presentation time (earlier of arrival time or triage time) and treatment time (earlier of first seen by clinician time or first seen by nurse time). Triage 1 patients are the most urgent and are treated within 2 minutes. Clinicians treating them are focused on providing immediate and essential care, rather than recording times, therefore times to start treatment are not generally reported.

Figure 7  Median time to treatment, by triage category and age group (public hospitals), NSW, 2013–14

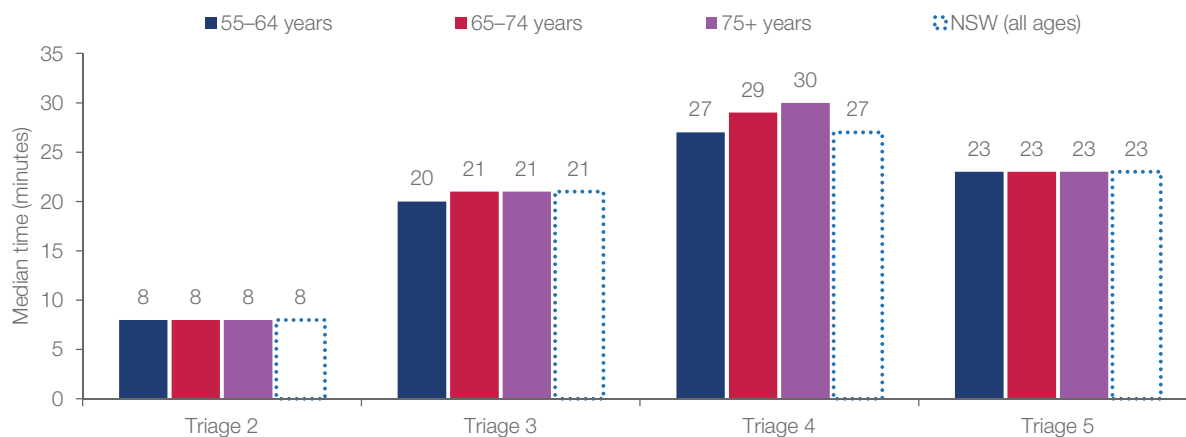
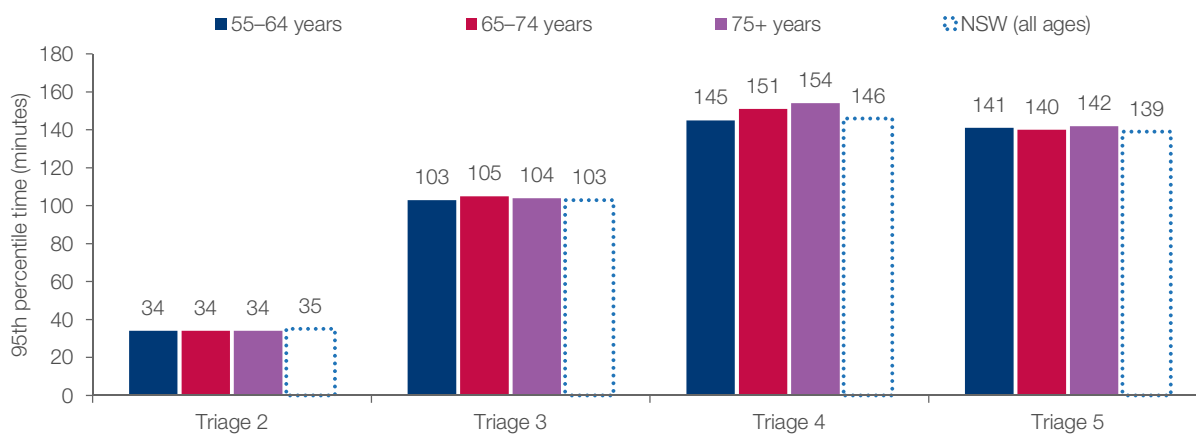


Figure 8  95th percentile time to treatment, by triage category and age group (public hospitals), NSW, 2013–14



## Time spent in emergency departments

Patients leaving the ED can either be discharged home, admitted to a short term Medical Assessment Unit or Emergency Medical Unit, admitted to a hospital ward, or transferred to another facility. A small number of patients choose not to wait for treatment.

In assessing performance in timeliness of completing care in the ED, it is important to distinguish between visits that end in admission to hospital or transfer and those that end in discharge. Patients who require admission to hospital from the ED usually have more complex health needs than those who are treated in the ED and are discharged. As a result, when their ED visit ends in admission or transfer to another hospital, patients often spend longer periods in the ED.

Looking across the age groups, ED visits made by people in the oldest age group were more likely to end with admission to hospital (35% of 55–64 years age group; 44% of 65–74 years age group; 59% of 75+ years age group) (Figure 9).

The median time from presentation to leaving the ED was longest for adults aged 75+ years (192 minutes for patients who were treated and discharged, and 327 minutes for those treated and admitted) compared with visits by patients aged 55–64 years (151 minutes and 295 minutes) (Figure 10).

Recent years have seen a concerted effort to ensure that most patients leave the ED within four hours of presentation.<sup>16</sup> In 2013–14, among visits made by patients aged 75+ years, only 47% achieved this benchmark, compared with 65% for visits made by patients aged 55–64 years. However, considering visits that ended with discharge home separately from those that ended with hospital admission reveals the differences in performance across age groups to be more modest. For visits ending with admission, the percentage for which patients left the ED within four hours ranged from 35% in cases where patients were aged 75+ years, to 41% where patients were aged 55–64 years (Figure 11).

Figure 9  Emergency visits by mode of separation and age group (public hospitals), NSW, 2013–14

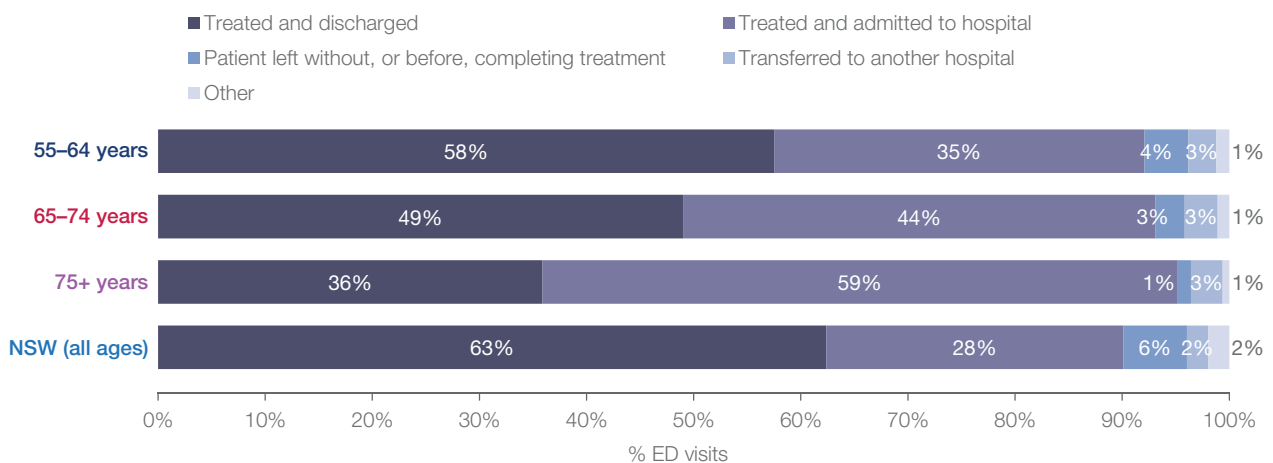



Figure 10  Median time to leaving the ED by mode of separation and age group (public hospitals), NSW, 2013–14

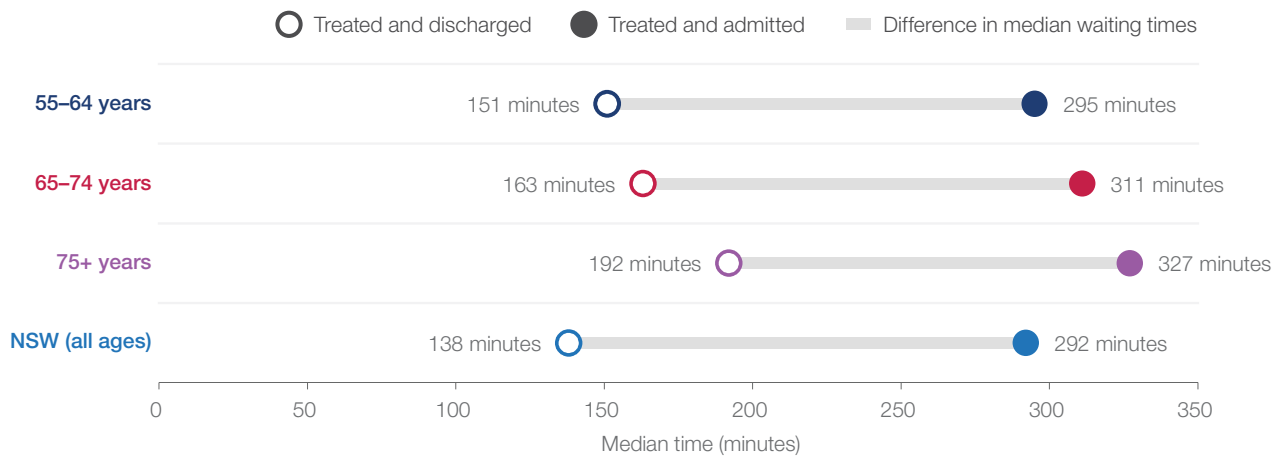
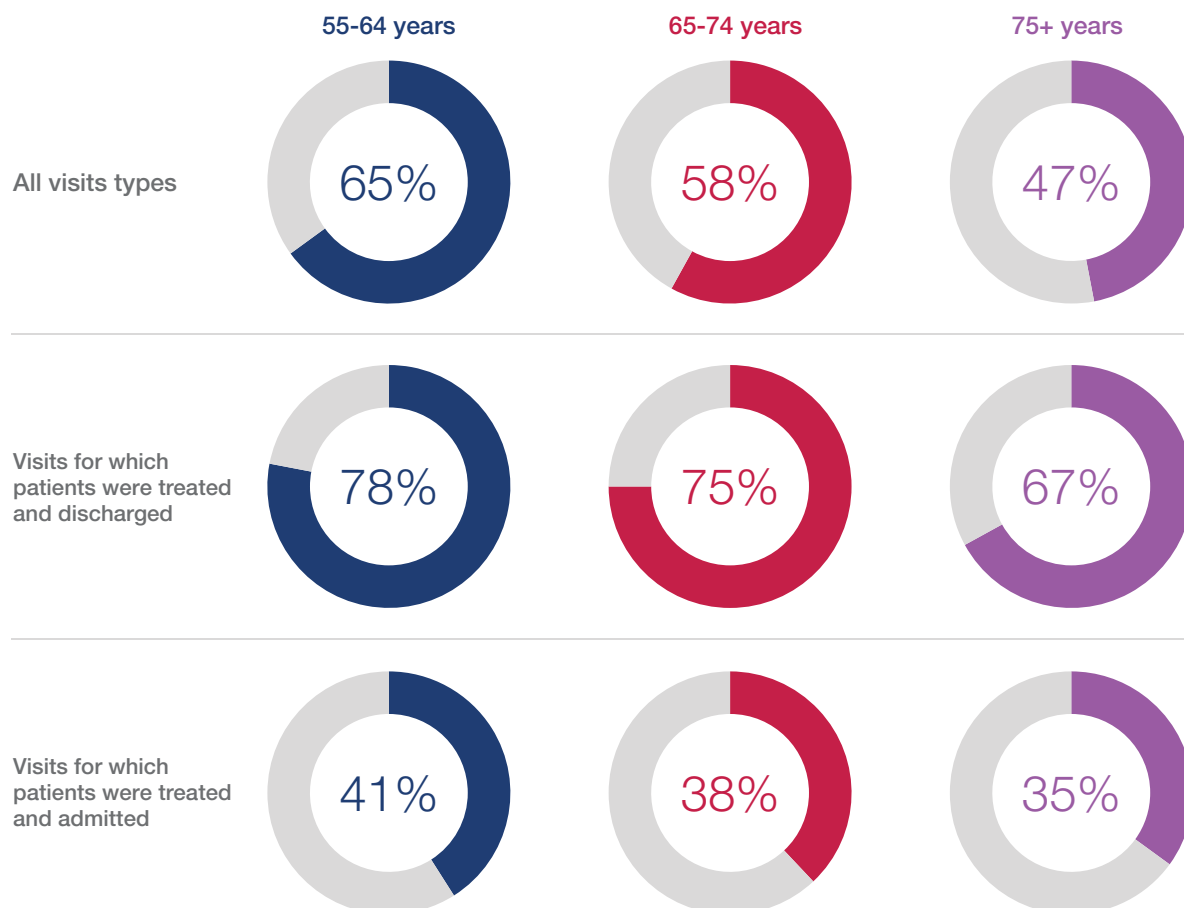


Figure 11  Percentage of ED presentations for which patients left the ED within four hours, by mode of separation and age group (public hospitals), NSW, 2013–14



# Experiences of care in emergency departments

The NSW Emergency Department Patient Survey (EDPS) contains 95 questions about different aspects of care provided to patients in NSW public hospital emergency departments. Responses were received from 13,119 patients aged 55 years and over (51% of all responses). The questions were sorted into thematic groups and results stratified by age group (Figure 12).

Overall, people aged 55–64 years were less positive about their experiences of care in the ED.

## Accessibility

### Quality services when and where needed.

Reflecting on the availability of primary care, the oldest age group was less likely to say their ED visit was for a condition that could have been treated in primary care (12% of 55–64 years age group; 12% of 65–74 years age group; 9% of 75+ years age group), suggesting fewer access problems for the most elderly, or different expectations of care.

## Appropriateness

**Good information.** Most patients said they received the ‘right amount’ of information about their condition or treatment (88%; 91%; 90%), although fewer said their questions were answered in a completely understandable way (60%; 63%; 54%). About seven in 10 said they were involved as much as they wanted to be in decisions about their care (67%; 71%; 67%).

**Seamless services.** Most ED patients said coordination and teamwork was very good, particularly in the way the ambulance crew and ED staff worked together (81%; 87%; 88%), but were less positive about the way ED staff worked together (59%; 66%; 64%). People aged 55–64 years were less likely to say adequate arrangements were made for their care following discharge (57%; 66%; 65%).

**Skilled, respectful workforce.** People aged 55–64 years were less likely to say: doctors ‘always’ had information about aspects of their medical history

that had already been given to the triage nurse or ambulance crew (58%; 66%; 68%); that they were ‘always’ treated with respect and dignity (86%; 91%; 91%); and they ‘always’ had confidence and trust in the doctors treating them (78%; 82%; 86%).

**Services that cater for diversity.** The majority of patients said their cultural beliefs were ‘always’ respected by the ED staff (87%; 94%; 93%). However, among those needing an interpreter, fewer than four in 10 said an interpreter was ‘always’ provided (32%; 38%; 34%).

**Support and partnership with carers.** People aged 55–64 years were less likely to say that: if their family wanted to talk to ED staff, they had the opportunity to do so (61%; 67%; 68%); their family was given the ‘right amount’ of information about their condition or treatment (82%; 87%; 85%); and ED staff ‘completely’ took their home situation into account when planning their discharge (61%; 71%; 72%).

## Effectiveness

**Complications and medical errors.** About one in 10 patients aged 55+ years said they experienced a complication or negative effect during or shortly after their ED visit (8%; 8%; 10%).

**Staying at home.** People aged 55–64 years were less likely to say they were given enough information about how to manage their care at home (70%; 77%; 76%). About half of all patients were told when to resume their usual activities (50%; 53%; 47%). Most were told who to contact if they were worried about their condition after leaving the ED (81%; 82%; 79%).

## Patterns and variation

Greatest variation across age groups was seen in questions about whether patients’ home situation was into account when planning discharge (11 percentage point range) and the least variation was seen on questions about complications (2 percentage points).

Figure 12  Emergency Department Patient Survey results (public hospitals) by age group, NSW, 2013–14



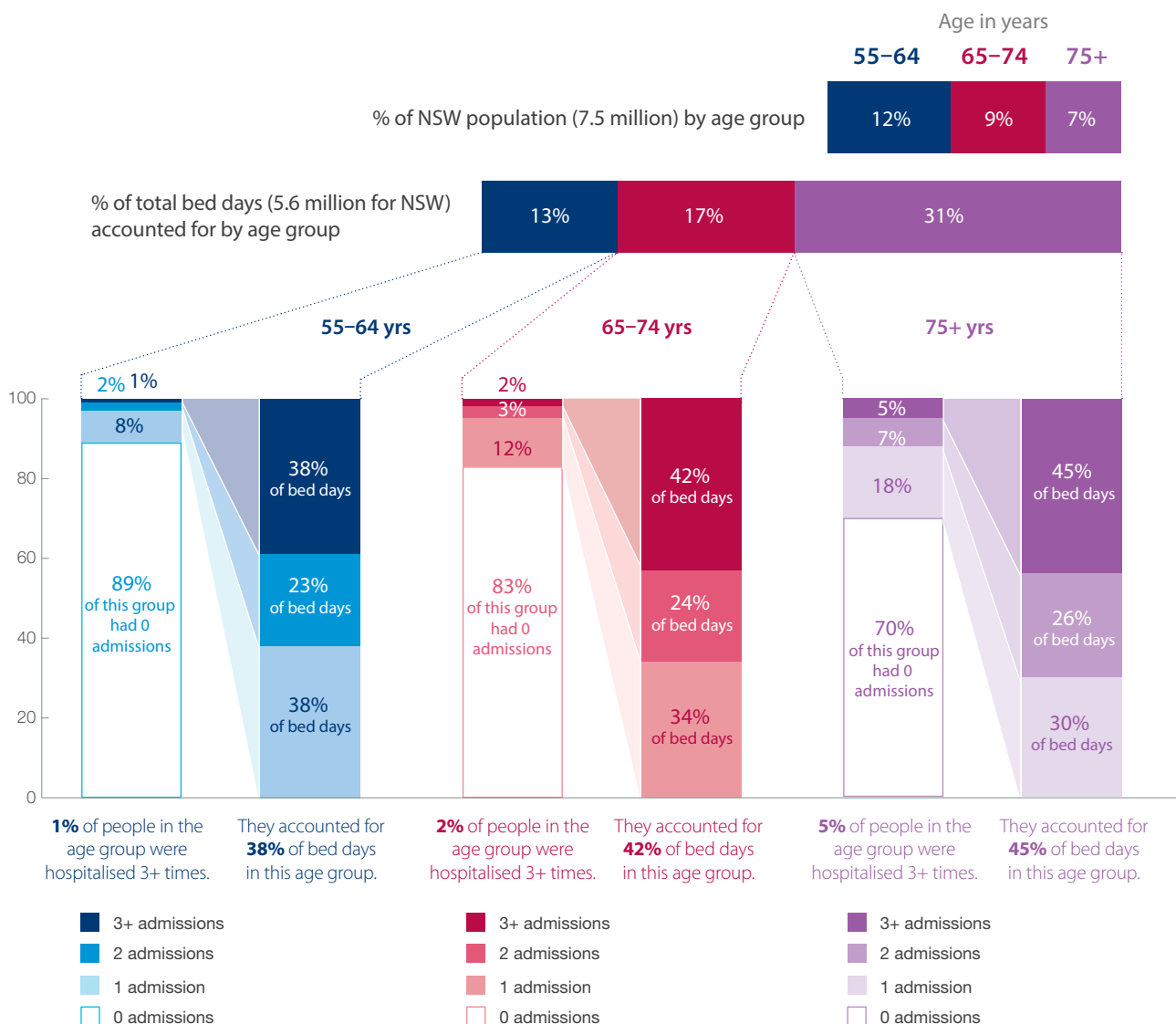
# Use of hospitals

In 2013–14, there were 1,161,950 acute overnight hospitalisations in NSW. Of these, 595,513 (51%) were for adults aged 55+ years. During the year, 97,971 people aged 55–64 years (11% of people in this age group); 109,740 people aged 65–74 years (17%); and 154,924 people aged 75+ years (30%) were hospitalised. Of the 5.6 million acute overnight bed days in NSW hospitals in 2013–14, almost

3.4 million (61%) were utilised by people aged 55+ years.

Among adults aged 55+ years, 237,560 (12% of people in this age group) were hospitalised once; 72,192 (4%) were hospitalised twice; and 52,883 (3%) were hospitalised three or more times (data not shown).

Figure 13  Utilisation of acute overnight hospital care (public and private hospitals) by age group, NSW, 2013–14

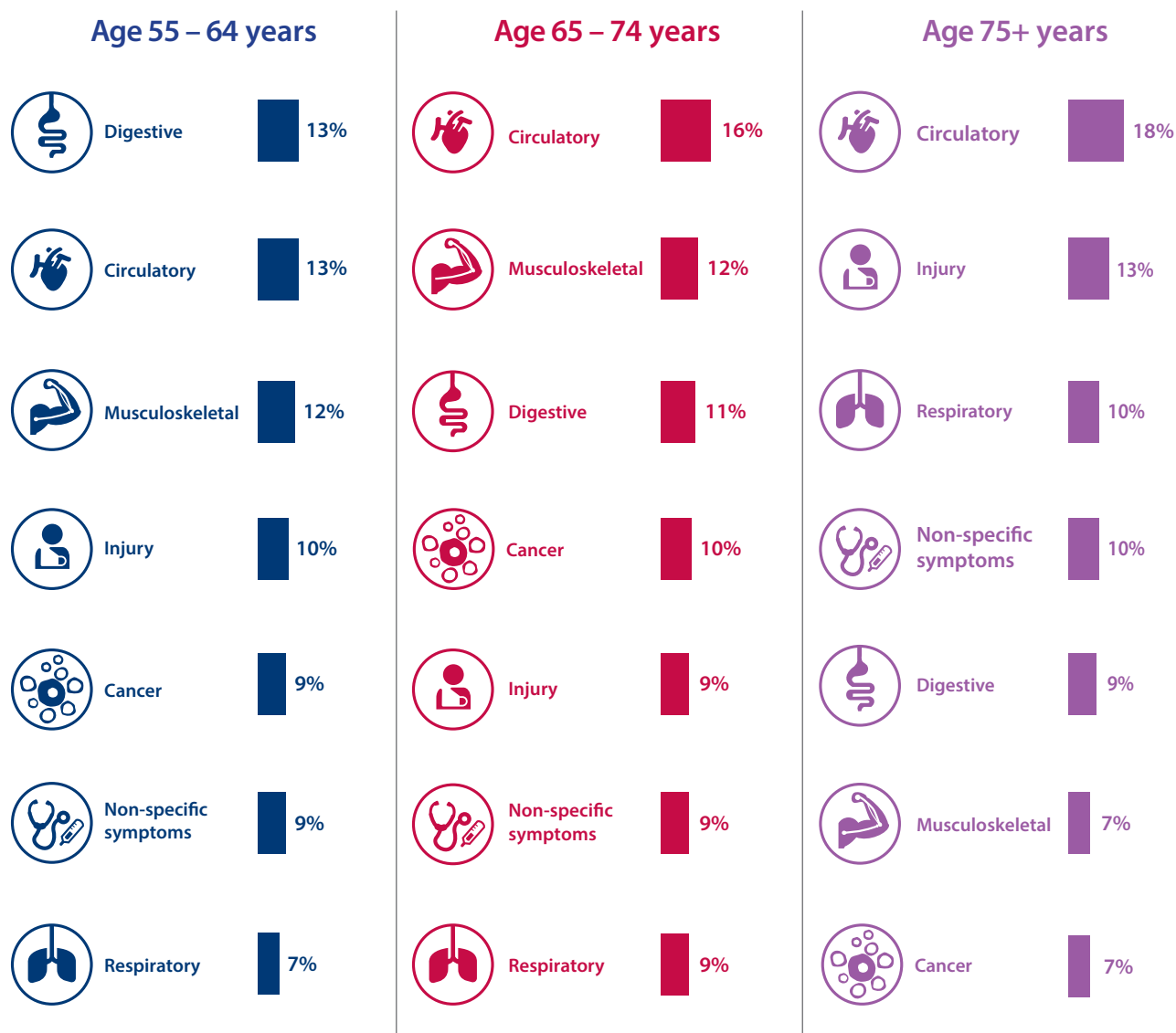




In each age group, there was a concentration of hospitalisations among a relatively small number of patients. Among people aged 75+ years, there were 28,302 (5% of this age group) who were hospitalised three or more times, and they accounted for 766,145 acute overnight bed days (45% of acute overnight bed days for people in the age group and 14 % of 'all age' acute overnight bed days) (Figure 13).

The relative proportion of hospitalisations that were for circulatory diseases increased with age while the proportion of hospitalisations for digestive and musculoskeletal diseases decreased. People aged 75+ years had proportionally more hospitalisations for trauma and injury (13%) than other groups (Figure 14).

Figure 14  Most commonly recorded reasons for hospitalisations by age group (public and private hospitals), NSW, 2013–14



# Experiences of care in hospital

The NSW Adult Admitted Patient Survey (AAPS) contains 103 questions about different aspects of care provided to patients in NSW public hospitals. Responses were received from 26,765 patients aged 55+ years (74% of all responses). The questions were sorted into thematic groups and results stratified by age groups (Figure 15).

Overall, the 64–75 year group reflected more positively on their experiences in hospital.

## Accessibility

**Quality services when and where needed.** Seven in 10 people said the amount of time they waited to be admitted was ‘about right’ (73% of 55–64 years age group; 72% of 65–74 years age group; 74% of 75+ years age group). The majority reported no delay in their discharge from hospital (80%; 80%; 78%).

## Appropriateness

**Good information.** People in the 75+ years group were less likely to say they received the ‘right amount’ of information about their condition or treatment (88%; 88%; 85%); and that their questions were answered in a completely understandable way (75%; 79%; 73%).

Altogether, around six in 10 people said they were involved as much as they wanted to be in decisions about their care and treatment (62%; 64%; 58%); and slightly more felt involved in decisions about their discharge from hospital (65%; 69%; 61%).

**Seamless services.** Over half said coordination and teamwork was ‘very good’, specifically in the way the doctors and nurses worked together (57%; 58%; 54%).

Of the three age groups, those aged 65–74 years were most positive when asked whether adequate arrangements were made by the hospital for services needed following discharge (69%; 75%; 73%).

**Skilled, respectful workforce.** People in the 65–74 year age group were more positive when asked

whether: doctors ‘always’ knew enough about their medical history (74%; 77%; 72%); they were ‘always’ treated with respect and dignity (85%; 89%; 89%); and they ‘always’ had confidence and trust in the doctors treating them (83%; 86%; 83%).

**Services that cater for diversity.** The majority said their cultural beliefs were ‘always’ respected by the hospital staff (91%; 93%; 93%). However, among those needing an interpreter, only four in 10 aged 55+ years said one was ‘always’ provided (36%; 38%; 35%).

**Support and partnership with carers.** People in the 55–64 year age group were less likely to say that their family had the opportunity to talk to a doctor (48%; 51%; 50%); and that hospital staff ‘completely’ took their family and home situation into account when planning their discharge (73%; 77%; 75%). Altogether, eight in 10 older adults said their family was given the ‘right amount’ of information (80%; 81%; 80%).

## Effectiveness

**Complications and medical errors.** Two in 10 older adults said they experienced a complication or negative effect during or shortly after their hospital stay (18%; 16%; 17%).

**Staying at home.** People aged 65–74 years were more positive when asked whether they were given enough information about how to manage their care at home (76%; 79%; 75%) and were told who to contact if they were worried about their condition or treatment after leaving hospital (88%; 88%; 84%).

## Patterns and variation

The greatest variation across age groups was seen in the question about patients being involved in decisions about their discharge from hospital (8 percentage point range) and the least variation in the question about the amount of information given to family about the patient’s condition or treatment (1 percentage point).

Figure 15  Adult Admitted Patient Survey results (public hospitals) by age group, NSW, 2013



## Timeliness of elective surgery

Elective surgery, often called planned surgery, is surgery that a doctor considers necessary but can be delayed by at least 24 hours.

Elective surgical procedures performed in public hospitals are classified in three urgency categories, each with a clinically recommended maximum time by which the procedure should be performed: urgent (30 days), semi-urgent (90 days) and non-urgent (365 days).

In the year July 2013 – June 2014, there was little variation across the age groups in the median waiting times for the three categories of elective surgery. The exception was non-urgent surgery, where the median waiting time for the 75+ year group (250 days) was 28 days longer than for the 55–64 year group (222 days) (Figure 16).

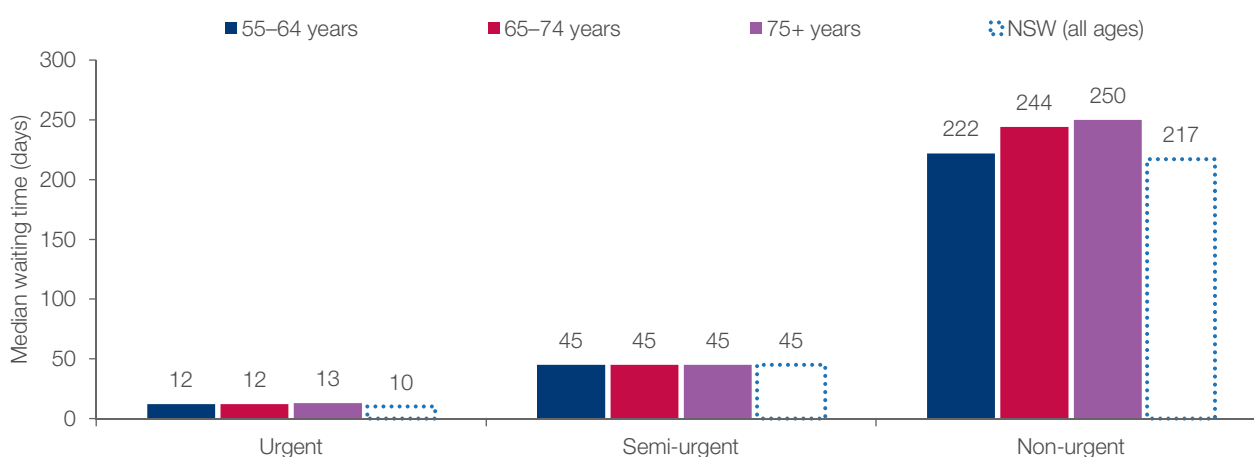
In terms of specific procedures, cataract extraction and total hip and total knee replacements had differences in median waiting times of 15 days or more across the age groups.

For cataract extraction, the median waiting time for patients aged 75+ years was 72 days longer than those aged 55–64 years. Conversely, for total hip replacement the median waiting time for patients aged 75+ years was 84 days shorter than for those aged 65–74 years. A similar but less marked pattern was seen for total knee replacement, where the median waiting time for patients aged 75+ years was 15 days shorter than for those aged 65–74 years (Figure 17)\*.

Despite this variation in median waiting times, the percentage of procedures performed within clinically recommended timeframes was consistent at 97%. Similarly, there was little variation in the 95th percentile waiting times (data not shown).

The differences in median waiting times may be a reflection of urgency profiles. The oldest age group had a higher proportion of non-urgent cataract procedures (86%) than those aged 55–64 years (80%); and a lower proportion of non-urgent hip and knee replacement procedures (68% and 82% respectively) than those aged 65–74 years (75% and 87%) (Figure 18).

Figure 16  Median waiting times for elective surgery by urgency and age group (public hospitals), NSW, 2013–14

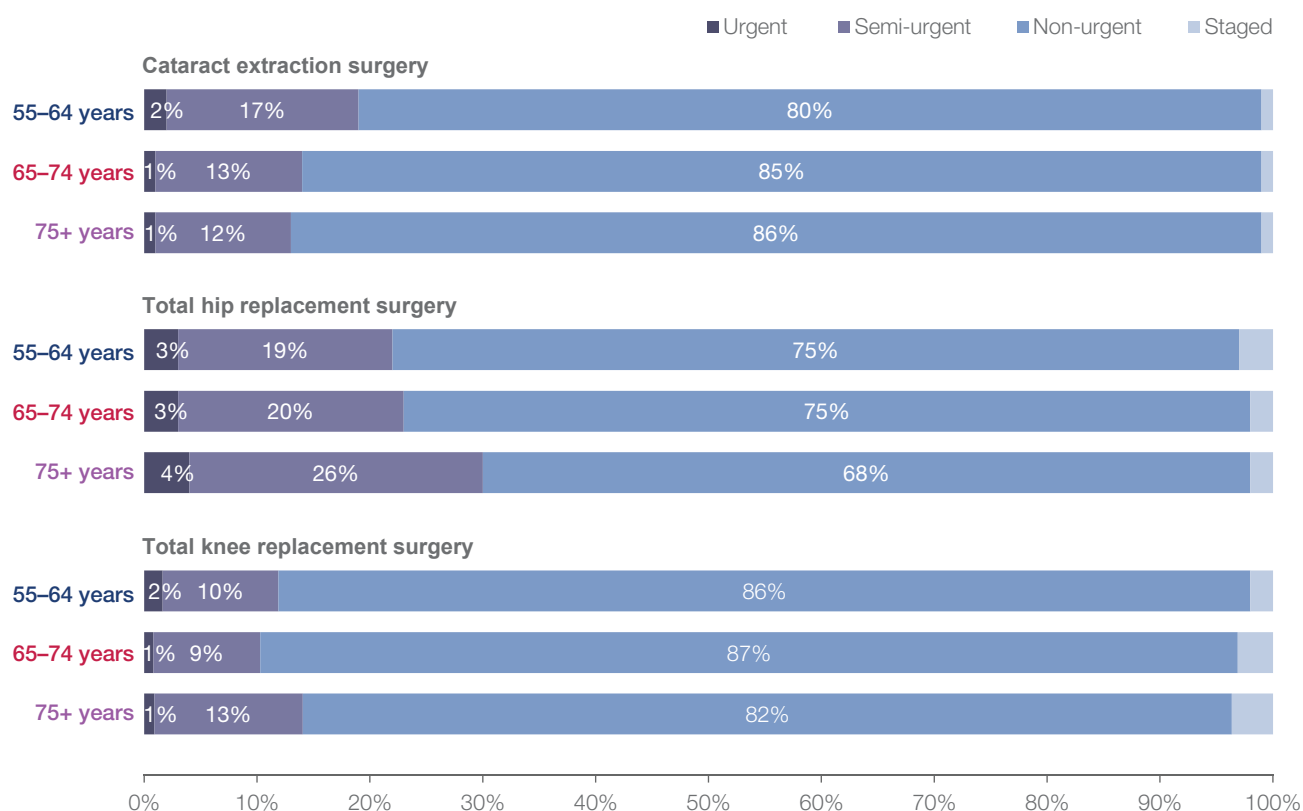


\* Procedures are shown in descending order of volume for adults aged 55+; those with more than 2,000 performed on adults aged 55+ are shown.

Figure 17  Median waiting times and volumes, by procedure and age group (public hospitals), NSW, 2013–14

Procedure	55–64 years		65–74 years		75+ years	
	Median	No. of procedures	Median	No. of procedures	Median	No. of procedures
Cataract extraction	167	2647	221	7636	239	10833
Cystoscopy	29	2167	29	3234	28	3741
Excision of Melanoma/SCC/BCC/ +/- Grafting	26	988	27	1600	28	2940
Total knee replacement	292	1396	297	2312	282	1763
Cystoscopy check / flexible	38	788	38	1236	37	1706
Inguinal hernia repair	77	1143	79	1219	74	1050
Other (General)	21	1256	18	1163	18	770
Removal of skin lesion	29	728	25	882	24	1298
Other (Vascular)	15	692	14	1002	14	1111
Cholecystectomy	60	1152	55	988	52	659
Total hip replacement	212	690	231	1064	147	958
Prostatectomy/open/TURP	63	596	65	1059	65	816
Other surgical	18	840	18	840	14	622
Hysteroscopy	27	1199	24	707	24	381
Arthroscopy	189	1142	179	750	183	243
Release of carpal tunnel	90	675	79	683	68	725

Figure 18  Percentage of cataract extraction, total hip and total knee replacement surgical procedures by urgency category and age group (public hospitals), NSW, 2013–14



# Hospital and emergency department use at the end of life

End-of-life care is an important priority for older people.<sup>12</sup> The capacity to make important decisions can be compromised as patients near death. Timely and appropriate decision making about end-of-life care is more likely when family and carers understand patients' wishes in advance.<sup>17</sup>

People in the oldest age group were more likely to say that: they had discussed with family, friends or a health professional, treatments they want or do not want should they become very ill or injured and unable to make decisions for themselves (48% of 55–64 year age group; 52% of 65–74 year age group; 60% of 75+ year age group); they have a written plan or document describing the healthcare treatment they want at the end of their life (18%; 22%; 31%); and they have a written document that names someone to make treatment decisions for them if they cannot make decisions for themselves (39%; 46%; 54%) (Figure 19).

In 2013, there were 4,431 NSW adults aged 55–64 years, 7,810 aged 55–64 years and 33,635 aged 75+ years who died.<sup>18</sup> Those in the 75+ years group were least likely to have visited an ED or to have been hospitalised in the last 30 days of their life.

Among adults aged 55+ years who died in 2013, around half visited an ED in the 30 days preceding their death (52%: 53%; 47%). In all age groups, a higher proportion of people were hospitalised than visited an ED in the last 30 days of life. The 75+ years group had the lowest percentage of people hospitalised in the last 30 days of life (73%; 74%; 61%) (Figure 20).

Over 70% of Australians say they want to be cared for and die at home.<sup>19</sup> In the 75+ years group, 15,750 people died in hospital (47% of deaths in the group) — a lower proportion of deaths than in the younger age groups (Figure 21).

Some of this difference may be explained by the cause of death. In the 75+ years group, a higher percentage of deaths were attributed to acute cardiovascular conditions that can often occur outside the hospital setting. In the younger age groups, a higher percentage of deaths were attributed to various cancers (neoplasms) which are more likely to result in deaths in hospital (Figure 22).

Figure 19 Questions about end of life care wishes by age group, NSW, 2014



Figure 20  ED visits (public hospitals) and hospitalisations (public and private hospitals) in the last 30 days of life, by age group, NSW, 2013

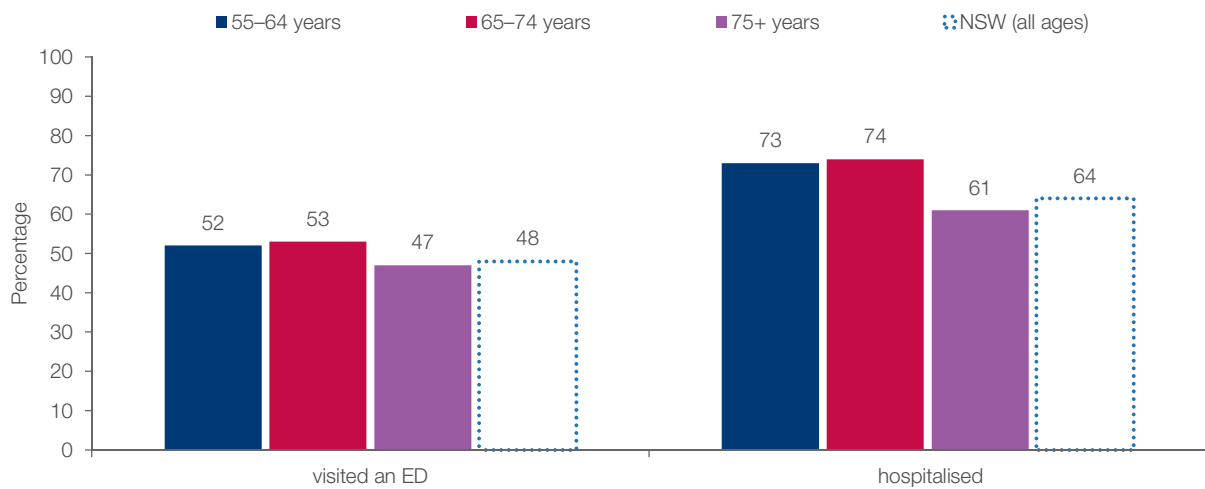
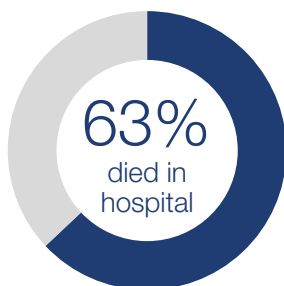
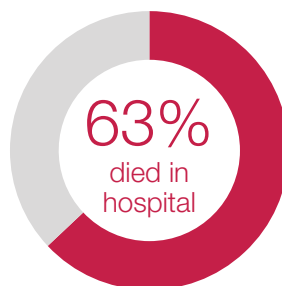


Figure 21  Proportion of deaths that occurred in hospital, by age group, NSW, 2013

Among those who died in the **55-64** years age group



Among those who died in the **65-74** years age group



Among those who died in the **75+** years age group

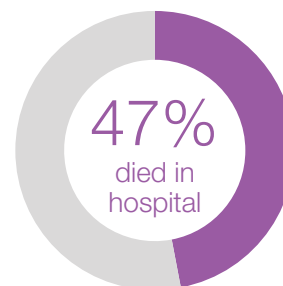


Figure 22 Leading causes of death, by age group, NSW, 2013

55-64 years (4,431 deaths)	65-74 years (7,810 deaths)	75+ years (33,635 deaths)
Malignant neoplasms of digestive organs (15% of deaths)	Malignant neoplasms of digestive organs (14% of deaths)	Ischaemic heart diseases (15% of deaths)
Malignant neoplasms of respiratory and intrathoracic organs (12%)	Malignant neoplasms of respiratory and intrathoracic organs (12%)	Cerebrovascular diseases (10%)
Ischaemic heart diseases (11%)	Ischaemic heart diseases (11%)	Organic, including symptomatic, mental disorders (8%)
Malignant neoplasm of breast (4%)	Chronic lower respiratory diseases (6%)	Other forms of heart disease (7%)
Chronic lower respiratory diseases (4%)	Cerebrovascular diseases (4%)	Malignant neoplasms of digestive organs (6%)

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## About the Bureau of Health Information

The Bureau of Health Information (BHI) is a board-governed organisation that provides independent reports about the performance of the NSW public healthcare system.

BHI was established in 2009 to provide system-wide support through transparent reporting.

BHI supports the accountability of the healthcare system by providing regular and detailed information to the community, government and healthcare professionals. This in turn supports quality improvement by highlighting how well the healthcare system is functioning and where there are opportunities to improve.

BHI publishes a range of reports and tools that provide relevant, accurate and impartial information about how the health system is measuring up in terms of:

- 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

BHI also manages the NSW Patient Survey Program, gathering information from patients about their experiences in public hospitals and healthcare facilities.

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