IMPACT REPORT

# Major trauma in NSW: 2020-21

A report from the NSW Trauma Registry

May 2023

NSW GOVERNMENT

AGENCY FOR CLINICAL INNOVATION

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|---|---|---|---|
| **Title** | Major trauma in NSW: 2020-21 | | |
| **Published** | May 2023 | | |
| **Next review** | 2028 | | |
| **Produced by** | NSW Trauma Registry | | |
| **Preferred citation** | NSW Agency for Clinical Innovation. Major trauma in NSW: 2020-21. Sydney: ACI; 2023 | | |
| TRIM ACI/D23/1590 | SHPN (ACI) 230278 | ISBN 978-1-76023-504-8 | ACI_6975 |

# Executive summary

In 2020-21, there were more than 30,050 admissions for traumatic injuries in NSW, of which more than 3,900 were considered major trauma and admitted to a trauma service. How the NSW trauma system responds to these patients is critical for their long-term outcome and quality of life and for reducing the overall financial and social cost of trauma to individuals and the community.

A key priority for the NSW Institute of Trauma and Injury Management (ITIM), within the Agency for Clinical Innovation (ACI), is to monitor the effectiveness of the NSW trauma system response to severely injured patients. This group of patients places the greatest demand on the health system, not simply for healthcare, but for a wide range of needs.

This report describes how the NSW trauma system responded to major trauma patients, from the time of injury and provision of pre-hospital services, through to in-hospital services provided at designated trauma hospitals. Findings from the report assist NSW Health in determining whether the NSW trauma system is functioning effectively, to ensure that severely injured patients receive specialist trauma care in a timely matter.

Furthermore, the data presented here help us understand the epidemiology of severe injuries, provide advice and feedback to clinicians and other stakeholders and facilitate health services research and quality improvement.[1] It is important to note that this report does not represent all injuries in NSW, nor does it represent the full work or caseload of trauma services in hospitals or the full set of data recorded in hospital trauma registries.

### 2020-21 report highlights for major trauma in NSW

- 3,921 major trauma patients resulted in 4,034 major trauma admissions.
- On average, major trauma patients were 52 years old.
- Males were 2.4 times more likely to suffer major trauma than females.
- 8.8% of patients with an Injury Severity Score of greater than 12 died.
- Females were less likely to die (8.1%) with an Injury Severity Score >12 than males (9.0%).
- Falls were the most common mechanism of injury (41.9%) followed by transport incidents (40.9%).
- The most common single injury was ‘three or more fractured ribs without flail’ (26.7%).
- 39.9% of all major trauma incidents occurred in a rural area.
- Metropolitan major trauma patients had higher proportion of falls (49.3%), whereas rural patients sustained more road trauma (53.8%).
- Pedestrians were more likely to die (16.8%) compared to other transport mechanisms.
- Patients most commonly injured their ‘head or neck’ (52.2%) or ‘chest’ (54.2%).

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# Monitoring the NSW trauma system

## NSW trauma system

The primary function of the NSW trauma system is to facilitate and coordinate an organised multidisciplinary system response with the aim of reducing the burden of physical injury on patients, their families, and the broader health system. The trauma system encompasses a continuum of care that provides traumatically injured patients with the greatest likelihood of returning to their pre-injury level of function within the community. This continuum of care includes injury prevention, pre-hospital care, emergency department trauma care, surgical intervention, intensive, critical and general in-hospital care, and rehabilitation services.

The overall goal of the NSW trauma system is to improve health outcomes for severely injured patients by ensuring equitable and timely access to high-quality specialist trauma care. The main objective of the trauma system is to get the right patient to the right hospital at the right time, receiving the right care. To meet this objective, designated trauma services need to have appropriate resources to meet the complex needs of the injured patient.

## Mandate for trauma data

The NSW Trauma Services Plan outlines the role of the Institute of Trauma and Injury Management (ITIM), including monitoring the quality of care delivered by NSW trauma services.[2] To enable this, NSW trauma services are required to contribute data as outlined in the Ministry of Health endorsed document, Improving the Quality of Trauma Care in NSW: Trauma Services Model of Care (2020).[3]

## NSW Trauma Registry

ITIM is responsible for managing the collection of data regarding moderate to critically injured people admitted to trauma services in NSW. Data collected are held securely in the NSW Trauma Registry.[1] Data in the registry are submitted from each of the designated NSW trauma services.

The NSW Trauma Registry contains de-identified patient records but does not hold data for every injured person admitted to hospital in NSW. Data are only included for patients with the greatest needs, that is the most seriously injured, who are treated at a designated NSW trauma service. These data are known as the NSW Trauma Minimum Data Set and form the basis of data analysis and reporting activities at ITIM. As the scope of the current data collection is restricted to these designated hospitals, there may be some data for trauma admissions to other hospitals that are not included in the NSW Trauma Registry.

## NSW trauma services

The NSW trauma system consists of 7 adult major trauma services, 3 paediatric major trauma services and 10 regional trauma services. All trauma services contributed data to the NSW Trauma Registry used in this report.

**Adult major trauma services**

- John Hunter Hospital, Hunter New England Local Health District
- Liverpool Hospital, South Western Sydney Local Health District
- Royal North Shore Hospital, Northern Sydney Local Health District
- Royal Prince Alfred Hospital, Sydney Local Health District
- St George Hospital, South Eastern Sydney Local Health District
- St Vincent's Hospital, St Vincent's Health Network
- Westmead Hospital, Western Sydney Local Health District

**Paediatric major trauma services**

- John Hunter Children's Hospital, Hunter New England Local Health District
- Sydney Children's Hospital, Sydney Children's Hospitals Network
- The Children's Hospital at Westmead, Sydney Children's Hospitals Network

**Regional trauma services**

- Coffs Harbour Health Campus, Mid North Coast Local Health District
- Gosford Hospital, Central Coast Local Health District
- Lismore Base Hospital, Northern NSW Local Health District
- Nepean Hospital, Nepean Blue Mountains Local Health District
- Orange Health Service, Western NSW Local Health District
- Port Macquarie Base Hospital, Mid North Coast Local Health District
- Tamworth Hospital, Hunter New England Local Health District
- The Tweed Hospital, Northern NSW Local Health District
- Wagga Wagga Base Hospital, Murrumbidgee Local Health District
- Wollongong Hospital, Illawarra Shoalhaven Local Health District

## Methodology

This report was compiled from data submitted by the reporting facilities to the NSW Trauma Registry in accordance with the inclusion and exclusion criteria detailed below. Data for this report were extracted from the NSW Trauma Registry on 30 June 2022.

### Inclusion criteria

All major trauma patient records from the NSW Trauma Registry, where the date of injury occurred between 1 July 2020 and 1 July 2021, are included in this report.
Major trauma is defined as all patients of any age, who were admitted to a NSW trauma service within seven days of sustaining an injury, and who:

- had an Injury Severity Score (ISS) >12 (moderate to critically injured), or
- were admitted to an intensive care unit (irrespective of ISS) following injury, or
- died in hospital (irrespective of ISS) following injury.

As a result of these criteria, patient records submitted for inclusion in this report do not represent all injuries in NSW, nor do they represent the full work or caseload of trauma services in hospitals, nor the full set of data recorded in hospital trauma registries.

### Exclusion criteria

The criteria for excluding a patient record from this report are as follows:

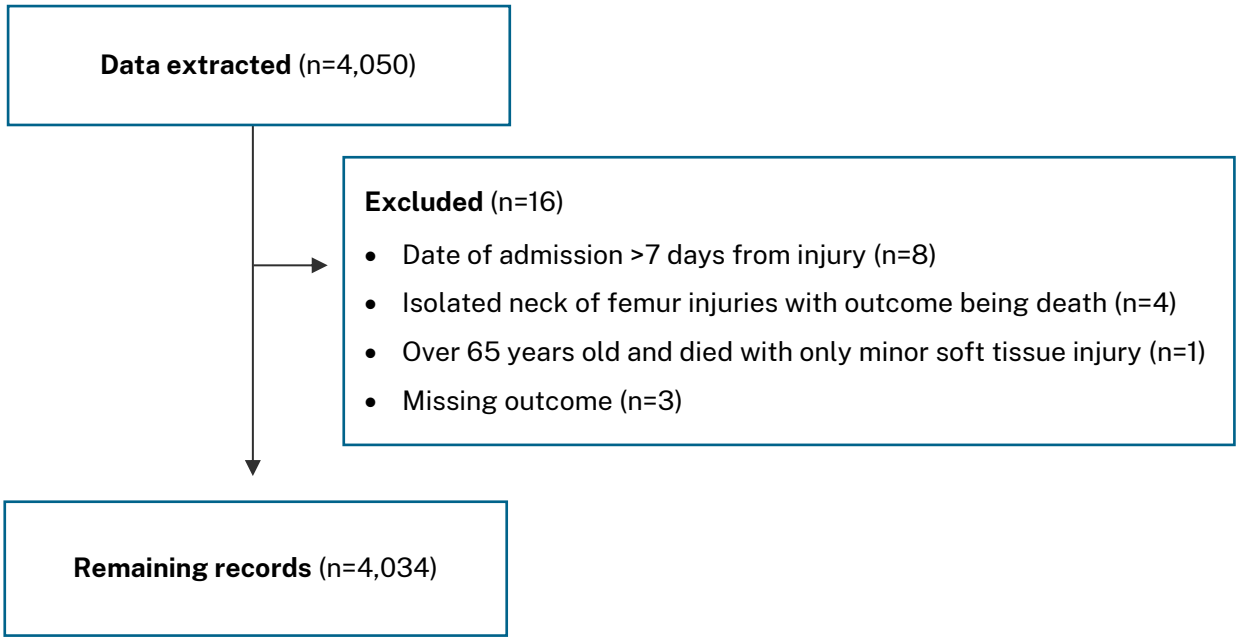
- Patients not admitted to a designated NSW trauma service.
- Patients admitted to a designated NSW trauma service greater than seven days after sustaining an injury.
- Patients who die with an isolated fractured neck of femur injury sustained from a fall from a standing height (<1m).[*]
- Patients aged 65 years or older who die with minor soft tissue injury only.[†]

Records have also been excluded from this report if the Outcome (survived or died) data element is missing or invalid data recorded in the registry.
Based on the criteria outlined above, a total of 16 records were excluded (Figure 1).

[*] See Glossary for the definition of an isolated fractured neck of femur injury.

[†] See Glossary for the definition of a minor soft tissue injury.

**Figure 1: Record of data exclusions**




### Data quality

Data submitted to the NSW Trauma Registry are subject to rigorous checking and validation by ITIM and the reporting facilities. Missing or invalid data are flagged and returned to individual trauma services for completion and validation.

The average data completeness by the trauma facilities was 95.9%, an increase of 0.1% from 2019-20.

A detailed breakdown of data completeness by trauma facility is available in Appendix 1: Data completeness.

### Data privacy – reporting of small numbers

The Australian Statistical Information Management Committee guidelines suggest that statistical results involving small numbers (<5) can be presented if the population from which they are drawn is more than 1,000 people, as the likelihood of identifying an individual would be very small.[4] This guideline is used for data reporting of small numbers by Health Stats NSW and the Agency for Clinical Innovation.[5]

For the purpose of this report, the demographic population is identified as either:

- those potentially injured within NSW (millions) when reporting on trauma patients as a whole, or
- those potentially injured within a facility's catchment area (thousands) when reporting on admissions to a trauma facility, such as in the facility summaries at Appendix 2.

The risk of a breach of data privacy is further mitigated by not aligning demographic information where the numbers are small (such as age groups in a regional area) with other potentially identifiable data fields such as the mechanism of injury or outcome.

### Metropolitan and rural categorisation

Various data elements within the report are categorised as either 'metropolitan' or 'rural'. These categories are derived using the postcode of injury and the Australian Statistical Geography Standard (ASGS) Remoteness Areas (RA).[6] The ASGS-RA is based on the Accessibility and Remoteness Index of Australia which defines locations in terms of remoteness, that is the physical distance of a location from the nearest urban centre (access to goods and services) based on population size.[7]

The ASGS-RA consists of five categories:

- major cities
- inner regional
- outer regional
- remote
- very remote.

For the purpose of this report, all locations with the ASGS-RA classification of 'major cities' are listed as 'metropolitan'. All other ASGS-RA classified locations are combined and listed as 'rural'. See Appendix 6 for further information on the ASGS-RA categorisation of NSW.

### The Injury Severity Score and Abbreviated Injury Score

One of the key criteria for inclusion in this report is an Injury Severity Score (ISS) of greater than 12. The ISS is an internationally recognised scoring system which correlates with mortality, morbidity and other measures of severity. The ISS is calculated based on an anatomical injury severity classification, the Abbreviated Injury Scale (AIS). The AIS classifies individual injuries by body region on a six-point severity scale from minor (1) to maximum (6 - currently untreatable injury). The NSW Trauma Registry uses the AIS 2005 (Update 2008) dictionary.[8]

The AIS is used by accredited staff at each hospital to score individual patient injuries and their severity. It provides a common tool for comparing and selecting patient records for inclusion in the NSW Trauma Registry. Scoring is undertaken retrospectively but usually within 24-48 hours after admission to allow for the identification of all injuries. On initial evaluation, these patients typically have abnormal vital signs or a significant anatomical injury.

Injuries are individually allocated to one of six body regions, and the severities of the top three injuries in different body regions are used to calculate the ISS. The ISS, along with the body regions and injury and severity codes, used in this calculation, are recorded in the NSW Trauma Registry (see Appendix 5: Calculation of the Injury Severity Score for further detail).
The calculated ISS value ranges from 1 to 75. Serious to critically injured trauma patients are defined as those patients with an ISS >15, which is an internationally recognised indicator of serious injury.

In this report, the ISS is reported in ranges:

- 13-15 (moderate injury)
- 16-24 (serious injury)
- 25-40 (severe injury)
- 41-75 (critical injury).

## Major trauma patients

### Introduction

The information in this section of the report is based on the number of major trauma patients who received care in a NSW trauma service (n=3,921), not the number of major trauma admissions (n=4,034), as some patients were treated in more than one NSW reporting facility. Trauma admission data (hospital activity) are discussed in detail in the Major trauma admissions section.

### Summary profile

During the period 1 July 2020 to 30 June 2021, there were 3,921 major trauma patients treated at NSW trauma services. Of these, 71.5% (n=2,487) were injured in a metropolitan location, and 277 died (case fatality rate for ISS >12 of 8.8%). The age-standardised injury rate was 44.4 per 100,000 persons, and the age-standardised death rate was 3.7 per 100,000 persons for all ISS. The standardised mortality ratio was 3.9 (Table **1**), indicating that the proportion of deaths in major trauma patients during the reporting period was nearly four times greater than that of the general Australian population.

**Table 1: Summary statistics for major trauma and mortality**

| Summary statistics | Value |
|---|---|
| Total number of patients injured overall | 3,921 |
| Total number of patients injured with ISS >12 | 3,163 |
| Injury rate per 100,000 persons (age-standardised) | 44.4 (95% CI: 43-45.8) |
| Location of injury (metropolitan/rural) | 2,487 (71.5%)/993 (28.5%) |
| Number of male/female patients | 2,782 (71.0%)/1,138 (29.0%) |
| Total number of deaths overall | 368 (9.4%) |
| Total number of traumatic deaths on arrival | 19 (0.5%) |
| Total number of deaths with ISS >12 | 277 (8.8%) |
| Total number of deaths with ISS >12 excluding traumatic deaths on arrival | 262 (8.3%) |
| Death rate per 100,000 persons (age-standardised) all ISS | 3.7 (95% CI: 3.3-4.1) |
| Standardised Mortality Ratio (SMR) | 3.9 (95% CI: 3.5-4.3) |
| Average age (years) | 52 (95% CI: 51.2-52.8) |
| Average Injury Severity Score (all ISS) | 18 (95% CI: 18-19) |
| Average Injury Severity Score (ISS >12) | 21 (95% CI: 21-21) |

Over the 2016-17 to 2020-21 financial years, the mean number of major trauma patients was 3,998, with the number in 2020-21 being slightly below the mean (Figure **2**). There are several contributing factors which may account for the 2019-20 and 2020-21 decrease in presentations, including the COVID-19 pandemic.

**Figure 2: Five-year trend in the number of major trauma patients**

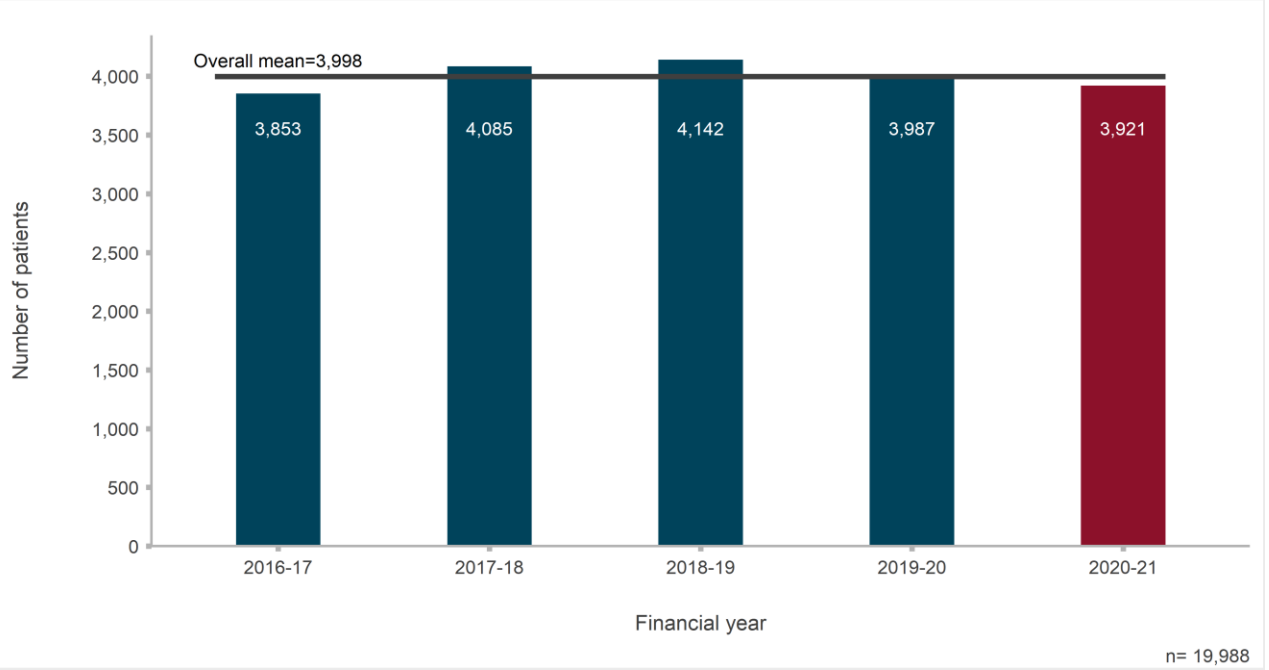
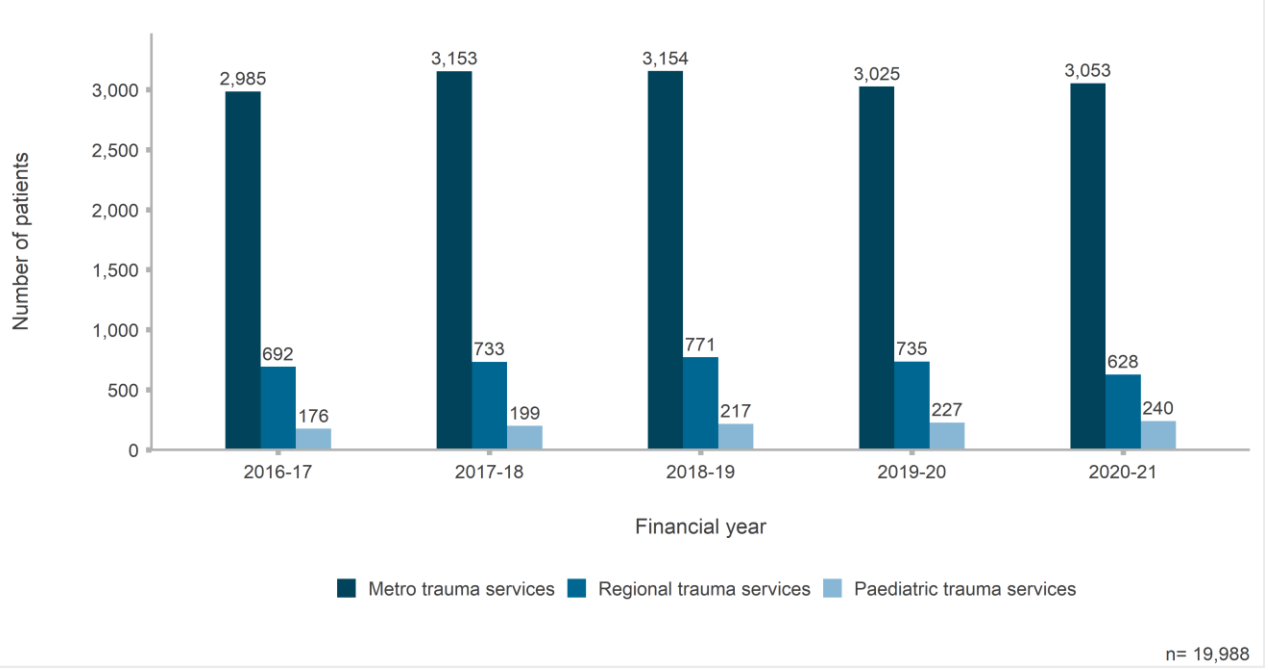



**Figure 3: Five-year trend in the number of major trauma patients, by facility type**



## Age and sex

The average age of a major trauma patient in NSW during the reporting period was 52 years. Table **2** outlines the age distribution, which demonstrates a sharp rise in the incidence of major trauma in the geriatric population especially those aged 80 years and older, as it has in previous years. From the 75 years and older age group, the case fatality rate for ISS >12 increases compared with the under 75 years age groups.

**Table 2: Major trauma patients, injury and mortality, by age group**

| Age group (years) | Number of injured (% of total) | Cumulative number of injured (% of total) | Age-specific injury rate per 100,000 | Age-specific death rate per 100,000 | Case fatality rate (ISS >12) |
|---|---|---|---|---|---|
| 0-4 | 108 (2.8%) | 108 (2.8%) | 21.8 | 2.4 | 12.5% |
| 5-9 | 52 (1.3%) | 160 (4.1%) | 10.1 | 0.2 | 2.4% |
| 10-14 | 90 (2.3%) | 250 (6.4%) | 18.0 | 1.0 | 6.5% |
| 15-19 | 210 (5.4%) | 460 (11.7%) | 44.8 | 3.0 | 7.4% |
| 20-24 | 256 (6.5%) | 716 (18.3%) | 47.4 | 2.2 | 5.3% |
| 25-29 | 220 (5.6%) | 936 (23.9%) | 36.2 | 1.8 | 5.1% |
| 30-34 | 204 (5.2%) | 1,140 (29.1%) | 33.4 | 1.8 | 4.4% |
| 35-39 | 172 (4.4%) | 1,312 (33.5%) | 29.5 | 1.0 | 2.1% |
| 40-44 | 194 (4.9%) | 1,506 (38.4%) | 37.8 | 2.1 | 7.0% |
| 45-49 | 230 (5.9%) | 1,736 (44.3%) | 43.6 | 0.8 | 2.0% |
| 50-54 | 249 (6.4%) | 1,985 (50.6%) | 51.4 | 2.9 | 6.3% |
| 55-59 | 223 (5.7%) | 2,208 (56.3%) | 45.0 | 1.8 | 4.8% |
| 60-64 | 295 (7.5%) | 2,503 (63.9%) | 63.9 | 3.9 | 5.4% |
| 65-69 | 236 (6%) | 2,739 (69.9%) | 58.4 | 5.4 | 8.9% |
| 70-74 | 284 (7.2%) | 3,023 (77.1%) | 79.9 | 7.0 | 7.5% |
| 75-79 | 245 (6.2%) | 3,268 (83.4%) | 96.7 | 12.2 | 11.2% |
| 80-84 | 284 (7.2%) | 3,552 (90.6%) | 162.3 | 29.1 | 16.8% |
| 85+ | 368 (9.4%) | 3,920 (100.0%) | 205.5 | 62.0 | 25.7% |

Males suffer more major trauma injuries (n=2,781) than females (n=1,138), except in the 85 years and older age group (Figure 4). Overall, males are 2.44 times more likely to be injured than females.

**Figure 4: Number of major trauma patients, by age, sex and mortality**

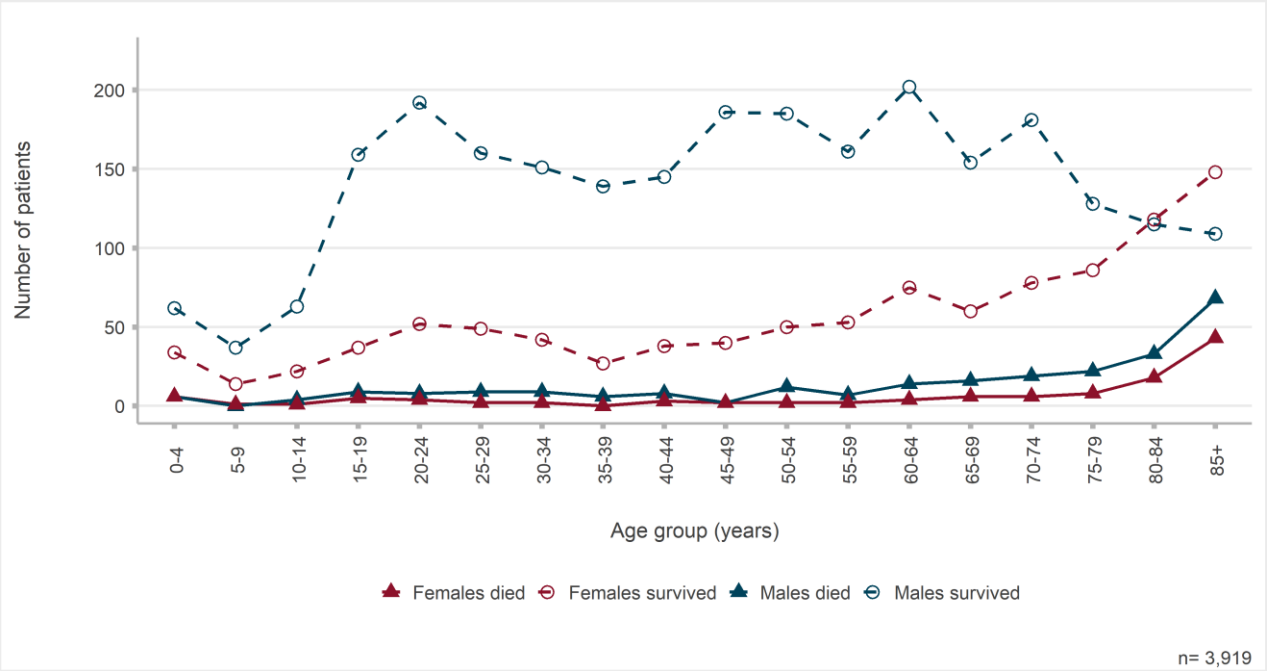
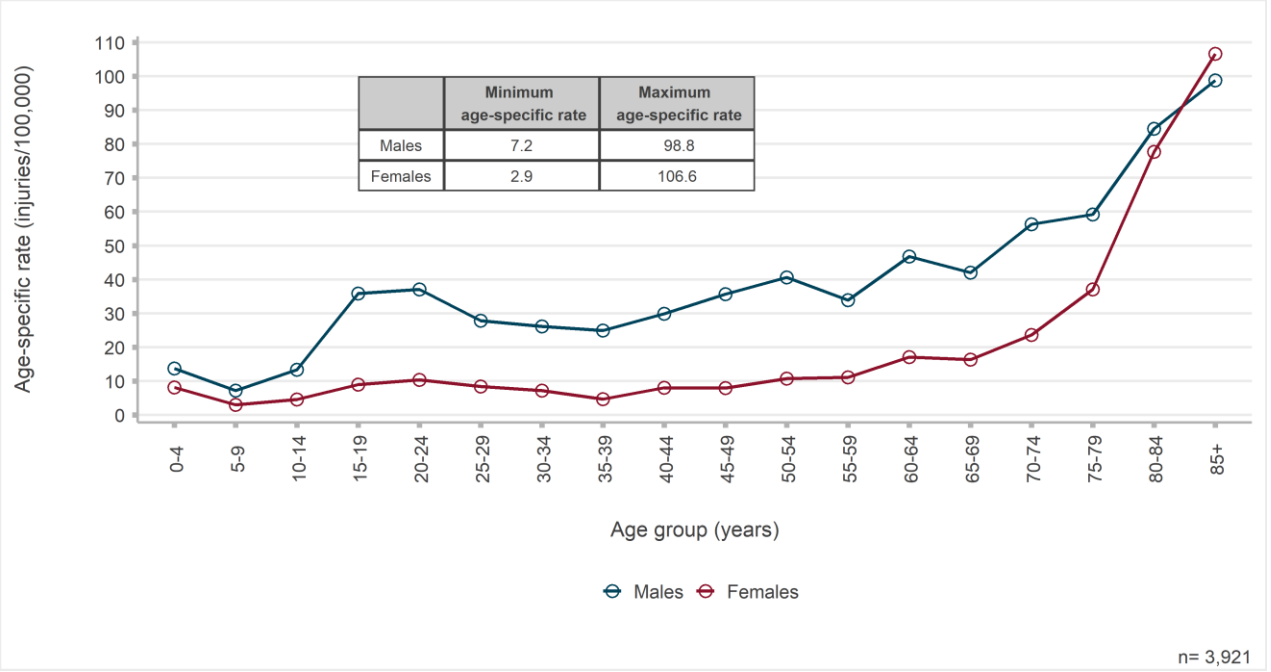
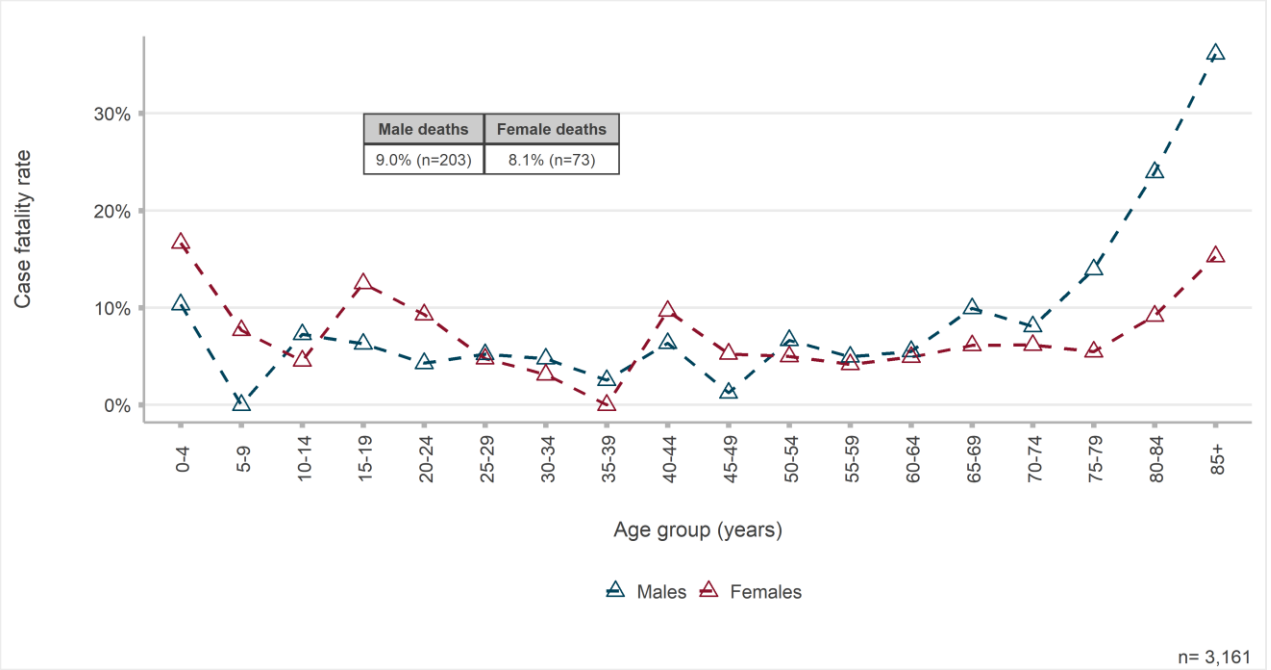



**Figure 5: Age-specific injury rate, by age and sex**




| | Minimum age-specific rate | Maximum age-specific rate |
|---|---|---|
| Males | 7.2 | 98.8 |
| Females | 2.9 | 106.6 |

**Figure 6: Case fatality rate, by age and sex (ISS >12)**




While females had a higher case fatality rate for ISS >12, males had a higher age-specific mortality rate per 100,000 persons (Figure **7**).

**Figure 7: Age-specific mortality rate, by age and sex**

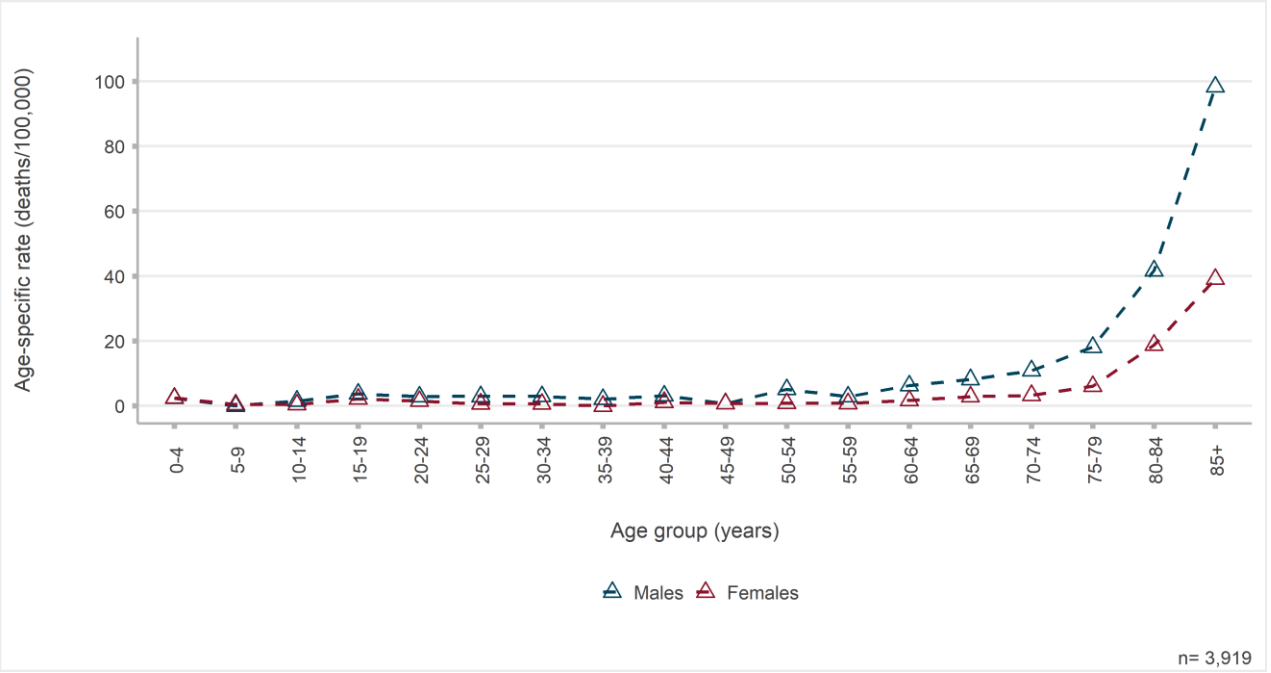
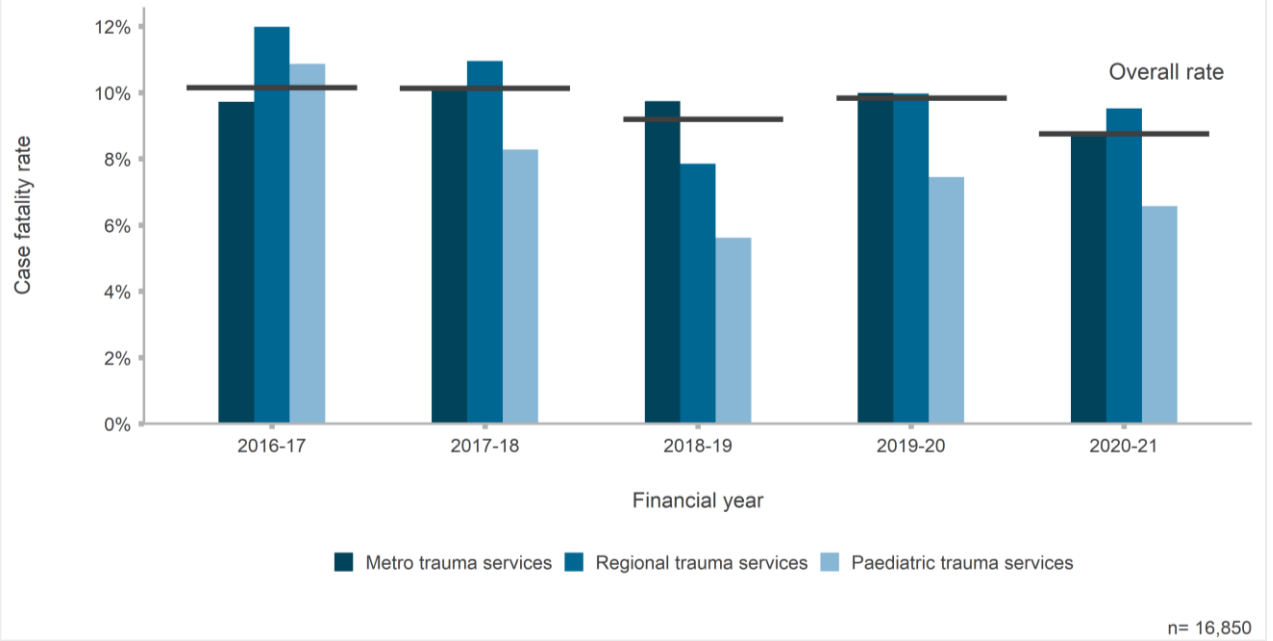


Figure **8** shows the five-year trend of case fatality rates (ISS >12) for the three facility types. Overall, the case fatality rate has decreased from 10.2% to 8.8% during the last five years.

**Figure 8: Five-year trend of case fatality rate, by facility type (ISS >12)**




## Mechanism of injury

The vast majority of major trauma in NSW in the reporting period was caused by blunt injuries (94.8%), such as falls and transport incidents (Table **3**).[‡]

**Table 3: Type of injury**

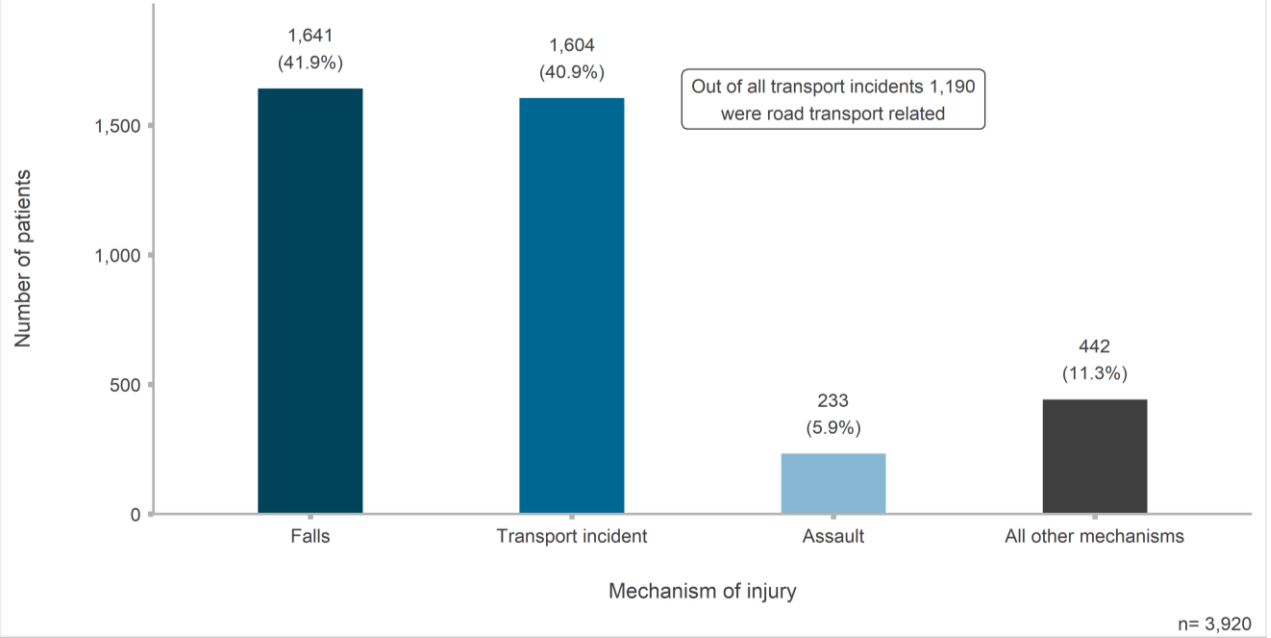
| Type of injury | Number of patients (% of total) | Case fatality rate (ISS>12) |
|---|---|---|
| Blunt | 3,641 (94.8%) | 8.5% |
| Penetrating | 198 (5.2%) | 7.8% |

The top three mechanisms of major trauma were:

- falls (41.8%, n=1,641)
- transport incidents (40.9%, n=1,604) out of which 1,190 were road trauma incidents
- assaults (5.9%, n=233).
- All other mechanisms combined accounted for 11.3% (n=442) (Figure 9).

[‡] Only blunt and penetrating injury types are reported. Other injury types are recorded as 'N/A' or 'Unknown'

**Figure 9: Mechanism of injury**



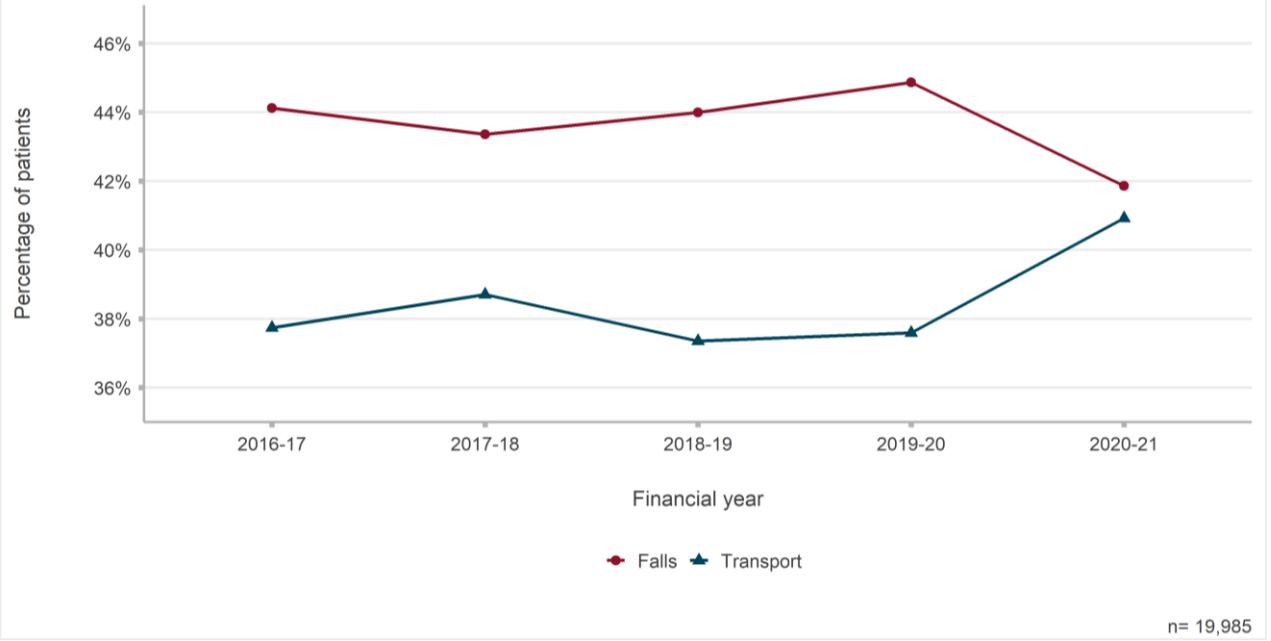

The distribution of mechanisms of injury by age group is demonstrated in Table 4.

**Table 4 : Mechanism of injury, by age**

| | Number of patients (age-specific rate per 100,000) | | | |
|---|---|---|---|---|
| **Age group** | **Falls** | **Transport incident** | **Assault** | **All other mechanisms** |
| 0-4 | 39 (7.9) | 17 (3.4) | 11 (2.2) | 41 (8.3) |
| 5-9 | 15 (2.9) | 27 (5.3) | 1 (0.2) | 9 (1.8) |
| 10-14 | 22 (4.4) | 47 (9.4) | 3 (0.6) | 18 (3.6) |
| 15-19 | 37 (7.9) | 116 (24.8) | 22 (4.7) | 35 (7.5) |
| 20-24 | 32 (5.9) | 153 (28.3) | 30 (5.6) | 41 (7.6) |
| 25-29 | 41 (6.7) | 116 (19.1) | 30 (4.9) | 33 (5.4) |
| 30-34 | 35 (5.7) | 102 (16.7) | 30 (4.9) | 37 (6.1) |
| 35-39 | 24 (4.1) | 97 (16.6) | 26 (4.5) | 25 (4.3) |
| 40-44 | 52 (10.1) | 95 (18.5) | 22 (4.3) | 25 (4.9) |
| 45-49 | 61 (11.6) | 125 (23.7) | 20 (3.8) | 24 (4.6) |
| 50-54 | 68 (14.0) | 126 (26.0) | 12 (2.5) | 43 (8.9) |
| 55-59 | 75 (15.1) | 108 (21.8) | 9 (1.8) | 31 (6.3) |
| 60-64 | 122 (26.4) | 135 (29.2) | 8 (1.7) | 30 (6.5) |
| 65-69 | 133 (32.9) | 80 (19.8) | 1 (0.2) | 22 (5.4) |
| 70-74 | 178 (50.1) | 87 (24.5) | 6 (1.7) | 13 (3.7) |
| 75-79 | 172 (67.9) | 65 (25.7) | 1 (0.4) | 7 (2.8) |
| 80-84 | 217 (124.0) | 61 (34.9) | 1 (0.6) | 5 (2.9) |
| 85+ | 317 (177.0) | 47 (26.2) | 0 (0.0) | 3 (1.7) |
| **Total** | **1,640** | **1,604** | **233** | **442** |

Figure **10** shows that in the 2020-21 period there was an increase in the percentage of transport-related incidents and a decrease in the percentage of falls resulting in major trauma; however, there is variability from year to year.

**Figure 10: Five-year trend in the number of falls and transport incidents**




During 2020-21, the greatest burden of major trauma among people aged 65 years and older was falls, at 71.8% (n=1,017) which is slightly less than that in the previous year while for those aged under 65 years it is transport incidents (50.5%, n=1,264), an increase from the previous year.

The highest incidence of assaults was in the 20-24, 25-29 and 30-34 years age groups (n=90) (

| | Number of patients (age-specific rate per 100,000) | | | |
|---|---|---|---|---|
| **Age group** | **Falls** | **Transport incident** | **Assault** | **All other mechanisms** |
| 0-4 | 39 (7.9) | 17 (3.4) | 11 (2.2) | 41 (8.3) |
| 5-9 | 15 (2.9) | 27 (5.3) | 1 (0.2) | 9 (1.8) |
| 10-14 | 22 (4.4) | 47 (9.4) | 3 (0.6) | 18 (3.6) |
| 15-19 | 37 (7.9) | 116 (24.8) | 22 (4.7) | 35 (7.5) |
| 20-24 | 32 (5.9) | 153 (28.3) | 30 (5.6) | 41 (7.6) |
| 25-29 | 41 (6.7) | 116 (19.1) | 30 (4.9) | 33 (5.4) |
| 30-34 | 35 (5.7) | 102 (16.7) | 30 (4.9) | 37 (6.1) |
| 35-39 | 24 (4.1) | 97 (16.6) | 26 (4.5) | 25 (4.3) |
| 40-44 | 52 (10.1) | 95 (18.5) | 22 (4.3) | 25 (4.9) |
| 45-49 | 61 (11.6) | 125 (23.7) | 20 (3.8) | 24 (4.6) |
| 50-54 | 68 (14.0) | 126 (26.0) | 12 (2.5) | 43 (8.9) |
| 55-59 | 75 (15.1) | 108 (21.8) | 9 (1.8) | 31 (6.3) |
| 60-64 | 122 (26.4) | 135 (29.2) | 8 (1.7) | 30 (6.5) |
| 65-69 | 133 (32.9) | 80 (19.8) | 1 (0.2) | 22 (5.4) |

| | Number of patients (age-specific rate per 100,000) | | | |
|---|---|---|---|---|
| **Age group** | **Falls** | **Transport incident** | **Assault** | **All other mechanisms** |
| 70-74 | 178 (50.1) | 87 (24.5) | 6 (1.7) | 13 (3.7) |
| 75-79 | 172 (67.9) | 65 (25.7) | 1 (0.4) | 7 (2.8) |
| 80-84 | 217 (124.0) | 61 (34.9) | 1 (0.6) | 5 (2.9) |
| 85+ | 317 (177.0) | 47 (26.2) | 0 (0.0) | 3 (1.7) |
| **Total** | **1,640** | **1,604** | **233** | **442** |

and Figures **11**, **12** and **13**).

**Figure 11: Mechanism of injury, by age**

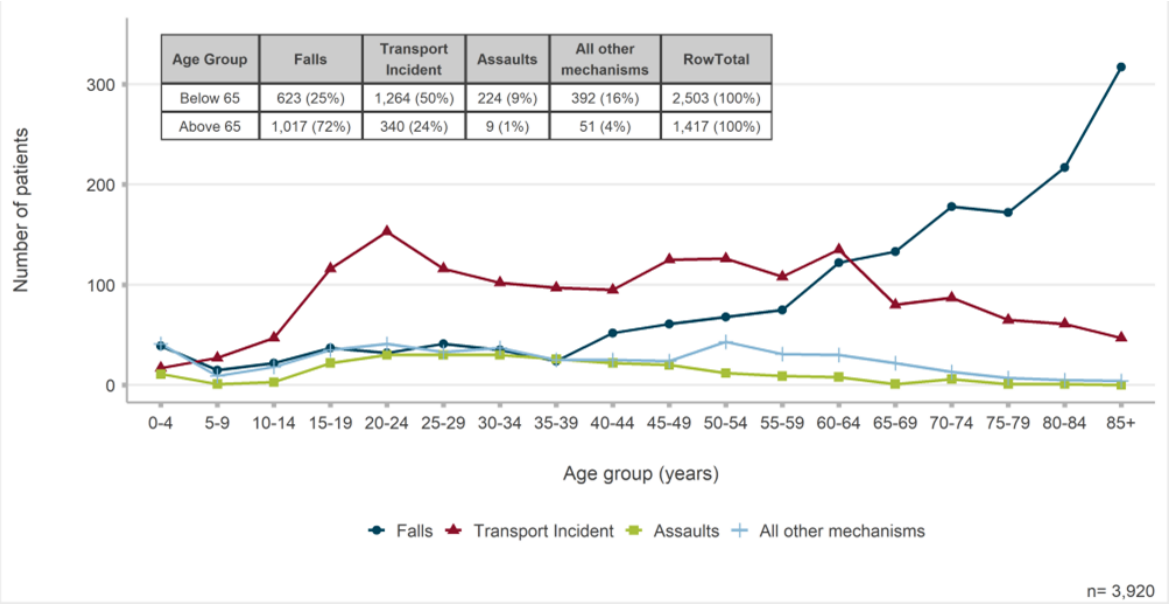



**Figure 12: Mechanism of injury as a percentage, by age**

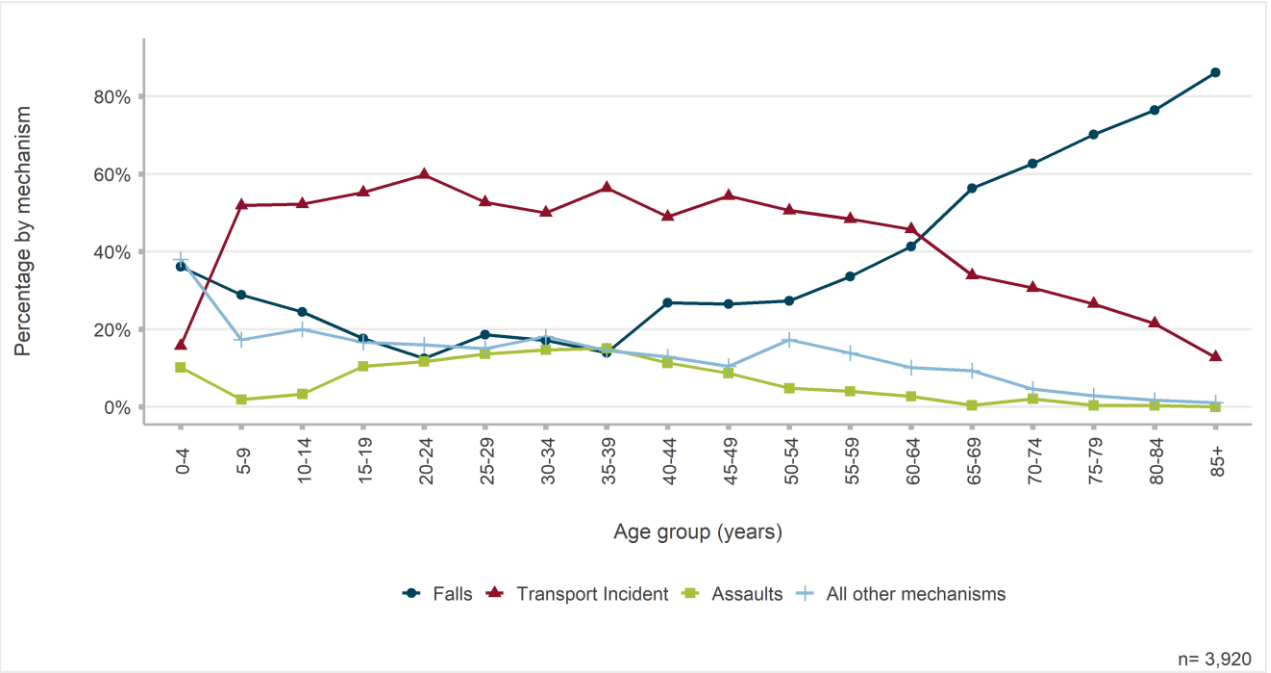
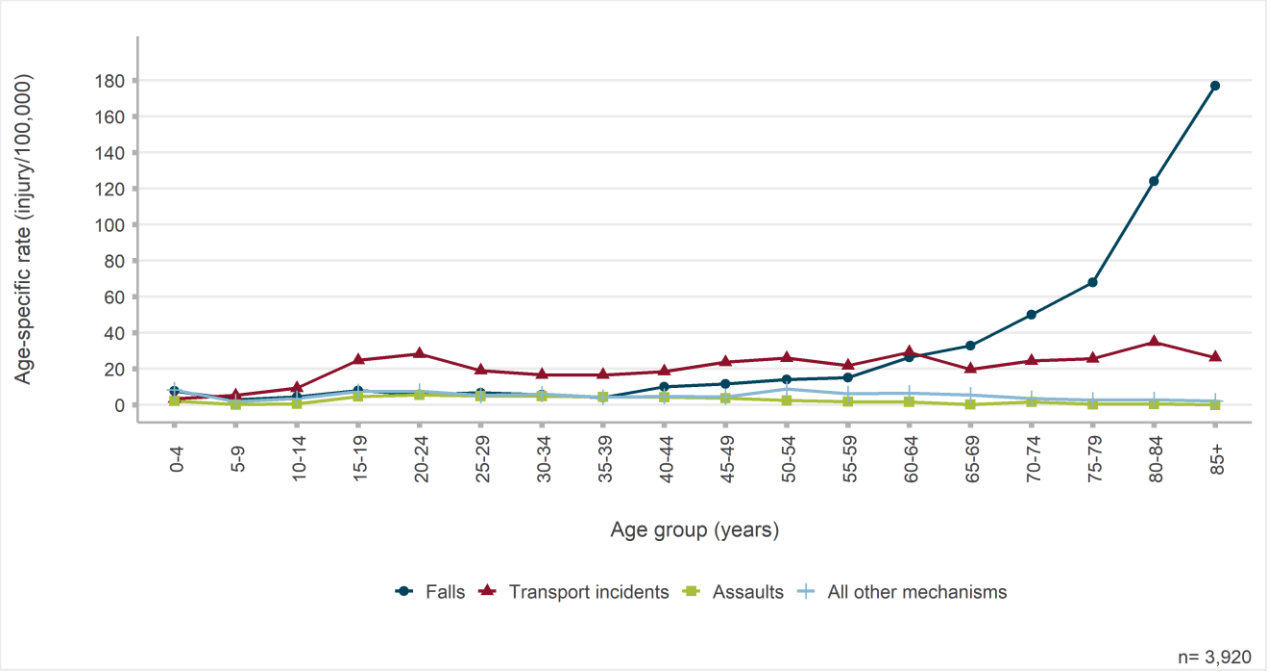



**Figure 13: Age-specific injury rate, by mechanism of injury**



Falls were responsible for 49.3% of the injuries in the metropolitan area, compared with 30.3% in rural areas. Transport incidents accounted for a higher percentage of injuries in rural areas, 53.8%, than in metropolitan areas, 33.6% (Table **5**, Figures **14**-15).

**Table 5: Mechanism of injury, by location (n = 3,479)**

| Mechanism of injury | Metropolitan (% of metropolitan) | Rural (% of rural) |
|---|---|---|
| Falls | 1,225 (49.3%) | 301 (30.3%) |
| Transport incident | 836 (33.6%) | 534 (53.8%) |
| Assault | 151 (6.1%) | 47 (4.7%) |
| All other mechanisms | 274 (11.0%) | 111 (11.2%) |
| **Total** | **2,486 (71.5%)** | **993 (28.5%)** |

**Figure 14: Mechanism of injury, by location**

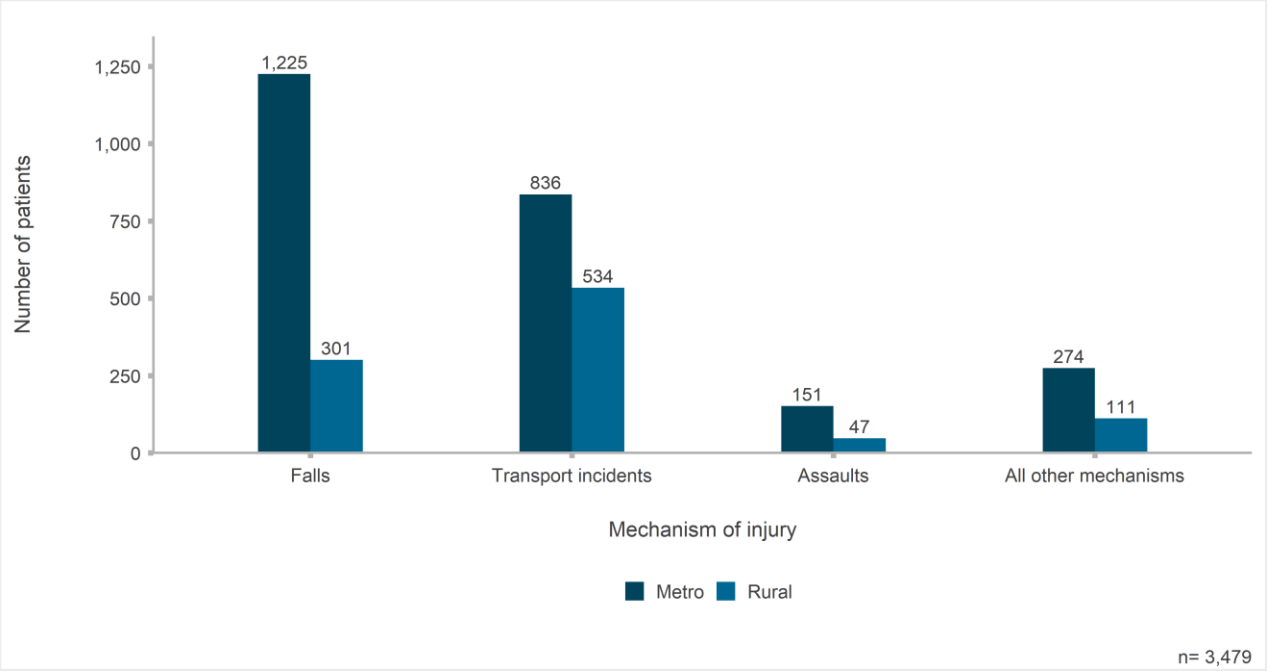
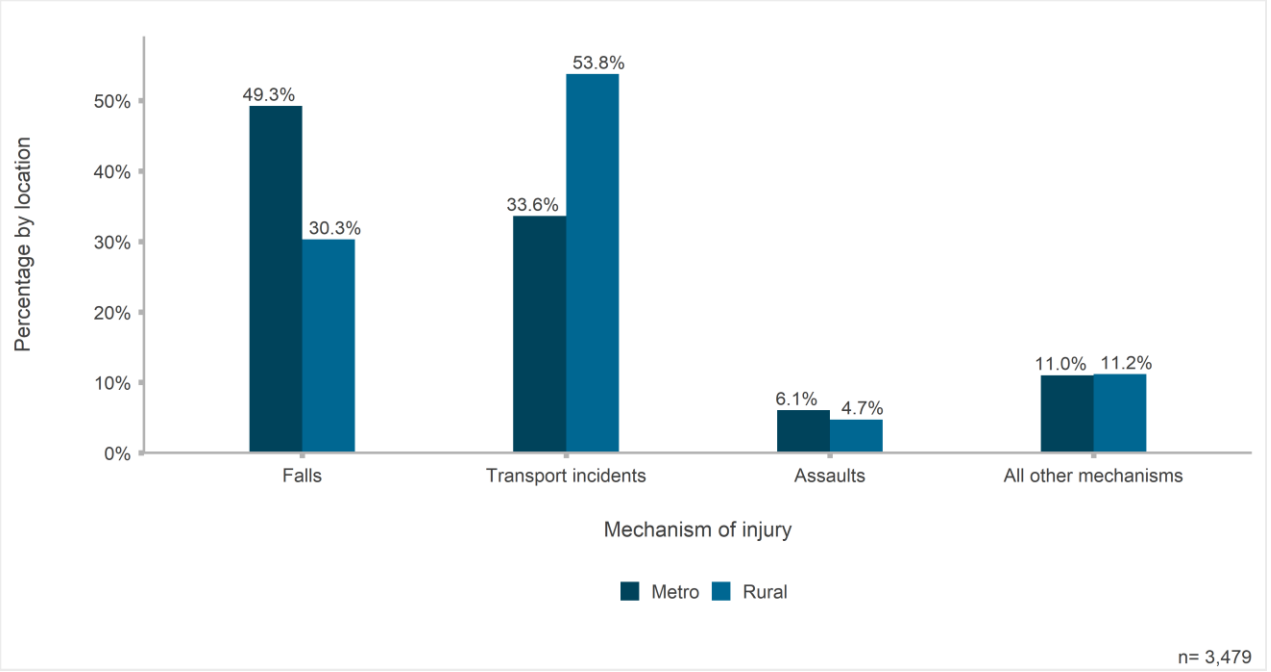


**Figure 15: Mechanism of injury as a percentage, by location**




The mechanisms of injury are outlined in more detail in Tables 6-9. Falls from a standing height (lowest level, <1m) accounted for the greatest burden of all heights, accounting for 59.8% of all falls, 25.1% of all trauma mechanisms, 30.4% of all trauma deaths and had case fatality rate for ISS >12 of 15.1% (Table 6).

**Table 6: Falls in detail (n=1,641)**

| Mechanism | Number injured (% of all mechanisms) | Number of deaths, ISS >12 (case fatality rate)[§] | Percentage of all trauma deaths |
|---|---|---|---|
| Low fall (<1m) | 982 (25.1%) | 112 (15.1%) | 30.4% |
| Medium fall (1-5m) | 525 (13.4%) | 27 (5.9%) | 7.3% |
| High fall (>5m) | 61 (1.6%) | 2 (3.6%) | 0.5% |
| Unspecified fall | 73 (1.9%) | 9 (17.0%) | 2.4% |
| **Total** | **1,641 (41.9%)** | **150 (11.5%)** | **40.8%** |

[§] The case fatality rates compare the ISS >12 cases for each of these MOI with the deaths (for ISS > 12) in the same MOI cohort

Pedestrian trauma had the highest case fatality rate for ISS >12 (17.6%), well above other forms of transport incidents. Pedestrian deaths were 7.6% of all the trauma deaths (Table **7**).

**Table 7: Transport incidents in detail (n=1,604)**

| Mechanism | Number injured (% of all mechanisms) | Number of deaths, ISS >12 (case fatality rate) | Percentage of all trauma deaths |
|---|---|---|---|
| Car occupant | 543 (13.9%) | 19 (4.3%) | 5.2% |
| Motorcycle rider | 470 (12.0%) | 16 (3.8%) | 4.3% |
| Pedal cyclist | 241 (6.1%) | 4 (1.8%) | 1.1% |
| Pedestrian | 191 (4.9%) | 28 (17.6%) | 7.6% |
| All other transport | 159 (4.1%) | 3 (2.1%) | 0.8% |
| **Total** | **1,604 (40.9%)** | **70 (5.1%)** | **19%** |

The most common mechanisms of injury in the assault group were assault by knife (n=74, 1.9% of all mechanisms), assault by bodily force (n=72, 1.8%) and assault by blunt object (n=21,0.5%). Assault by firearm remains low with only eight recorded cases (0.2%) (Table 8).

**Table 8: Assaults in details (n=233)**

| Mechanism | Number injured (% of all mechanisms) | Number of deaths, ISS > 12 (case fatality rate) | Percentage of all trauma deaths |
|---|---|---|---|
| Assault by knife | 74 (1.9%) | 3 (6.0%) | 0.8% |
| Assault by bodily force | 72 (1.8%) | 5 (8.5%) | 1.4% |
| All other assaults | 58 (1.5%) | 1 (2.4%) | 0.3% |
| Assault by blunt object | 21 (0.5%) | 1 (6.2%) | 0.3% |
| Assault by firearm | 8 (0.2%) | 0 (0.0%) | 0.0% |
| **Total** | **233 (5.9%)** | **10 (5.8%)** | **2.7%** |

Of the other mechanisms of injury, self-harm was the most common (n=150, 3.8%). In the current period, burns resulted in the highest case fatality rate for ISS >12 in the 'all other mechanisms' group at 29.4% (Table 9).

**Table 9: All other mechanisms of injury in detail (n=442)**

| Mechanism | Number injured (% of all mechanisms) | Number of deaths, ISS > 12 (case fatality rate) | Percentage of all trauma deaths |
|---|---|---|---|
| Self-harm | 150 (3.8%) | 26 (28.3%) | 7.1% |
| Inanimate mechanical forces | 138 (3.5%) | 5 (5.0%) | 1.4% |
| Animate mechanical forces | 55 (1.4%) | 2 (4.8%) | 0.5% |
| Other | 37 (0.9%) | 4 (16.7%) | 1.1% |
| Burns | 34 (0.9%) | 5 (29.4%) | 1.4% |
| Drownings | 28 (0.7%) | 4 (15.4%) | 1.1% |
| **Total** | **442 (11.3%)** | **46 (12.5%)** | **12.5%** |

## Transport incidents by place of occurrence

In order to provide a greater analysis of the burden road trauma has on the health system, a 'place of occurrence' code qualifier was applied to all transport incidents resulting in two categories: road trauma and other transport incidents. For the purpose of this report, road trauma is defined as a transport incident which occurred on a street, highway or other paved roadway.**

Road trauma accounts for 30.4% (n=1,190) of all mechanisms of injury (Table 13) , the second highest behind falls at 41.86% (n=1,641). The rates of 'road trauma' and 'other transport incidents' were higher in rural areas, 35.8% and 18.0%, respectively, than in metropolitan areas, 26.9% and 6.7%, respectively (Table 10).

**Table 10: Transport incidents by location of injury (n=1,604)**

| Mechanism | Metropolitan (% of metropolitan) | Rural (% of rural) | Unknown location (% of unknown) |
|---|---|---|---|
| Road trauma | 669 (26.9%) | 355 (35.8%) | 166 (37.6%) |
| Other transport incidents | 167 (6.7%) | 179 (18.0%) | 68 (15.4%) |
| **Total** | **836** | **534** | **234** |

Injuries to car occupants remains the highest mechanism of injury in the road trauma group (n=515, 13.1%), with pedestrians having the highest case fatality rate for ISS >12 (16.9%), well above other forms of road trauma (Table 11).

**Table 11: Road trauma in detail (n=1,190)**

| Mechanism | Number injured (% of all mechanisms) | Number of deaths, ISS >12 (case fatality rate) | Percentage of all trauma deaths |
|---|---|---|---|
| Car occupant | 515 (13.1%) | 19 (4.6%) | 5.2% |
| Motorcycle rider | 319 (8.1%) | 14 (5.0%) | 3.8% |
| Pedestrian | 167 (4.3%) | 23 (16.9%) | 6.2% |
| Pedal cyclist | 153 (3.9%) | 4 (2.9%) | 1.1% |
| All other road transport | 36 (0.9%) | 1 (3.3%) | 0.3% |
| **Total** | **1,190 (30.4%)** | **61 (6.1%)** | **16.6%** |

** See Glossary for the definition of 'road trauma' and 'other transport incident).

The most common mechanisms in the 'other transport incidents' group were motorcycle riders (n=151), other land transport incidents (n=105), pedal cyclists (n=88) and pedestrians (n=24). Of the 'other land transport' incident group, animal-rider or animal-drawn vehicle were the most common (n=64) followed by all-terrain vehicle (including quad bike) incidents (n=30) (Table **12**). Other transport incidents include incidents being reported as occurring NOT on a street, highway or other paved roadway.

**Table 12: Other transport incidents in detail (n=414)**

| Mechanism | Number injured (% of all mechanisms) | Number of deaths, ISS > 12 (case fatality rate) | Percentage of all trauma deaths |
|---|---|---|---|
| Motorcycle rider | 151 (3.9%) | 2 (1.4%) | 0.5% |
| Other land transport accidents | 105 (2.7%) | 2 (2.1%) | 0.5% |
| Pedal cyclist | 88 (2.2%) | 0 (0.0%) | 0.0% |
| Car occupant | 28 (0.7%) | 0 (0.0%) | 0.0% |
| Pedestrian | 24 (0.6%) | 5 (21.7%) | 1.4% |
| Water transport accidents | 9 (0.2%) | 0 (0.0%) | 0.0% |
| Air and space transport accidents | 6 (0.2%) | 0 (0.0%) | 0.0% |
| Occupant of pick-up truck or van | 2 (0.1%) | 0 (0.0%) | 0.0% |
| Occupant of heavy transport vehicle | 1 (0.0%) | 0 (0.0%) | 0.0% |
| **Total** | **414 (10.6%)** | **9 (2.3%)** | **2.4%** |

## Time, day and month of injury

While 10 am and 6 pm has been the busiest period in the past years, this year there was a higher activity during 9 am with 180 injuries (Figure 16).

**Figure 16: Number of patients, by time of injury**

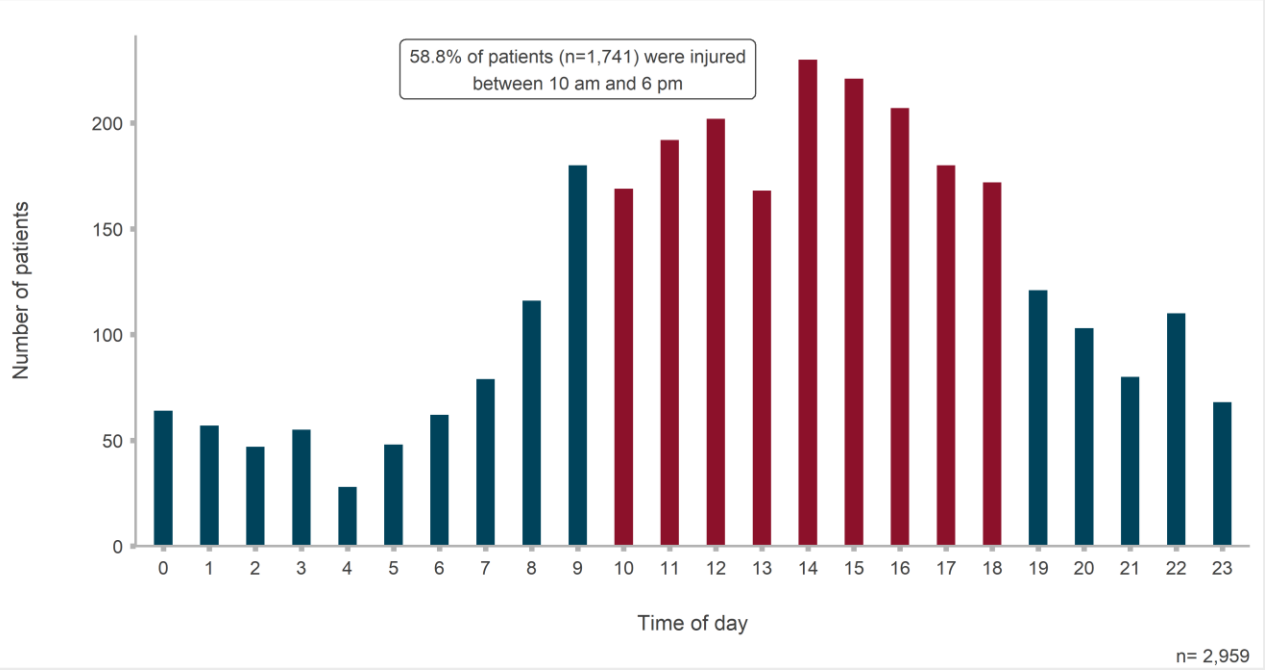



**Figure 17: Number of patients, by day of injury**

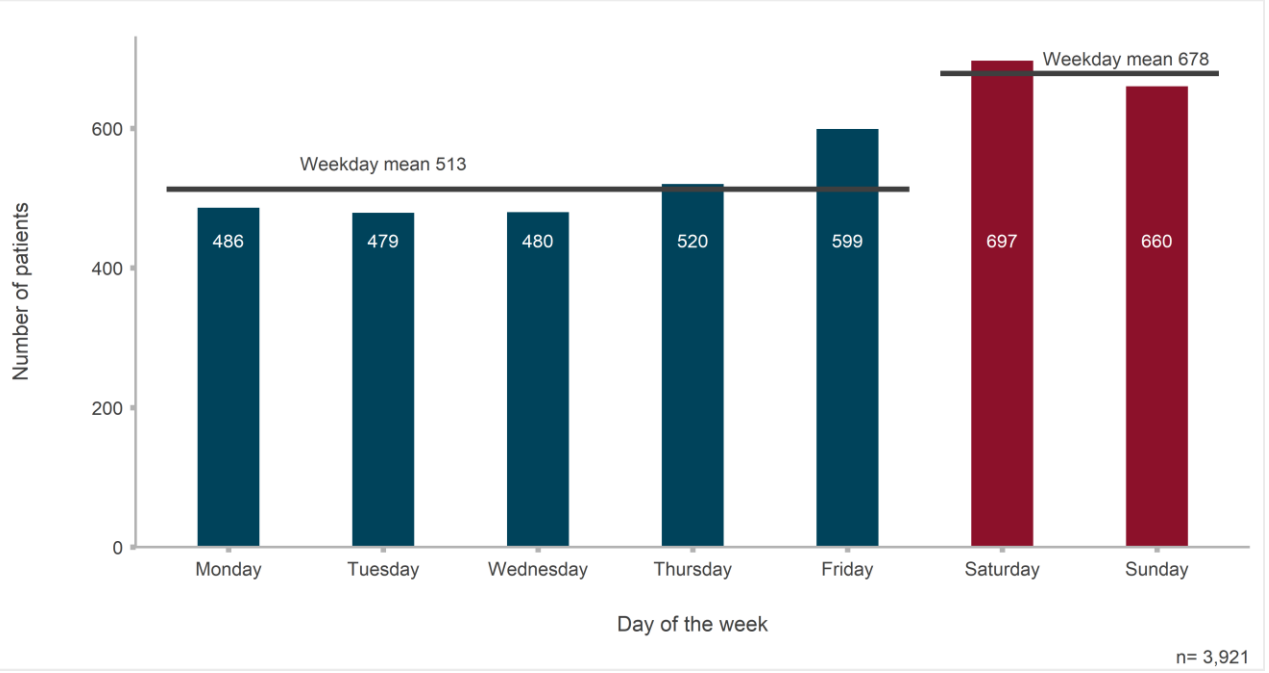
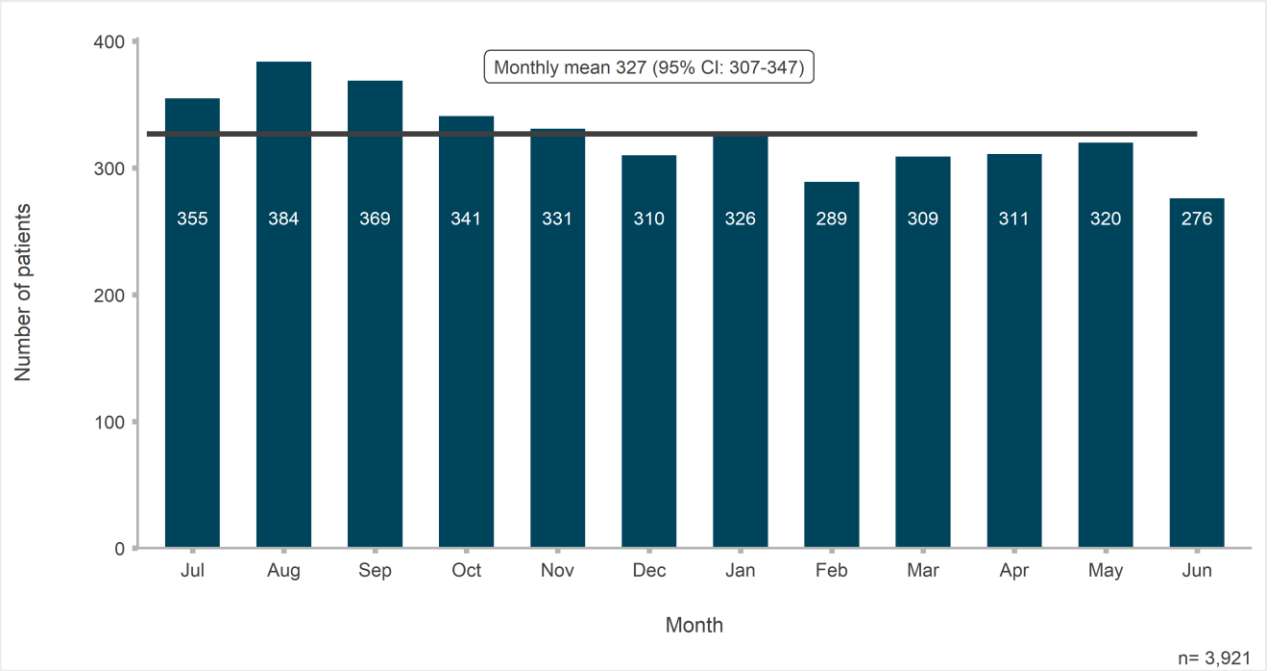


**Figure 18: Number of patients, by month of injury**



## Injuries

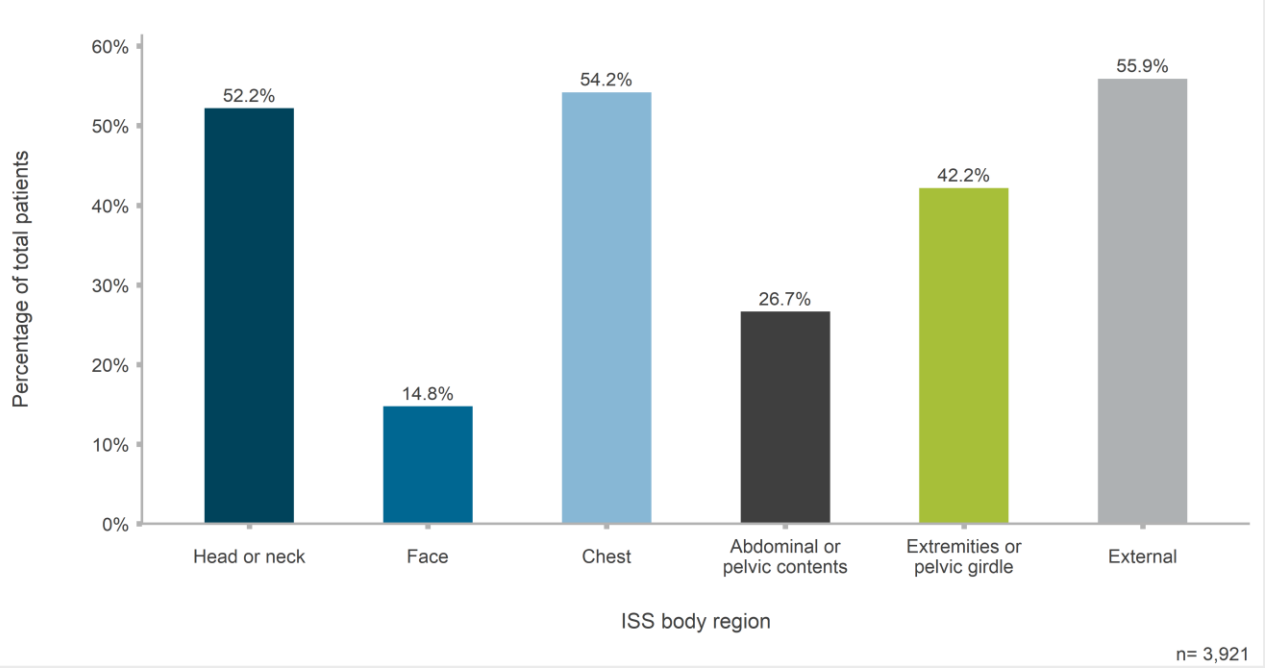
Three or more fractured ribs without a flail segment[††] continued to be the most common single serious injury sustained (26.7%, n=1,047) where the AIS severity was >2 (Table **13**). Head injuries occupied three of the top five injuries.

**Table 13: Top five injuries with an AIS severity >2 (n=3,921)**

| Injury description | All severity | Number of patients (% of total) |
|---|---|---|
| Fractured ≥3 ribs without flail, not further specified | 3 | 1,047 (26.7%) |
| Cerebrum haematoma – subdural – small; moderate | 4 | 315 (8.0%) |
| Cerebrum haematoma – subdural – tiny | 3 | 206 (5.3%) |
| Hemopneumothorax not further specified | 3 | 188 (4.8%) |
| Base skull fracture, not further specified | 3 | 171 (4.4%) |

In addition, 52.2% of major trauma patients sustained injuries to the head or neck body region, with the chest region injured in 54.2% of major trauma patients (Figure 19).

**Figure 19: All injuries by ISS Body region**




[††] Flail is defined as three or more ribs fractured in more than one location and/or resulting in paradoxical chest movement.[8]

Most major trauma patients (72.2%) sustained serious injury (AIS severity >2) to only one ISS body region (Table **14**).

**Table 14: Number of ISS body regions injured with an AIS severity >2 (n=3,921)**

| Number of ISS body regions injured with an AIS severity >2 | Number of patients – all ISS (% of total) | Number of patients (% of total) (ISS >12) |
|---|---|---|
| 0 | 364 (9.3%) | 0 (0.0%) |
| 1 | 2,832 (72.2%) | 2,440 (77.1%) |
| 2 | 605 (15.4%) | 603 (19.1%) |
| 3 | 109 (2.8%) | 109 (3.4%) |
| 4 | 10 (0.3%) | 10 (0.3%) |
| 5 | 1 (0.0%) | 1 (0.0%) |

20.4% of major trauma patients sustained polytrauma, defined as sustaining serious injury (AIS severity >2) in two or more ISS body regions (Table **15**).[12]

**Table 15: Single body region versus polytrauma with an AIS severity >2 (n=3,557)**

| Body region | Number of patients - all ISS (% of total) | Case fatality rate (ISS >12) |
|---|---|---|
| Single body region | 2,832 (79.6%) | 8.3% |
| Polytrauma | 725 (20.4%) | 10.4% |

## Injury Severity Score

An ISS of >12 is a key identifier of a major trauma patient. The ISS correlates with mortality – the higher the ISS, the higher the mortality rate (Table **16**). It is important to note that ISS is only calculated on injuries sustained and does not include other potential contributors to mortality and morbidity, such as patient's age and comorbidities. The average ISS for all major trauma patients was 18. This increased to 25 when excluding those with an ISS <13.

**Table 16: Major trauma patients, by ISS group (n=3,917)**

| ISS group | Number of patients (% of total) | Number of deaths |
|---|---|---|
| ISS <13 | 754 (19.2%) | 87 (11.5%) |
| ISS 13-15 | 891 (22.7%) | 16 (1.8%) |
| ISS 16-24 | 1,427 (36.4%) | 53 (3.7%) |
| ISS 25-40 | 739 (18.9%) | 169 (22.9%) |
| ISS 41-75 | 106 (2.7%) | 39 (36.8%) |

**Figure 20: Number of major trauma patients, by ISS group and sex**

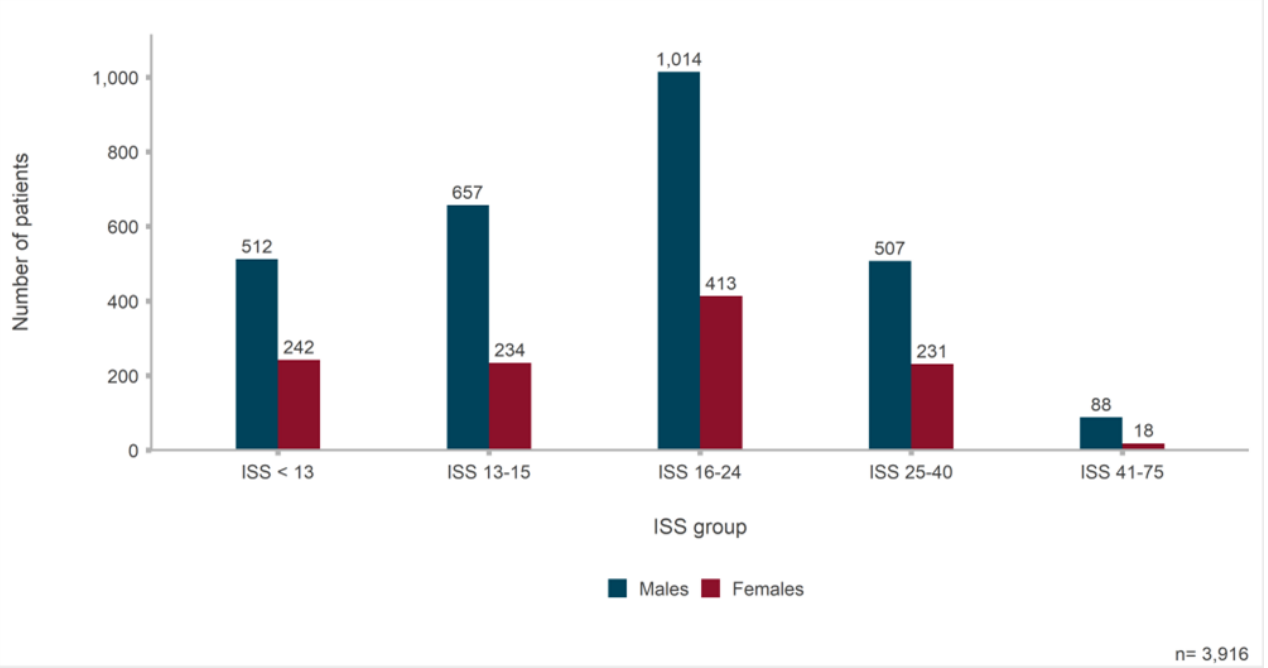
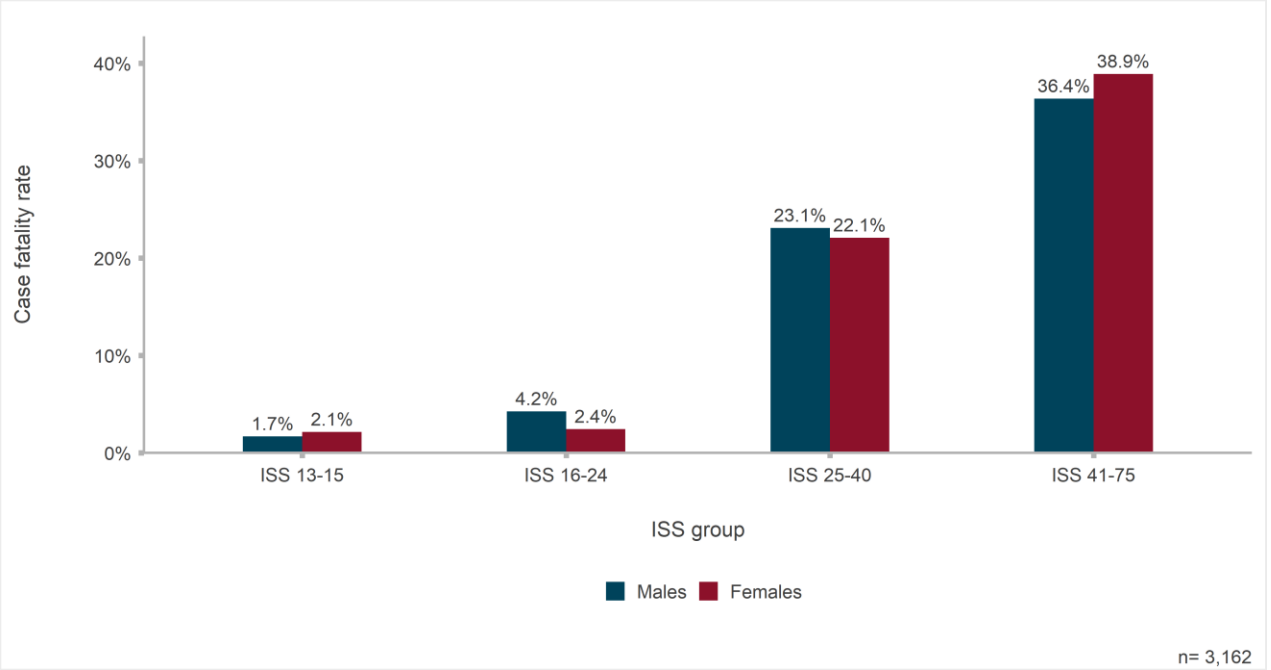


**Figure 21: Case fatality rate, by ISS and sex**



## Pre-hospital time

The time from injury to arrival at a designated trauma service can have a significant impact on morbidity and mortality in the major trauma patient cohort. The regional population and geography of NSW are vastly spread, and this impacts on the variation in the time of arrival to a designated trauma service. Overall, patients who were injured in a metropolitan region arrived at a designated trauma service faster (88mins) than those injured in a rural location (175mins) (Table **17**).

See the Methodology section of this report for more information regarding the definitions of metropolitan and rural.

**Table 17: Median time of injury to arrival to a designated trauma service (n=3,680)**

| Location of injury | Direct from scene | Transferred from another hospital | Overall |
|---|---|---|---|
| Metropolitan | 83mins (n=2,127) | 467.5mins (n=280) | 88mins (n=2,407) |
| Rural | 144.5mins (n=617) | 540.5mins (n=229) | 175mins (n=846) |
| **NSW overall** | **91 mins (n=3,080)** | **496.5 mins (n=600)** | **103 mins (n=3,680)** |

A number of major trauma patients (5%, n=217) who arrived at a designated trauma service needed to be transferred to a higher level of care for specialised treatment.

## Mode of transport

Major trauma patients are transported to a designated trauma service from either the scene of the injury or from another hospital. Road ambulance was by far the most common mode of transport (73.3%), with helicopter, fixed wing aircraft and private transport also used (Table 18, Figures 22-23).

**Table 18: Mode of transport, by ISS group (n=3,741)**

| Transport mode | Direct from scene of injury | Transfer from another acute care facility | Total |
|---|---|---|---|
| Road ambulance | 2,291 (77.6%) | 451 (57.2%) | 2,742 (73.3%) |
| Helicopter | 434 (14.7%) | 119 (15.1%) | 553 (14.8%) |
| Private vehicle | 189 (6.4%) | 9 (1.1%) | 198 (5.3%) |
| Unknown | 34 (1.2%) | 96 (12.2%) | 130 (3.5%) |
| Other | 3 (0.1%) | 7 (0.9%) | 10 (0.3%) |
| Fixed wing | 2 (0.1%) | 106 (13.5%) | 108 (2.9%) |
| **Total** | **2953** | **788** | **3741** |

**Figure 22: Mode of transport to definitive care when transported direct from the scene of injury, by injury location**

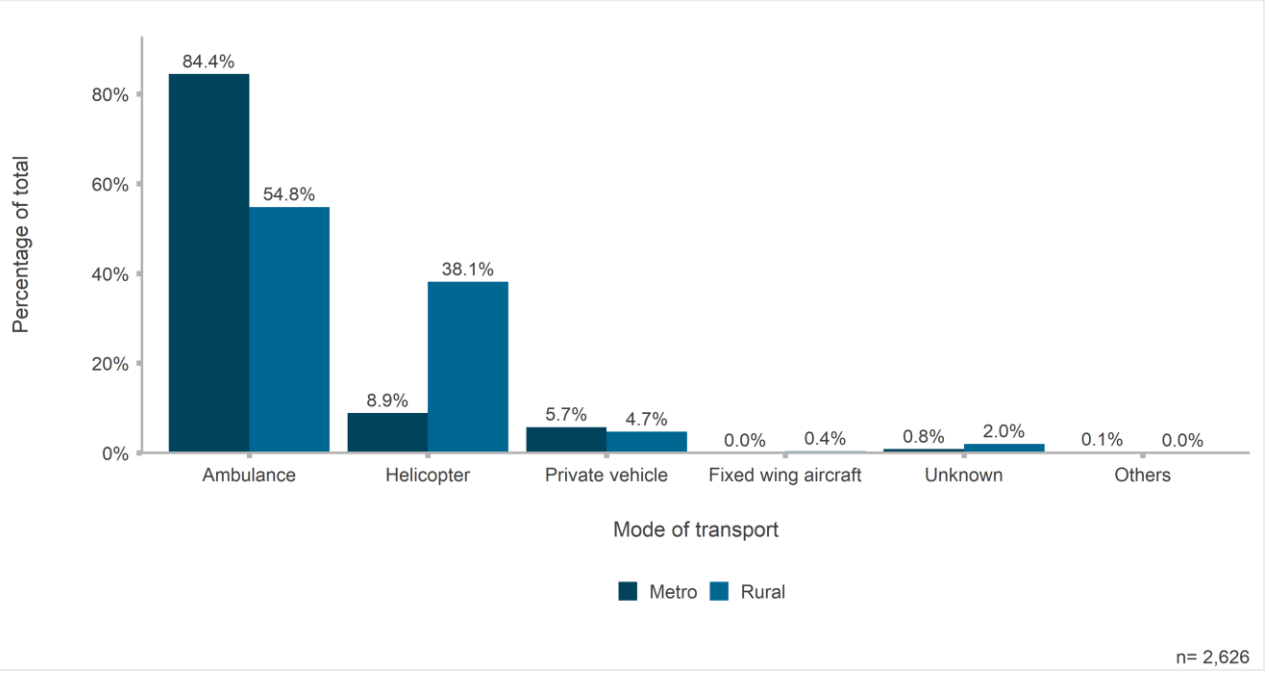
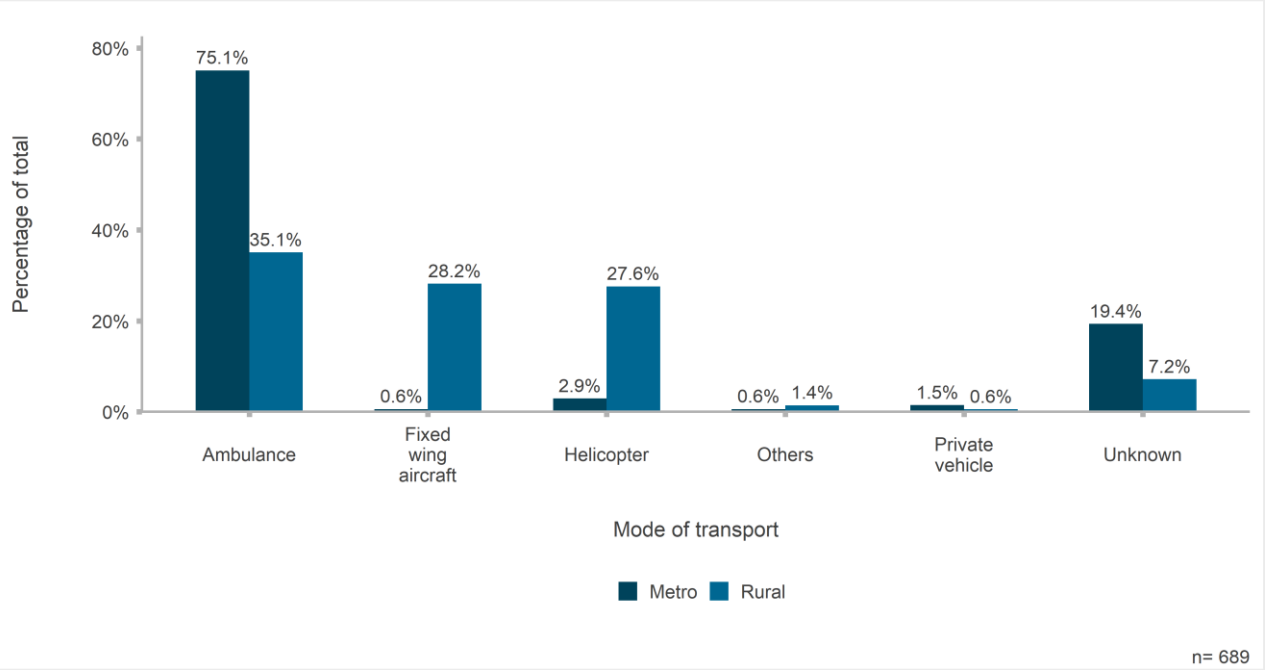


**Figure 23: Mode of transport to definitive care when transferred from another acute care facility, by injury location**



# Major trauma admissions

## Introduction

The information in this section of the report is based on the number of major trauma patients admitted to NSW trauma services (n=4,034), not the number of major trauma patients (n=3,921), as some patients were treated in more than one NSW reporting facility. Trauma patient data are discussed in detail in the Major trauma patients section.

## Overall burden of trauma

Major trauma patients are an important cohort, but only represent a fraction of all trauma patients who are admitted to facilities across NSW. Based on data from the Admitted Patient Data Collection and using an International Classification of Diseases (ICD) to AIS mapping tool, 30,065 patients with an estimated ISS >5 were admitted to an NSW health facility during the reporting period (Figure **24**).[13,14] This demonstrates the significant burden that trauma places on the health system.

**Figure 24: Number of patients with an estimated ISS >5, by local health district**

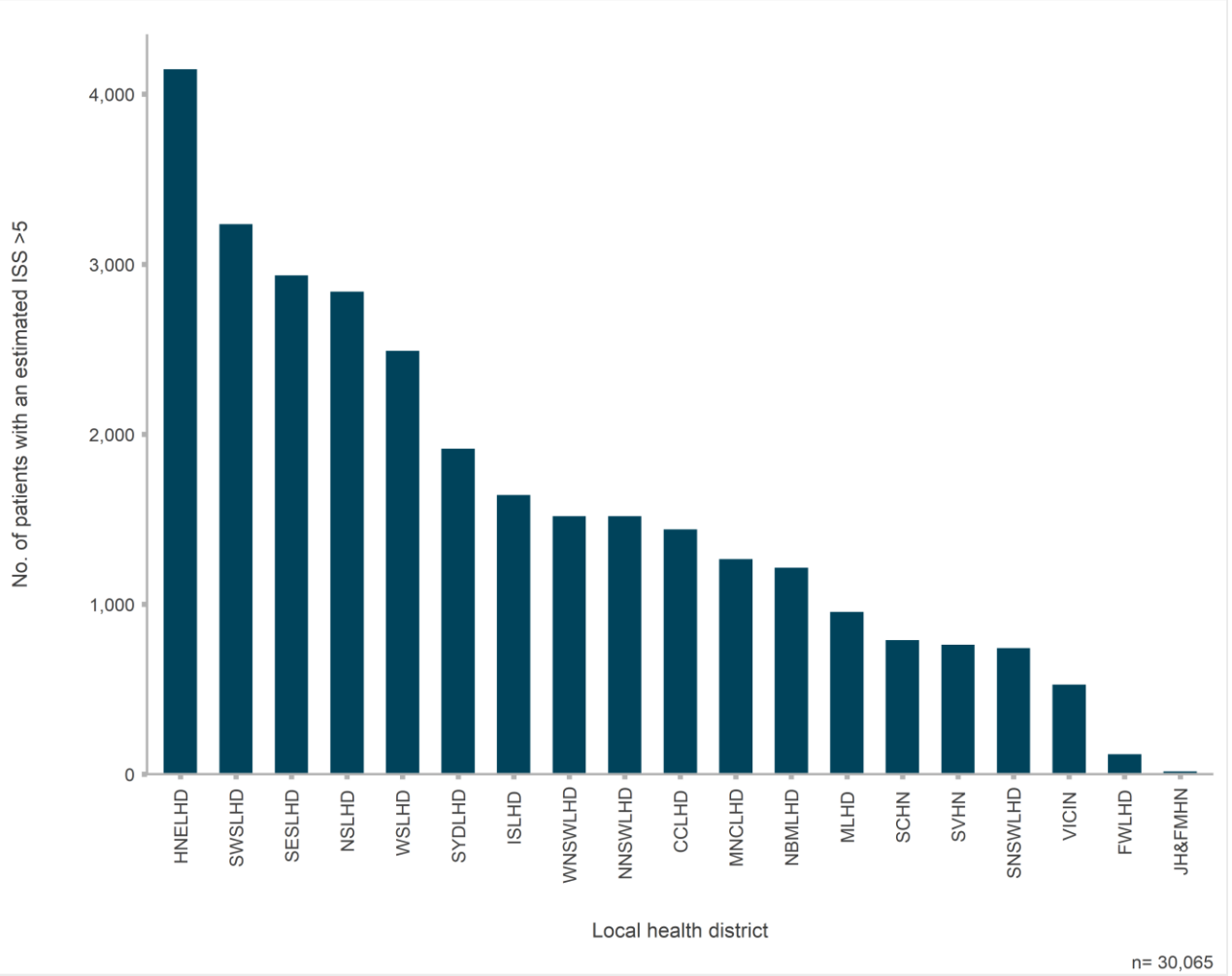
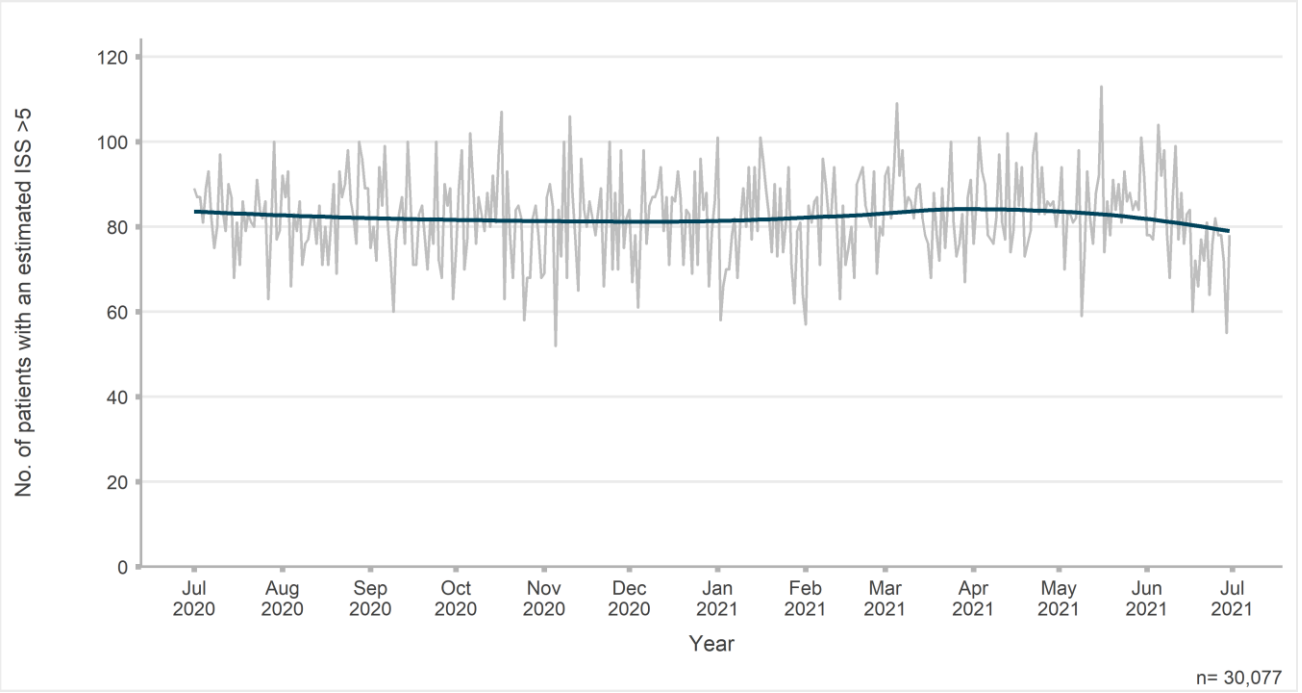


Figure **25** shows the monthly trend of the ISS >5 trauma patients.

**Figure 25: Monthly presentations of patients with an estimated ISS >5**



## Facility overview

Table **19** provides an overview of the major trauma admissions for each designated trauma service together with averages from the three trauma service types.

**Table 19: Overview of trauma service admissions (n=4,034)**

| Facility | Number of admissions | Number of admissions (ISS >12) | Average age | Average ISS | Case fatality rate (ISS >12) excl traumatic DOA |
|---|---|---|---|---|---|
| **Adult major trauma services** | **3,071** | **2,425** | **54.0** | **17** | **8.3%** |
| John Hunter Hospital | 617 | 586 | 53.0 | 20 | 6.8% |
| Liverpool Hospital | 657 | 456 | 57.0 | 16 | 7.9% |
| Royal North Shore Hospital | 369 | 268 | 53.0 | 17 | 12.3% |
| Royal Prince Alfred Hospital | 333 | 291 | 57.0 | 18 | 6.6% |
| St George Hospital | 355 | 246 | 54.0 | 16 | 11.0% |
| St Vincent's Hospital | 175 | 138 | 53.0 | 16 | 12.4% |
| Westmead Hospital | 565 | 440 | 51.0 | 17 | 6.7% |
| **Regional trauma services** | **722** | **648** | **54.0** | **18** | **7.9%** |
| Coffs Harbour Base Hospital | 91 | 82 | 53.0 | 20 | 8.5% |
| Gosford Hospital | 64 | 58 | 59.0 | 16 | 6.9% |
| Lismore Base Hospital | 65 | 60 | 52.0 | 16 | 5.0% |
| Nepean Hospital | 44 | 25 | 64.0 | 13 | 8.0% |
| Orange Health Service | 101 | 99 | 48.0 | 19 | 4.0% |
| Port Macquarie Base Hospital | 65 | 63 | 53.0 | 19 | 7.9% |
| Tamworth Base Hospital | 98 | 83 | 52.0 | 18 | 9.8% |
| Tweed Heads District Hospital | 34 | 29 | 58.0 | 15 | 13.8% |
| Wagga Wagga Base Hospital | 82 | 77 | 52.0 | 18 | 6.6% |
| Wollongong Hospital | 78 | 72 | 56.0 | 20 | 12.5% |

| Facility | Number of admissions | Number of admissions (ISS >12) | Average age | Average ISS | Case fatality rate (ISS >12) excl traumatic DOA |
|---|---|---|---|---|---|
| **Paediatric major trauma services** | **241** | **199** | **7.0** | **19** | **6.1%** |
| John Hunter Children | 59 | 55 | 8.0 | 19 | 1.8% |
| Sydney Children's Hospital | 88 | 71 | 7.0 | 18 | 7.0% |
| The Children's Hospital at Westmead | 94 | 73 | 7.0 | 21 | 8.5% |

## Admission type

Most major trauma patients (79%, n=3,190) were admitted to a trauma service direct from the scene of injury. However, there were differences in the admission type between adult and paediatric patient groups (Table **20**).

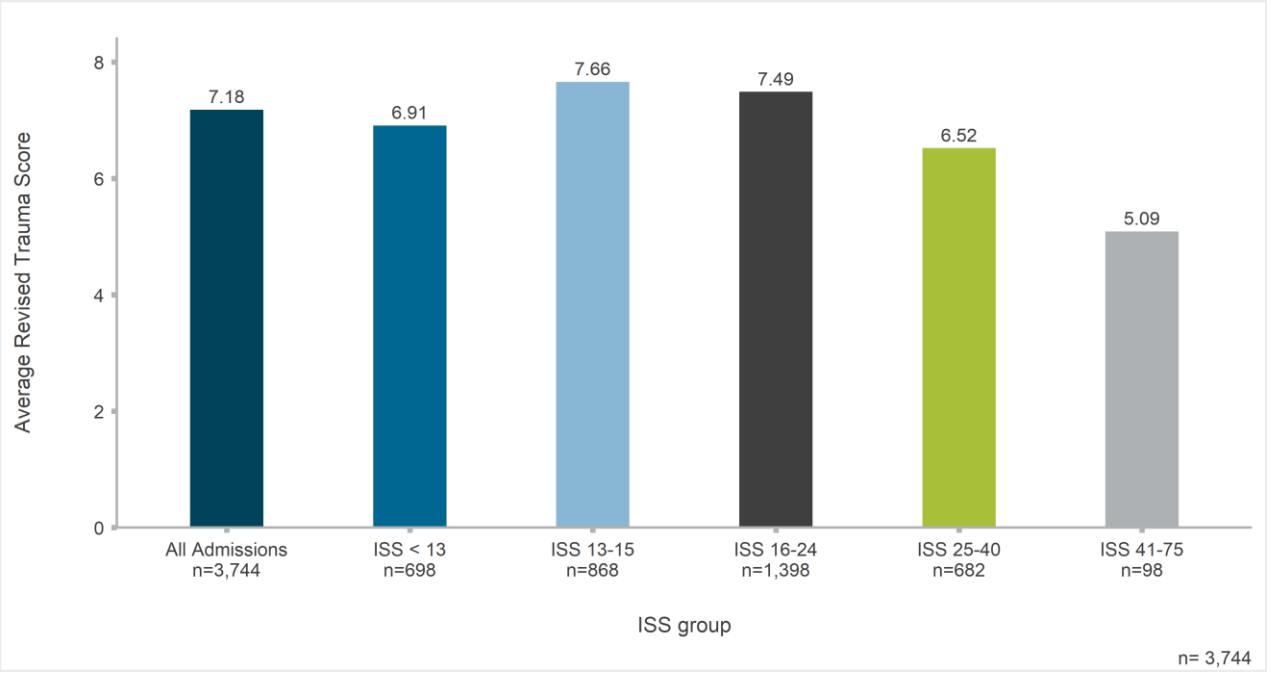
**Table 20: Number of admissions, by type (n=4,033)**

| Admission type | Number of adult admissions (percentage) | No of paediatric admissions (percentage) |
|---|---|---|
| Direct from scene | 2,991 (80.7%) | 199 (60.7%) |
| Transfer from acute care facility | 696 (18.8%) | 127 (38.7%) |
| Unknown and others | 18 (0.5%) | 2 (0.6%) |

## Revised Trauma Score

The Revised Trauma Score[#] is an early (<24 hours) indicator of trauma outcomes. The lower the score, the higher the likelihood of death. There was a negative correlation between the Revised Trauma Score and ISS, showing that the higher the ISS, the lower the Revised Trauma Score. The average Revised Trauma Score was 7.18 (Figure **26**).

**Figure 26: Average Revised Trauma Score, by ISS group**

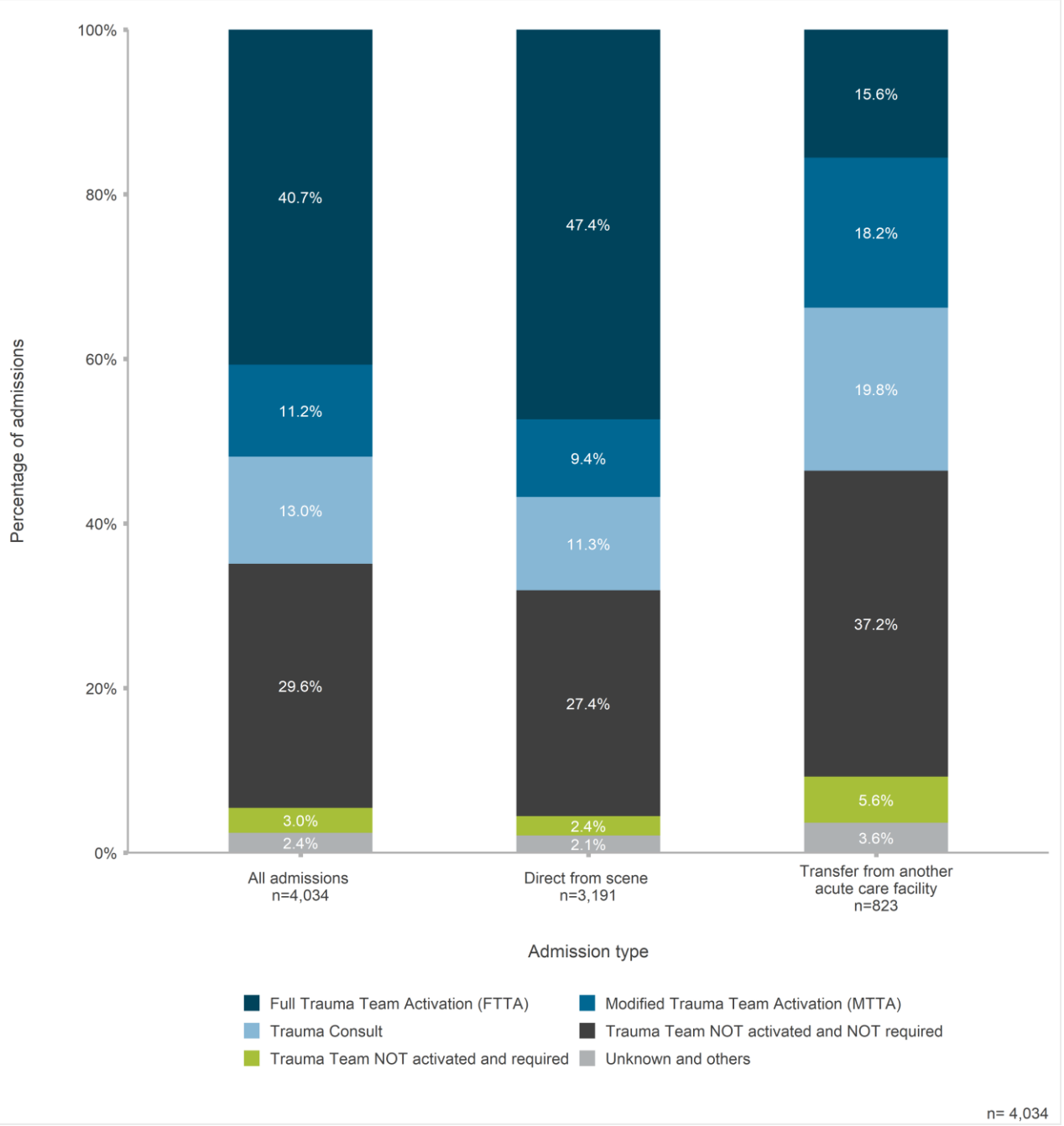



[#] See Glossary for a definition of the Revised Trauma Score.[9]

## Trauma team activation

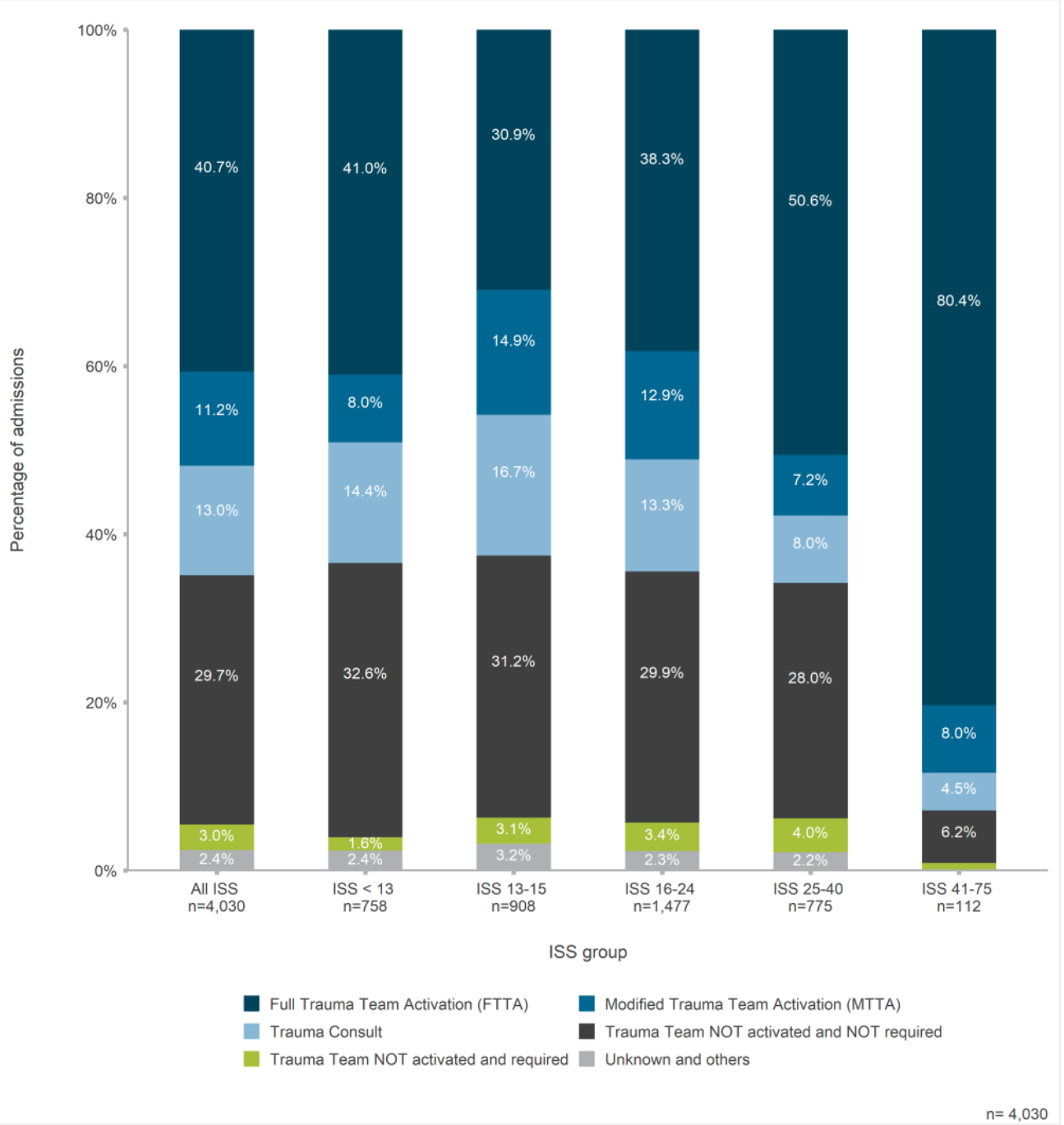
Major trauma patients require rapid, thorough and systematic assessment and resuscitation. This is conducted on arrival by a multidisciplinary team known as a trauma team. The activation of the trauma team is based on a locally derived set of criteria, including the mechanism of injury and physiological parameters. Of patients who arrived at a trauma service direct from scene, 47.4% received a full trauma team activation compared with 15.6% of those who were transferred from another acute care facility (Figure **27**).

**Figure 27: Trauma team activation, by admission type**



As expected, the activation of the trauma team increased with severity of injury with 30.9% (n=281) of the ISS 13-15 group patients receiving a full trauma team activation compared to 80.4% (n=90) of the ISS 41-75 group patients (Figure **28**).

**Figure 28: Trauma team activation, by ISS group**



## Vital signs on arrival to the emergency department

The initial vital signs on arrival to the emergency department (ED) are useful indicators of injury severity and predictors of death. Major trauma patients who presented with hypotension (systolic blood pressure <100mmHg), a Glasgow Coma Scale <13 or hypothermia (temperature <35°C) represented a higher proportion of those who died compared to all patients (Figures **29**-31).

**Figure 29: Initial systolic blood pressure on arrival to the ED and mortality**

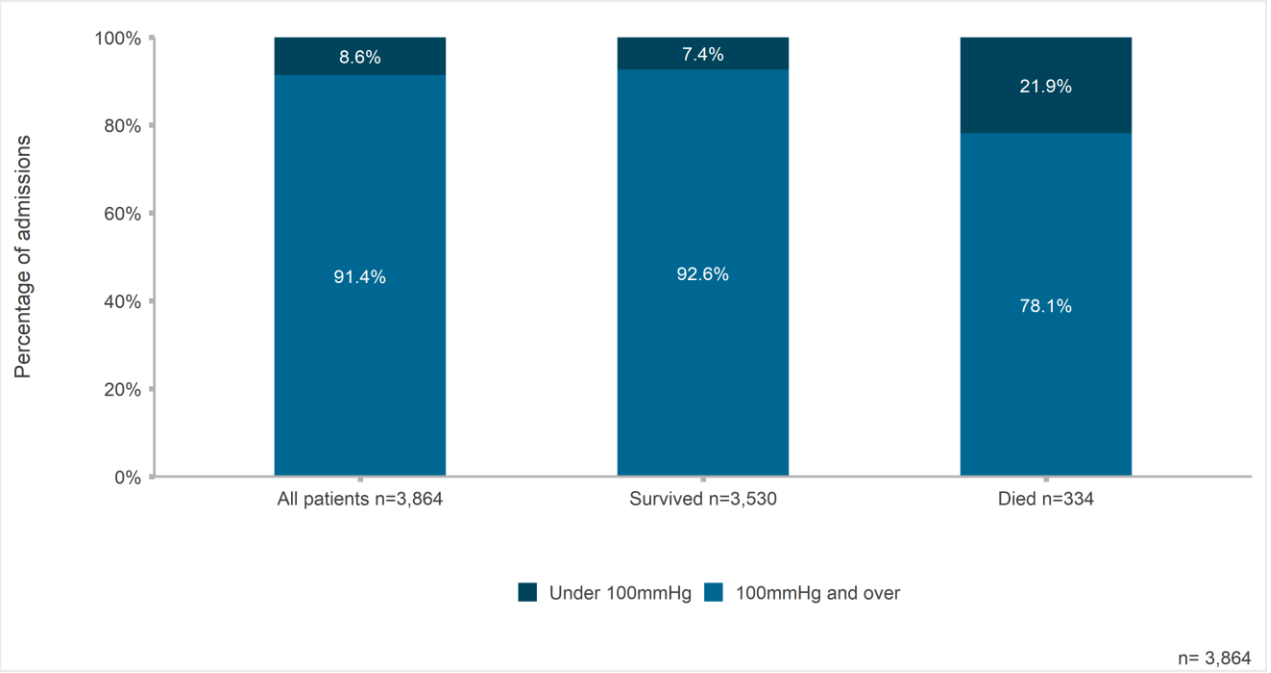



**Figure 30: Initial Glasgow Coma Scale on arrival to the ED and mortality**

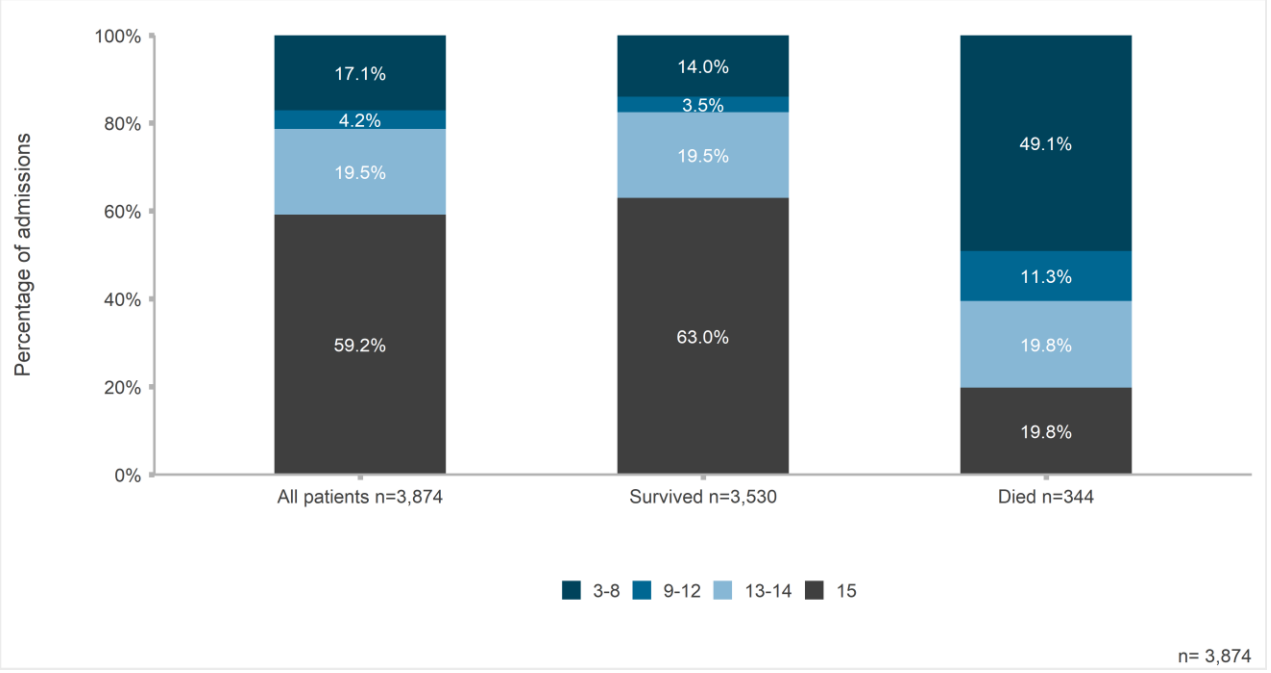
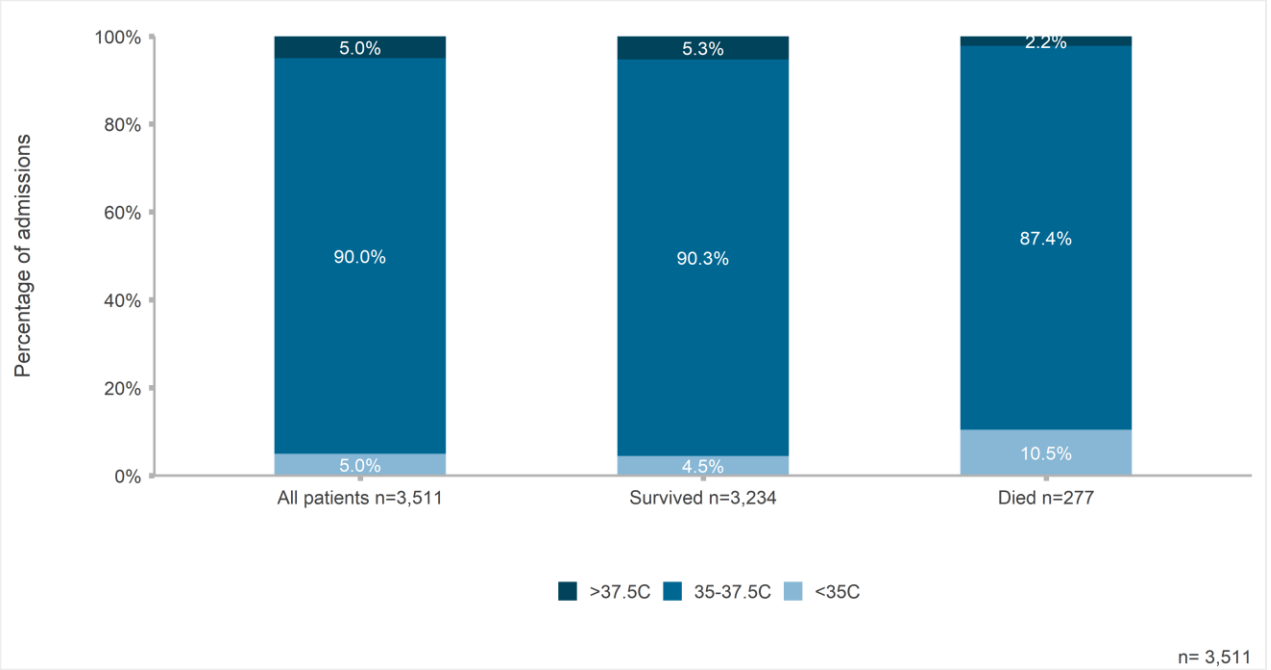


**Figure 31: Initial temperature on arrival to ED and mortality**

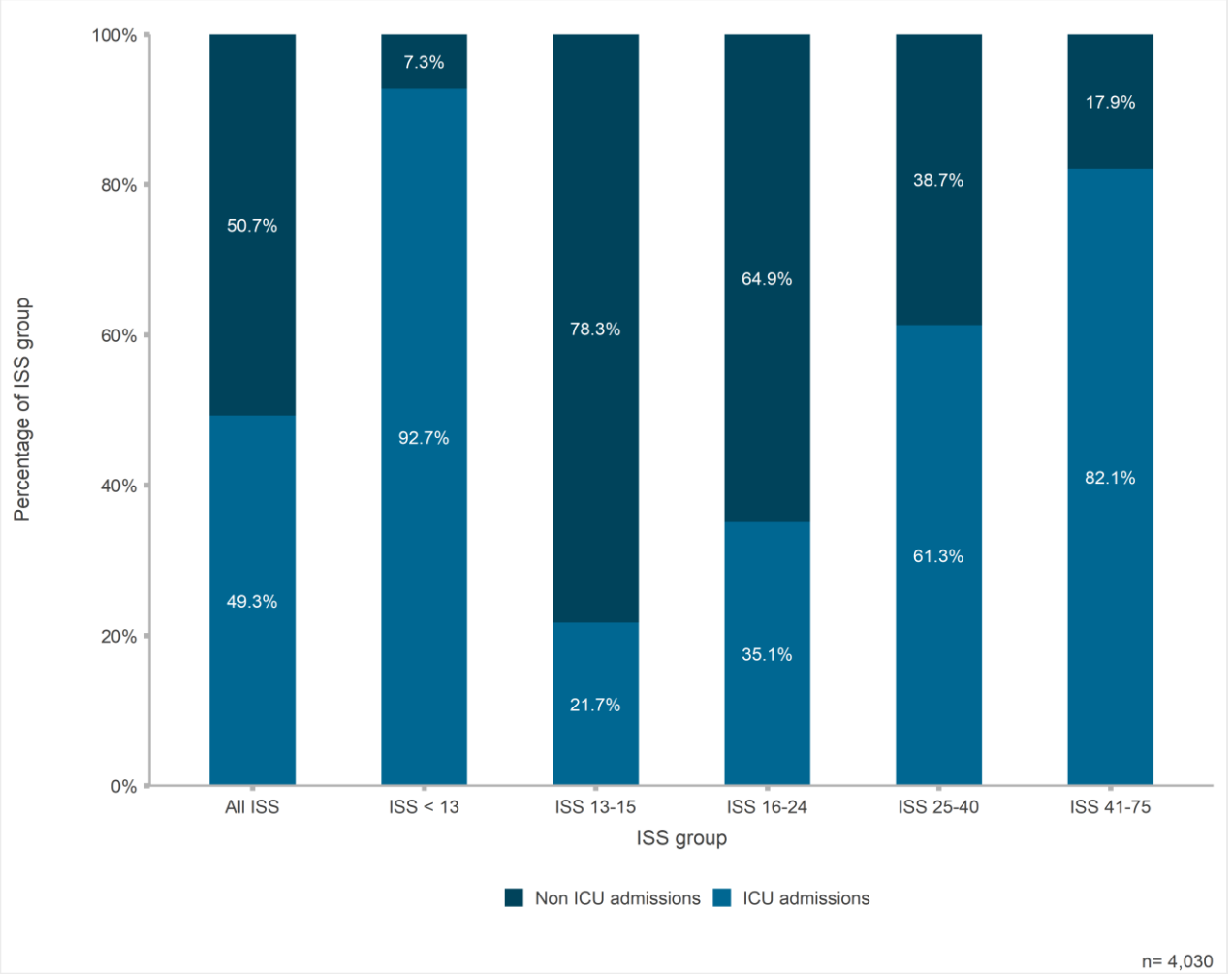



**Intensive care unit admissions**

Overall, 49.3% (n=1,985) of major trauma patients received an intensive care unit (ICU) admission, with the percentage increasing with the level of injury severity (Figure **32**). This is slightly up from 46.5% the previous year. While the number of ICU admissions may be explained by the level of severity of injury, the complexity of injury and other factors such as comorbidities may also influence the requirement for ICU admission.

It is important to note that the ISS <13 group is only included in the report if they have been admitted to ICU or died, hence the high proportion of ICU admissions in this group.

**Figure 32: ICU admission, by ISS group**



## Length of stay

The length of stay (LOS) in hospital, particularly the LOS in an ICU, is an indicator of the severity and complexity of the injury. The average hospital LOS for major trauma patients was 13.2 days (Table **21**).

**Table 21: Overview of ICU and hospital length of stay (n=4,027)**

| LOS description | Number of patients | Average days | Median days |
|---|---|---|---|
| ICU LOS | 1,981 | 4.9 | 2.0 |
| Total hospital LOS | 4,027 | 13.2 | 7.0 |

The average ICU LOS increased with severity: 3.2 days for the ISS 13-15 group and 11.8 days for the ISS 41-75 group being . A similar increasing pattern was observed in the hospital LOS, as expected (Table **22**).

**Table 22: Overview of ICU and hospital length of stay by ISS group (n=4,027)**

| ISS group | Average ICU LOS | Median ICU LOS | Average hospital LOS | Median hospital LOS |
|---|---|---|---|---|
| ISS <13 | 3.0 | 1.0 | 12.1 | 8.0 |
| ISS 13-15 | 3.2 | 2.0 | 8.9 | 5.0 |
| ISS 16-24 | 4.7 | 3.0 | 12.5 | 7.0 |
| ISS 25-40 | 7.2 | 3.0 | 18.8 | 9.0 |
| ISS 41-75 | 11.8 | 6.0 | 25.7 | 11.0 |

No considerable change was observed in the median values of ICU LOS and hospital LOS across different age groups (Table **23**).

**Table 23: ICU and hospital length of stay, by age (n=4,026)**

| Age group | Average ICU LOS | Median ICU LOS | Average hospital LOS | Median hospital LOS |
|---|---|---|---|---|
| 0-4 | 6.2 | 2.0 | 11.4 | 3.0 |
| 5-9 | 3.8 | 2.0 | 7.6 | 5.0 |
| 10-14 | 3.7 | 1.0 | 8.9 | 5.0 |
| 15-19 | 5.6 | 3.0 | 12.3 | 5.0 |
| 20-24 | 5.2 | 2.0 | 11.3 | 5.0 |
| 25-29 | 3.6 | 1.5 | 11.8 | 5.0 |
| 30-34 | 5.4 | 2.0 | 15.9 | 6.0 |
| 35-39 | 6.2 | 2.0 | 13.1 | 6.0 |
| 40-44 | 4.6 | 2.0 | 11.8 | 7.0 |
| 45-49 | 5.4 | 2.0 | 14.1 | 7.0 |
| 50-54 | 4.2 | 2.0 | 13.2 | 6.0 |
| 55-59 | 4.8 | 3.0 | 13.0 | 8.0 |
| 60-64 | 5.2 | 3.0 | 16.2 | 8.0 |
| 65-69 | 5.2 | 3.0 | 14.8 | 8.0 |
| 70-74 | 4.8 | 3.0 | 13.5 | 8.0 |
| 75-79 | 5.0 | 2.0 | 13.6 | 8.0 |
| 80-84 | 4.7 | 2.0 | 13.7 | 8.0 |
| 85+ | 3.8 | 2.0 | 12.5 | 8.0 |

## Procedures

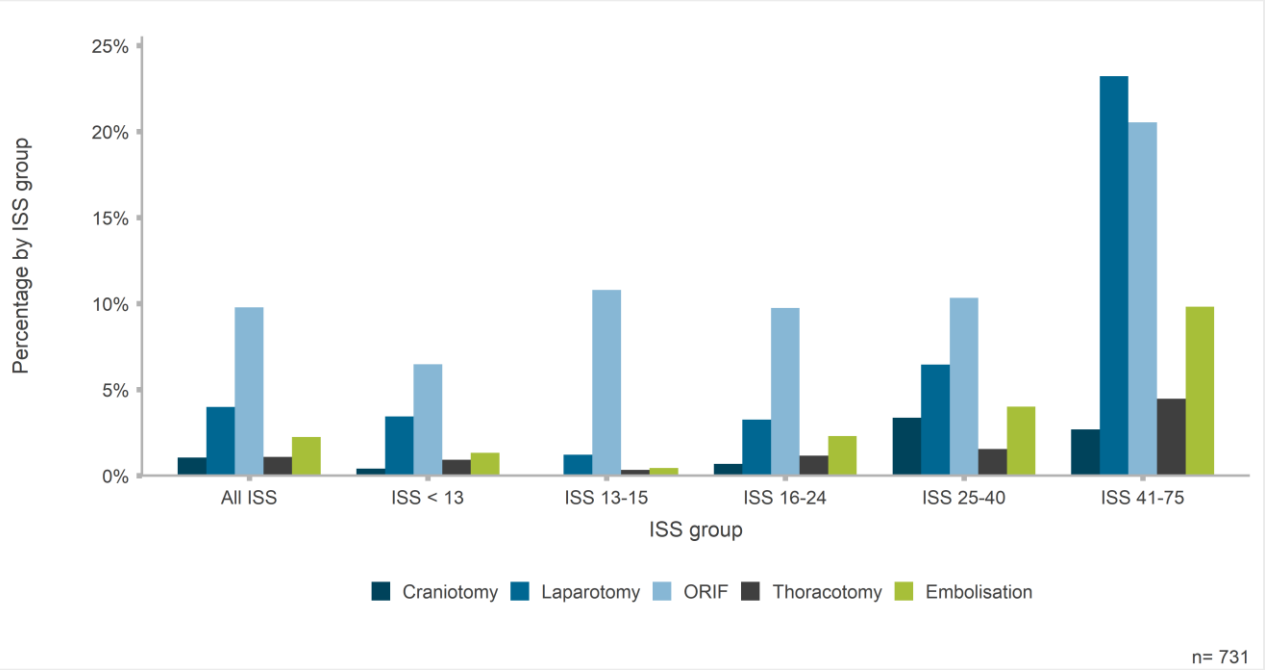
Despite the serious nature of the injuries sustained by major trauma patients, the number of surgical or interventional radiology procedures performed was very low. There were 682 procedures performed on patients (16.7% of all admissions). The highest percentage of procedures were performed in the ISS 41-75 group (Table 24, Figure 33).

**Table 24: Procedures performed, by type (n=674)**

| Procedure | Number of procedures | Percentage of total admissions |
|---|---|---|
| Open reduction internal fixation | 394 | 9.8% |
| Laparotomy | 161 | 4.0% |
| Embolisation | 90 | 2.2% |
| Thoracotomy | 44 | 1.1% |
| Craniotomy | 42 | 1.0% |
| **Total** | **731** | **16.7%** |

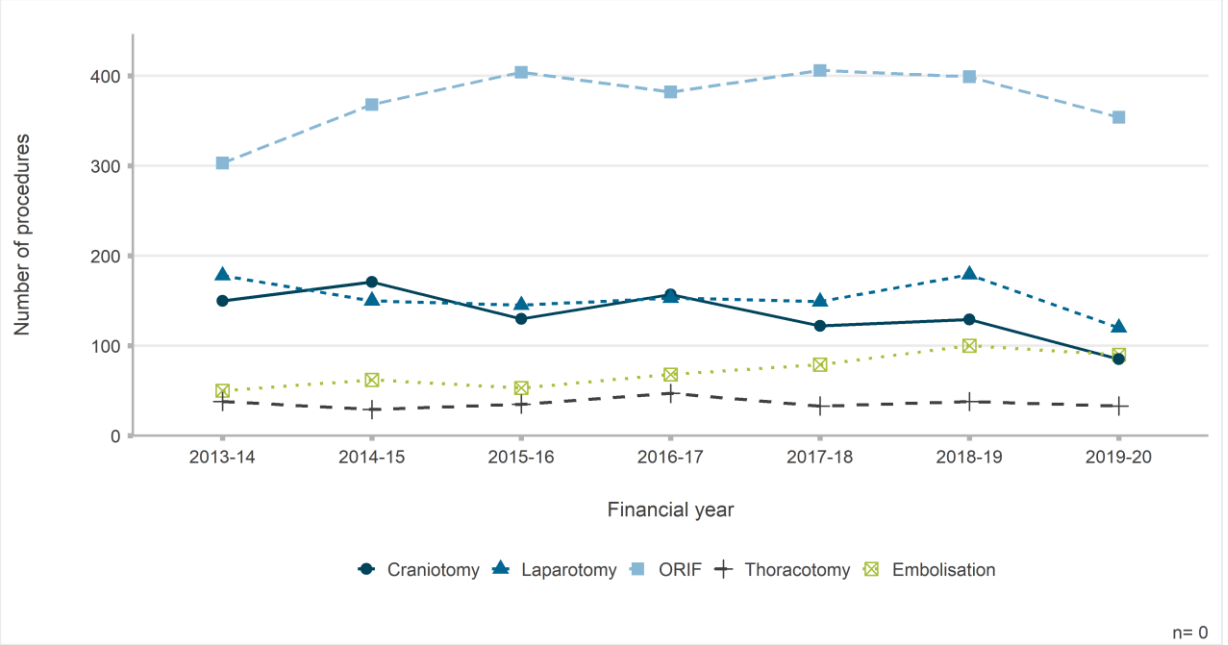
An increase in the proportion of laparotomy, open reduction internal fixation and embolisation procedures performed was noted in the ISS 41-75 group (Figure 31).

**Figure 33: Procedures performed, by ISS group**



Over the preceding five years, there has not been a substantial change in the number of procedures performed, with only embolisation procedures showing a gradual increase; however, since COVID-19 outbreak during 2019-20, the number of some procedures such as craniotomy, ORIF and laparotomy has decreased (Figure 34).

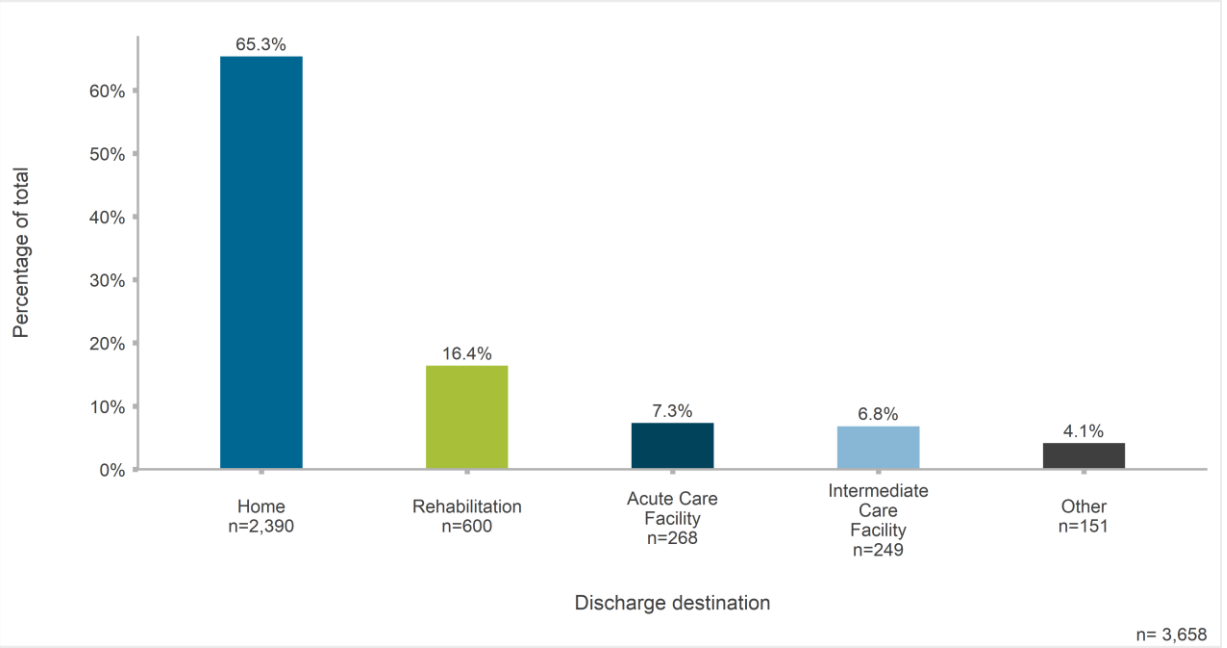
**Figure 34: Annual trend of procedures performed**



## Discharge destination of survivors

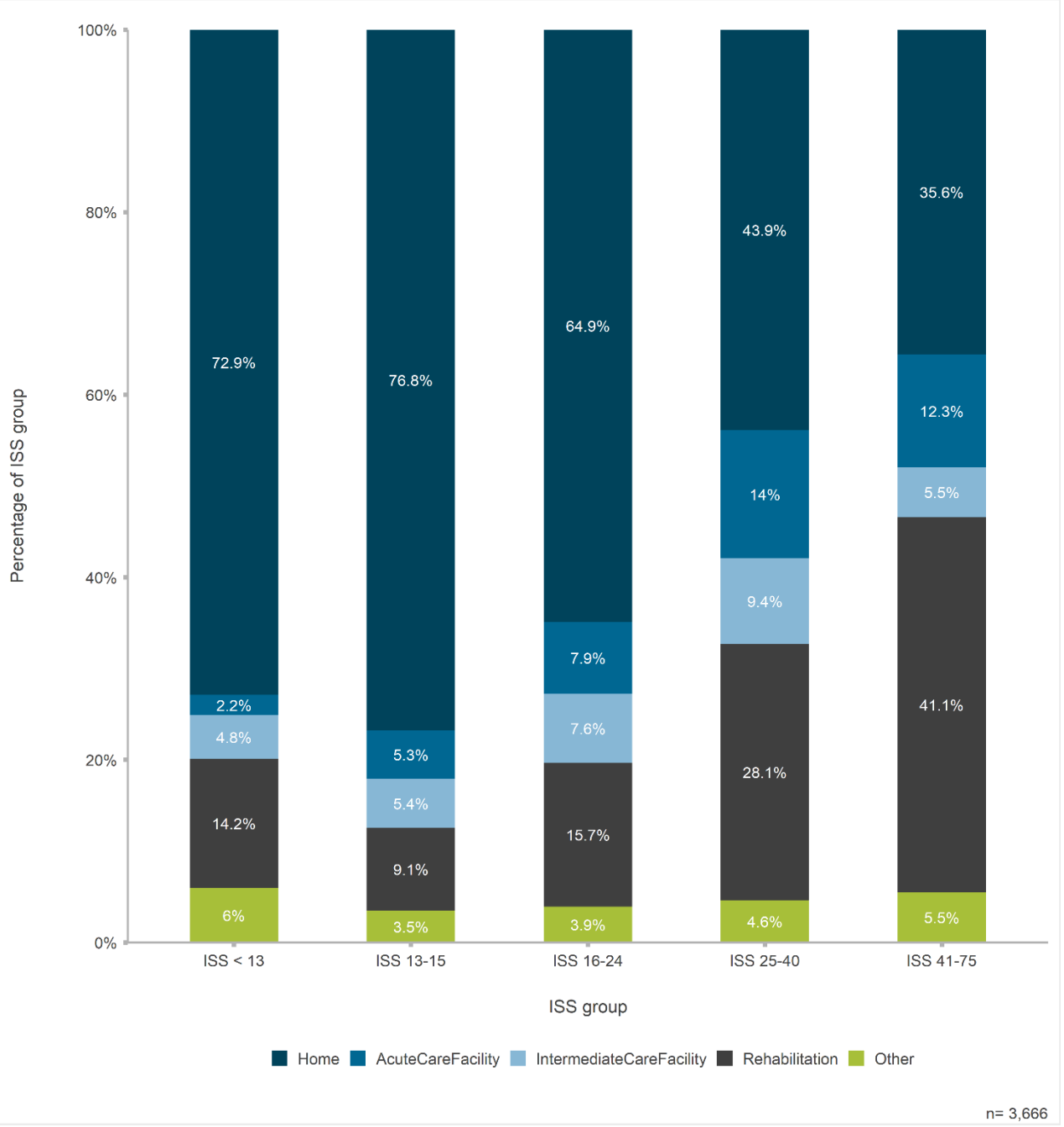
Survivors of major trauma (n=3,658) were discharged to various locations, with the home being the most common (65.3%) followed by rehabilitation (16.4%). 'Other' incorporates locations such as board and care, burns centre, foster care, residential institution, missing and unknown (Figure 35).

**Figure 35: Discharge destination of survivors**



Overall, the rate of discharge to home decreased as the injury severity increased, coinciding with an increase in the rate of discharge to rehabilitation services (Figure 36).

**Figure 36: Discharge destination of survivors, by ISS group**



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# Appendices

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Appendix 1: Data completeness

Appendix 2: Adult major trauma service summaries

Appendix 3: Paediatric major trauma service summaries

Appendix 4: Regional trauma service summaries

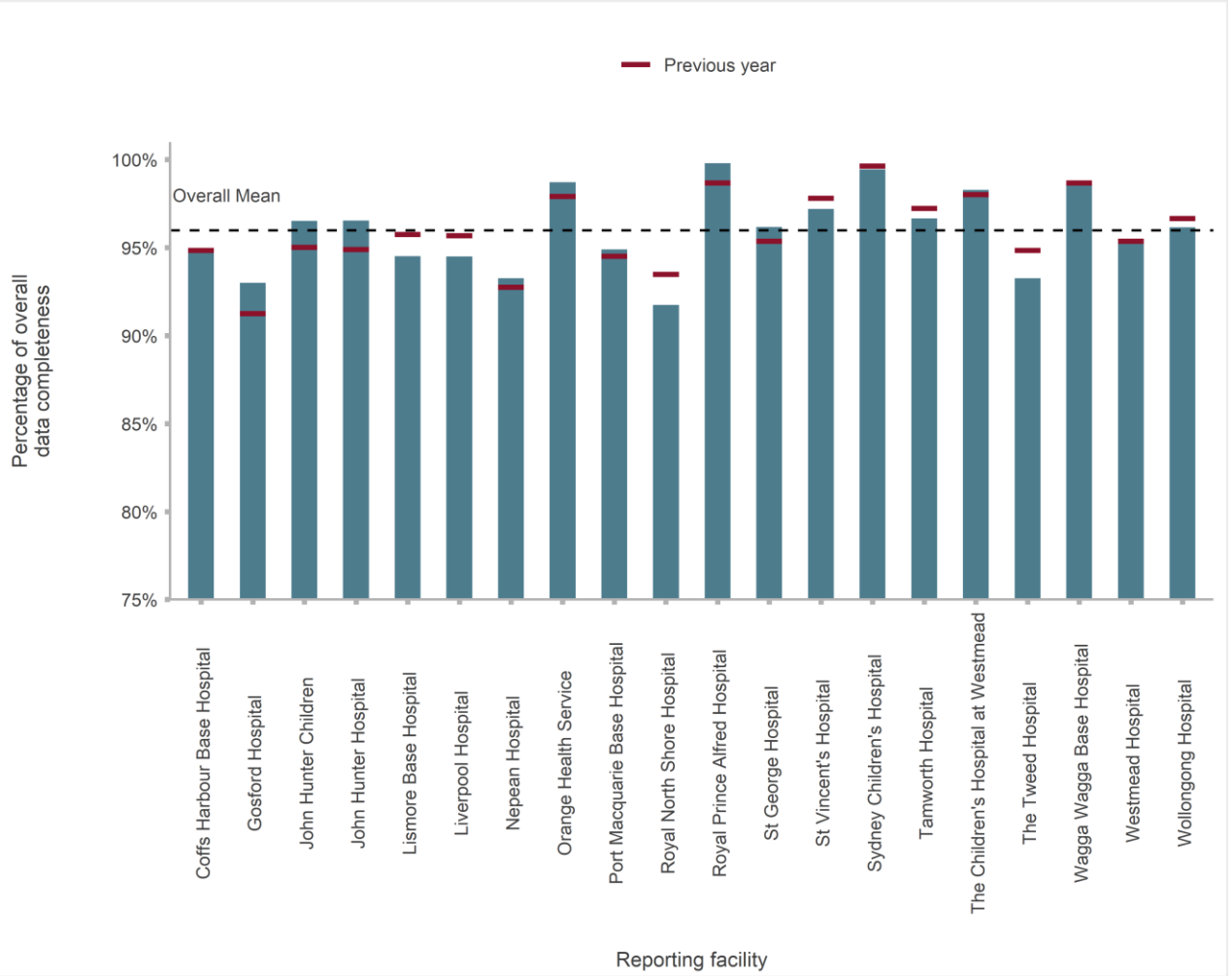
Appendix 5: Calculation of the Injury Severity Score

Appendix 6: Australian Statistical Geography Standard Remoteness Areas

## Appendix 1: Data completeness

High levels of data accuracy and entry completion, as entered by the trauma facilities, is crucial in enabling accurate and thorough data analysis as part of a broader trauma quality assurance program. The average overall data completion of mandatory data elements completed was 96.0%, with completion rates ranging from 91.7% to 99.8%. The overall completion rate for this reporting period was 95.8%.

**Figure 37: Overall data completeness, by facility**



A detailed breakdown of data completion by facility, showing each mandatory data element, can be seen in Table 25.

**Table 25: Trauma data completeness, by facility**

| Legend colour guide (percentage complete) | | | |
|---|---|---|---|
| 100% | 80-99% | 60-79% | Less than 60% |

| Data element name | Facility name | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tamworth Hospital | The Tweed Hospital | Coffs Harbour Base Hospital | Gosford Hospital | John Hunter Children | John Hunter Hospital | Lismore Base Hospital | Liverpool Hospital | Nepean Hospital | Orange Health Service | Port Macquarie Base Hospital | Royal North Shore Hospital | Royal Prince Alfred Hospital | St George Hospital | St Vincent's Hospital | Sydney Children's Hospital | The Children's Hospital at Westmead | Wagga Wagga Base Hospital | Westmead Hospital | Wollongong Hospital |
| Trauma ID | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Age | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Gender | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Post code home | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 80-99% | 80-99% | 100% | 100% | 100% |
| Post code injury | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 60-79% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% |
| Injury date | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Injury time | 80-99% | Less than 60% | 100% | 80-99% | 100% | 100% | Less than 60% | 100% | 100% | 100% | 80-99% | 80-99% | 100% | 80-99% | 100% | 80-99% | 80-99% | 100% | 100% | 100% |
| Primary cause of injury | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Injury type | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Injury place | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Injury activity | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Fall height | 80-99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 80-99% | 80-99% |
| Scene agency | 80-99% | Less than 60% | 100% | 100% | 100% | 100% | 60-79% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% |
| Scene mode | 80-99% | Less than 60% | 100% | 100% | 100% | 100% | 60-79% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% |
| PH agency Run No. | 80-99% | 60-79% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 100% | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 80-99% |
| PH agency call received date | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% |
| PH agency call received time | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 80-99% | 80-99% | 100% | 80-99% | 100% | 80-99% |
| PH agency arrive at patient date | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% |
| PH agency arrive at patient time | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% |
| PH agency depart location date | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% |
| PH agency depart location time | 60-79% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 60-79% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% |
| Admission date | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Admission time | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| System access | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

| Legend colour guide (percentage complete) | | | |
|---|---|---|---|
| 100% | 80-99% | 60-79% | Less than 60% |

| Data element name | Facility name | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tamworth Hospital | The Tweed Hospital | Coffs Harbour Base Hospital | Gosford Hospital | John Hunter Children | John Hunter Hospital | Lismore Base Hospital | Liverpool Hospital | Nepean Hospital | Orange Health Service | Port Macquarie Base Hospital | Royal North Shore Hospital | Royal Prince Alfred Hospital | St George Hospital | St Vincent's Hospital | Sydney Children's Hospital | The Children's Hospital at Westmead | Wagga Wagga Base Hospital | Westmead Hospital | Wollongong Hospital |
| ED arrival date | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| ED arrival time | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| ED depart date | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| ED depart time | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Trauma response | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Post ED disposition | 80-99% | 80-99% | 100% | 100% | 100% | 100% | 80-99% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | Less than 60% |
| Intubated | 80-99% | 60-79% | Less than 60% | Less than 60% | Less than 60% | Less than 60% | 60-79% | Less than 60% | Less than 60% | 80-99% | Less than 60% | Less than 60% | 100% | Less than 60% | 100% | 100% | 100% | 80-99% | Less than 60% | 80-99% |
| Intubated method | 80-99% | 60-79% | Less than 60% | Less than 60% | Less than 60% | Less than 60% | 60-79% | Less than 60% | Less than 60% | 80-99% | Less than 60% | Less than 60% | 100% | Less than 60% | 100% | 100% | 80-99% | 80-99% | Less than 60% | 80-99% |
| Resp assisted | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% |
| Resp assisted type | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% |
| Paralytic agent | 80-99% | 60-79% | Less than 60% | Less than 60% | Less than 60% | Less than 60% | 60-79% | Less than 60% | Less than 60% | 80-99% | Less than 60% | Less than 60% | 100% | Less than 60% | 80-99% | 100% | 80-99% | 80-99% | Less than 60% | 80-99% |
| Sedation | 80-99% | 60-79% | Less than 60% | Less than 60% | Less than 60% | Less than 60% | 60-79% | Less than 60% | Less than 60% | 80-99% | Less than 60% | Less than 60% | 100% | Less than 60% | 80-99% | 100% | 100% | 80-99% | Less than 60% | 80-99% |
| ED vitals-Heart rate | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| ED vitals-Resp rate | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% |
| ED vitals-DBP | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| ED vitals-SBP | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| ED vitals-Temp | 80-99% | 80-99% | 80-99% | 60-79% | 80-99% | 80-99% | 80-99% | 80-99% | 60-79% | 80-99% | 100% | 60-79% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% |
| ED vitals-SAO2 | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 80-99% | 80-99% | 100% | 100% | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% |
| ED vitals-GCS eye | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% |
| ED vitals-GCS verbal | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% |
| ED vitals-GCS motor | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% |
| ED vitals-GCS total | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 60-79% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% |
| ED vitals-RTS total | 80-99% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 60-79% | 80-99% | 100% | 60-79% | 100% | 80-99% | 80-99% | 80-99% | 60-79% | 80-99% | 80-99% | 80-99% |
| Ref hospital 1 arrival date | 80-99% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 80-99% |
| Ref hospital 1 arrival time | 80-99% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 80-99% |
| Ref hospital 1 transfer rationale | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Ref hospital 1 procedures | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 60-79% | 80-99% | 100% | 60-79% | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 60-79% |
| Ref hospital 2 arrival date | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

| Legend colour guide (percentage complete) | | | |
|---|---|---|---|
| 100% | 80-99% | 60-79% | Less than 60% |

| Data element name | Facility name | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tamworth Hospital | The Tweed Hospital | Coffs Harbour Base Hospital | Gosford Hospital | John Hunter Children | John Hunter Hospital | Lismore Base Hospital | Liverpool Hospital | Nepean Hospital | Orange Health Service | Port Macquarie Base Hospital | Royal North Shore Hospital | Royal Prince Alfred Hospital | St George Hospital | St Vincent's Hospital | Sydney Children's Hospital | The Children's Hospital at Westmead | Wagga Wagga Base Hospital | Westmead Hospital | Wollongong Hospital |
| Ref hospital 2 arrival time | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Ref hospital 2 transfer rationale | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Ref hospital 2 procedures | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% |
| Inter facility 1 transfer agency | 80-99% | 80-99% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 60-79% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 80-99% |
| Inter facility 1 mode | 80-99% | 80-99% | 80-99% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 60-79% | 100% | 100% | 100% | 100% | 80-99% | 100% | 80-99% | 80-99% |
| Inter facility 2 transfer agency | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Inter facility 2 mode | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Location tracking depts | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Location tracking arrival dates | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Location tracking arrival times | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Procedure start dates | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Procedure start times | 100% | 100% | 80-99% | 80-99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% |
| Location tracking depart dates | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Location tracking depart times | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| AIS codes | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| ISS | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% |
| Outcome discharge disposition | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Location of death | 100% | 80-99% | 100% | 80-99% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 80-99% | 100% | 100% | 100% |
| Discharge date | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% |
| Discharge time | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% |
| ICU length of stay | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 80-99% | 100% | 100% | 100% | 100% | 100% |
| Hospital length of stay | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Discharge destination | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Discharge facility | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| TRISS | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Record complete flag | Less than 60% | 80-99% | 80-99% | 60-79% | 80-99% | 100% | 60-79% | 100% | 100% | 100% | 80-99% | 100% | 80-99% | 80-99% | Less than 60% | 80-99% | 80-99% | 80-99% | 80-99% | 80-99% |
| Extrication minutes | 100% | 100% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 80-99% | 100% | 80-99% | 80-99% | 100% | 60-79% | 80-99% | 80-99% | 80-99% |

## Appendix 2: Adult major trauma service summaries

**Table 26: Trauma data profile, John Hunter Hospital**

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 617 | 439 |
| Mean monthly admissions | 51 | 37 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 6.8% | 8.3% |
| **Sex** | | |
| Male/Female | 450/167 | 309/130 |
| **Age ranges** | | |
| Mean age | 53.7 | 54.6 |
| 0-4 | 0 (0%) | 1.1 (0.3%) |
| 5-9 | 0 (0%) | 0.3 (0.1%) |
| 10-14 | 0 (0%) | 0.9 (0.2%) |
| 15-19 | 27 (4.4%) | 21.9 (5%) |
| 20-24 | 41 (6.6%) | 31 (7.1%) |
| 25-29 | 50 (8.1%) | 27.7 (6.3%) |
| 30-34 | 36 (5.8%) | 24.7 (5.6%) |
| 35-39 | 37 (6%) | 21.7 (5%) |
| 40-44 | 29 (4.7%) | 23.7 (5.4%) |
| 45-49 | 46 (7.5%) | 28.6 (6.5%) |
| 50-54 | 38 (6.2%) | 30.4 (6.9%) |
| 55-59 | 46 (7.5%) | 27.3 (6.2%) |
| 60-64 | 45 (7.3%) | 34.1 (7.8%) |
| 65-69 | 46 (7.5%) | 28.7 (6.5%) |
| 70-74 | 49 (7.9%) | 33.4 (7.6%) |
| 75-79 | 43 (7%) | 29.7 (6.8%) |
| 80-84 | 44 (7.1%) | 32.1 (7.3%) |
| 85+ | 40 (6.5%) | 41.1 (9.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 20.6 | 17.8 |
| ISS <13 | 31 (5%) | 91.9 (21%) |
| ISS 13-15 | 127 (20.6%) | 96.6 (22%) |
| ISS 16-24 | 286 (46.4%) | 155.6 (35.5%) |
| ISS 25-40 | 146 (23.7%) | 82.1 (18.7%) |
| ISS 41-75 | 27 (4.4%) | 12.1 (2.8%) |
| **Mechanism of injury** | | |
| Assault | 43 (7%) | 26.6 (6.1%) |
| Falls | 190 (30.8%) | 188 (42.9%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 132 (59.5%) | 119 (72.1%) |
| Road trauma | 234 (37.9%) | 139.9 (31.9%) |
| Other transport incident | 88 (14.3%) | 39.1 (8.9%) |
| All other injuries | 62 (10%) | 45.1 (10.3%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 575 (93.2%) | 409.7 (93.4%) |
| Penetrating | 33 (5.3%) | 22.9 (5.2%) |
| Unknown | 9 (1.5%) | 6.1 (1.4%) |
| **Admission type** | | |
| Direct admission | 450 (72.9%) | 350.3 (79.8%) |
| Transfer in | 165 (26.7%) | 87.3 (19.9%) |
| Unknown | 2 (0.3%) | 1.1 (0.3%) |
| **Arrival modes** | | |
| Ambulance | 405 (65.6%) | 336.1 (76.6%) |
| Helicopter | 140 (22.7%) | 55 (12.5%) |
| Other (private vehicle, fixed wing, unknown) | 72 (11.7%) | 47.6 (10.8%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.1 | 7.2 |
| ISS <13 | 6 | 6.9 |
| ISS 13-15 | 7.7 | 7.7 |
| ISS 16-24 | 7.5 | 7.5 |
| ISS 25-40 | 6.4 | 6.5 |
| ISS 41-75 | 5.5 | 5.1 |
| **Hospital length of stay** | | |
| Total bed days | 7,783 | 6,416 |
| Mean overall | 12.6 | 14.6 |
| ISS <13 | 12.5 | 12.6 |
| ISS 13-15 | 8.2 | 9.6 |
| ISS 16-24 | 11.1 | 13.9 |
| ISS 25-40 | 17 | 22.5 |
| ISS 41-75 | 25.4 | 26.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 1,172 (217) | 1,187 (234) |
| Mean overall | 5.4 | 5.1 |
| ISS <13 | 2.4 | 3 |
| ISS 13-15 | 3.7 | 3.2 |
| ISS 16-24 | 4.4 | 5.1 |
| ISS 25-40 | 6.1 | 7.7 |
| ISS 41-75 | 11 | 11.8 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 827 (150) | 655 (120) |
| Mean overall | 5.5 | 5.5 |
| ISS <13 | 2.8 | 3.3 |
| ISS 13-15 | 4.9 | 3.6 |
| ISS 16-24 | 4.1 | 5.2 |
| ISS 25-40 | 6.2 | 7.1 |
| ISS 41-75 | 9.2 | 9.6 |

## Table 27: Trauma data profile, Liverpool Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 657 | 439 |
| Mean monthly admissions | 55 | 37 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 7.9% | 8.3% |
| **Sex** | | |
| Male/Female | 456/201 | 309/130 |
| **Age ranges** | | |
| Mean age | 57.5 | 54.6 |
| 0-4 | 2 (0.3%) | 1.1 (0.3%) |
| 5-9 | 1 (0.2%) | 0.3 (0.1%) |
| 10-14 | 1 (0.2%) | 0.9 (0.2%) |
| 15-19 | 36 (5.5%) | 21.9 (5%) |
| 20-24 | 39 (5.9%) | 31 (7.1%) |
| 25-29 | 34 (5.2%) | 27.7 (6.3%) |
| 30-34 | 33 (5%) | 24.7 (5.6%) |
| 35-39 | 26 (4%) | 21.7 (5%) |
| 40-44 | 26 (4%) | 23.7 (5.4%) |
| 45-49 | 37 (5.6%) | 28.6 (6.5%) |
| 50-54 | 41 (6.2%) | 30.4 (6.9%) |
| 55-59 | 44 (6.7%) | 27.3 (6.2%) |
| 60-64 | 48 (7.3%) | 34.1 (7.8%) |
| 65-69 | 38 (5.8%) | 28.7 (6.5%) |
| 70-74 | 58 (8.8%) | 33.4 (7.6%) |
| 75-79 | 56 (8.5%) | 29.7 (6.8%) |
| 80-84 | 58 (8.8%) | 32.1 (7.3%) |
| 85+ | 79 (12%) | 41.1 (9.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 16.3 | 17.8 |
| ISS <13 | 201 (30.6%) | 91.9 (21%) |
| ISS 13-15 | 136 (20.7%) | 96.6 (22%) |
| ISS 16-24 | 217 (33%) | 155.6 (35.5%) |
| ISS 25-40 | 86 (13.1%) | 82.1 (18.7%) |
| ISS 41-75 | 17 (2.6%) | 12.1 (2.8%) |
| **Mechanism of injury** | | |
| Assault | 41 (6.2%) | 26.6 (6.1%) |
| Falls | 321 (48.9%) | 188 (42.9%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 228 (78.9%) | 119 (72.1%) |
| Road trauma | 178 (27.1%) | 139.9 (31.9%) |
| Other transport incident | 61 (9.3%) | 39.1 (8.9%) |
| All other injuries | 56 (8.5%) | 45.1 (10.3%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 623 (94.8%) | 409.7 (93.4%) |
| Penetrating | 34 (5.2%) | 22.9 (5.2%) |
| Unknown | 0 (0%) | 6.1 (1.4%) |
| **Admission type** | | |
| Direct admission | 542 (82.5%) | 350.3 (79.8%) |
| Transfer in | 114 (17.4%) | 87.3 (19.9%) |
| Unknown | 1 (0.2%) | 1.1 (0.3%) |
| **Arrival modes** | | |
| Ambulance | 550 (83.7%) | 336.1 (76.6%) |
| Helicopter | 35 (5.3%) | 55 (12.5%) |
| Other (private vehicle, fixed wing, unknown) | 72 (11%) | 47.6 (10.8%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.3 | 7.2 |
| ISS <13 | 7.3 | 6.9 |
| ISS 13-15 | 7.7 | 7.7 |
| ISS 16-24 | 7.7 | 7.5 |
| ISS 25-40 | 6.6 | 6.5 |
| ISS 41-75 | 5.2 | 5.1 |
| **Hospital length of stay** | | |
| Total bed days | 8,064 | 6,416 |
| Mean overall | 12.3 | 14.6 |
| ISS < 13 | 11.9 | 12.6 |
| ISS 13-15 | 9.4 | 9.6 |
| ISS 16-24 | 11.4 | 13.9 |
| ISS 25-40 | 16.8 | 22.5 |
| ISS 41-75 | 28.5 | 26.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 1,610 (406) | 1,187 (234) |
| Mean overall | 4 | 5.1 |
| ISS < 13 | 3.2 | 3 |
| ISS 13-15 | 2.7 | 3.2 |
| ISS 16-24 | 3.6 | 5.1 |
| ISS 25-40 | 6.3 | 7.7 |
| ISS 41-75 | 10.5 | 11.8 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 645 (116) | 655 (120) |
| Mean overall | 5.6 | 5.5 |
| ISS < 13 | 5.3 | 3.3 |
| ISS 13-15 | 4.8 | 3.6 |
| ISS 16-24 | 4.9 | 5.2 |
| ISS 25-40 | 5.4 | 7.1 |
| ISS 41-75 | 8.3 | 9.6 |

## Table 28: Trauma data profile, Royal North Shore Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 369 | 439 |
| Mean monthly admissions | 31 | 37 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 12.3% | 8.3% |
| **Sex** | | |
| Male/Female | 273/96 | 309/130 |
| **Age ranges** | | |
| Mean age | 53.3 | 54.6 |
| 0-4 | 1 (0.3%) | 1.1 (0.3%) |
| 5-9 | 0 (0%) | 0.3 (0.1%) |
| 10-14 | 0 (0%) | 0.9 (0.2%) |
| 15-19 | 20 (5.4%) | 21.9 (5%) |
| 20-24 | 24 (6.5%) | 31 (7.1%) |
| 25-29 | 23 (6.2%) | 27.7 (6.3%) |
| 30-34 | 24 (6.5%) | 24.7 (5.6%) |
| 35-39 | 15 (4.1%) | 21.7 (5%) |
| 40-44 | 23 (6.2%) | 23.7 (5.4%) |
| 45-49 | 31 (8.4%) | 28.6 (6.5%) |
| 50-54 | 28 (7.6%) | 30.4 (6.9%) |
| 55-59 | 25 (6.8%) | 27.3 (6.2%) |
| 60-64 | 28 (7.6%) | 34.1 (7.8%) |
| 65-69 | 33 (8.9%) | 28.7 (6.5%) |
| 70-74 | 24 (6.5%) | 33.4 (7.6%) |
| 75-79 | 17 (4.6%) | 29.7 (6.8%) |
| 80-84 | 22 (6%) | 32.1 (7.3%) |
| 85+ | 31 (8.4%) | 41.1 (9.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 17.9 | 17.8 |
| ISS <13 | 98 (26.8%) | 91.9 (21%) |
| ISS 13-15 | 73 (19.9%) | 96.6 (22%) |
| ISS 16-24 | 103 (28.1%) | 155.6 (35.5%) |
| ISS 25-40 | 83 (22.7%) | 82.1 (18.7%) |
| ISS 41-75 | 9 (2.5%) | 12.1 (2.8%) |
| **Mechanism of injury** | | |
| Assault | 10 (2.7%) | 26.6 (6.1%) |
| Falls | 158 (42.8%) | 188 (42.9%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 82 (64.6%) | 119 (72.1%) |
| Road trauma | 124 (33.6%) | 139.9 (31.9%) |
| Other transport incident | 20 (5.4%) | 39.1 (8.9%) |
| All other injuries | 57 (15.4%) | 45.1 (10.3%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 325 (88.1%) | 409.7 (93.4%) |
| Penetrating | 14 (3.8%) | 22.9 (5.2%) |
| Unknown | 30 (8.1%) | 6.1 (1.4%) |
| **Admission type** | | |
| Direct admission | 290 (78.6%) | 350.3 (79.8%) |
| Transfer in | 79 (21.4%) | 87.3 (19.9%) |
| Unknown | 0 (0%) | 1.1 (0.3%) |
| **Arrival modes** | | |
| Ambulance | 275 (74.5%) | 336.1 (76.6%) |
| Helicopter | 76 (20.6%) | 55 (12.5%) |
| Other (private vehicle, fixed wing, unknown) | 18 (4.9%) | 47.6 (10.8%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.1 | 7.2 |
| ISS <13 | 7 | 6.9 |
| ISS 13-15 | 7.6 | 7.7 |
| ISS 16-24 | 7.2 | 7.5 |
| ISS 25-40 | 6.6 | 6.5 |
| ISS 41-75 | 5.3 | 5.1 |
| **Hospital length of stay** | | |
| Total bed days | 8,161 | 6,416 |
| Mean overall | 22.1 | 14.6 |
| ISS <13 | 15.8 | 12.6 |
| ISS 13-15 | 10.7 | 9.6 |
| ISS 16-24 | 24.9 | 13.9 |
| ISS 25-40 | 37 | 22.5 |
| ISS 41-75 | 21.3 | 26.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 1,657 (268) | 1,187 (234) |
| Mean overall | 6.2 | 5.1 |
| ISS <13 | 3.4 | 3 |
| ISS 13-15 | 4.4 | 3.2 |
| ISS 16-24 | 6 | 5.1 |
| ISS 25-40 | 9.6 | 7.7 |
| ISS 41-75 | 12.6 | 11.8 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 756 (145) | 655 (120) |
| Mean overall | 5.2 | 5.5 |
| ISS <13 | 2.7 | 3.3 |
| ISS 13-15 | 3.2 | 3.6 |
| ISS 16-24 | 4.9 | 5.2 |
| ISS 25-40 | 7.4 | 7.1 |
| ISS 41-75 | 9.3 | 9.6 |

## Table 29: Trauma data profile, Royal Prince Alfred Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 333 | 439 |
| Mean monthly admissions | 28 | 37 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 6.6% | 8.3% |
| **Sex** | | |
| Male/Female | 215/118 | 309/130 |
| **Age ranges** | | |
| Mean age | 57.8 | 54.6 |
| 0-4 | 0 (0%) | 1.1 (0.3%) |
| 5-9 | 1 (0.3%) | 0.3 (0.1%) |
| 10-14 | 3 (0.9%) | 0.9 (0.2%) |
| 15-19 | 14 (4.2%) | 21.9 (5%) |
| 20-24 | 17 (5.1%) | 31 (7.1%) |
| 25-29 | 14 (4.2%) | 27.7 (6.3%) |
| 30-34 | 14 (4.2%) | 24.7 (5.6%) |
| 35-39 | 21 (6.3%) | 21.7 (5%) |
| 40-44 | 13 (3.9%) | 23.7 (5.4%) |
| 45-49 | 24 (7.2%) | 28.6 (6.5%) |
| 50-54 | 14 (4.2%) | 30.4 (6.9%) |
| 55-59 | 19 (5.7%) | 27.3 (6.2%) |
| 60-64 | 34 (10.2%) | 34.1 (7.8%) |
| 65-69 | 18 (5.4%) | 28.7 (6.5%) |
| 70-74 | 38 (11.4%) | 33.4 (7.6%) |
| 75-79 | 18 (5.4%) | 29.7 (6.8%) |
| 80-84 | 27 (8.1%) | 32.1 (7.3%) |
| 85+ | 44 (13.2%) | 41.1 (9.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 18.1 | 17.8 |
| ISS <13 | 42 (12.6%) | 91.9 (21%) |
| ISS 13-15 | 85 (25.5%) | 96.6 (22%) |
| ISS 16-24 | 135 (40.5%) | 155.6 (35.5%) |
| ISS 25-40 | 62 (18.6%) | 82.1 (18.7%) |
| ISS 41-75 | 9 (2.7%) | 12.1 (2.8%) |
| **Mechanism of injury** | | |
| Assault | 22 (6.6%) | 26.6 (6.1%) |
| Falls | 181 (54.4%) | 188 (42.9%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 116 (80%) | 119 (72.1%) |
| Road trauma | 87 (26.1%) | 139.9 (31.9%) |
| Other transport incident | 11 (3.3%) | 39.1 (8.9%) |
| All other injuries | 32 (9.6%) | 45.1 (10.3%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 313 (94%) | 409.7 (93.4%) |
| Penetrating | 20 (6%) | 22.9 (5.2%) |
| Unknown | 0 (0%) | 6.1 (1.4%) |
| **Admission type** | | |
| Direct admission | 269 (80.8%) | 350.3 (79.8%) |
| Transfer in | 64 (19.2%) | 87.3 (19.9%) |
| Unknown | 0 (0%) | 1.1 (0.3%) |
| **Arrival modes** | | |
| Ambulance | 269 (80.8%) | 336.1 (76.6%) |
| Helicopter | 2 (0.6%) | 55 (12.5%) |
| Other (private vehicle, fixed wing, unknown) | 62 (18.6%) | 47.6 (10.8%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.4 | 7.2 |
| ISS <13 | 7 | 6.9 |
| ISS 13-15 | 7.8 | 7.7 |
| ISS 16-24 | 7.7 | 7.5 |
| ISS 25-40 | 6.8 | 6.5 |
| ISS 41-75 | 4.4 | 5.1 |
| **Hospital length of stay** | | |
| Total bed days | 3,754 | 6,416 |
| Mean overall | 11.3 | 14.6 |
| ISS <13 | 6.6 | 12.6 |
| ISS 13-15 | 7.7 | 9.6 |
| ISS 16-24 | 11.4 | 13.9 |
| ISS 25-40 | 13.8 | 22.5 |
| ISS 41-75 | 47 | 26.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 702 (153) | 1,187 (234) |
| Mean overall | 4.6 | 5.1 |
| ISS <13 | 2.4 | 3 |
| ISS 13-15 | 2.5 | 3.2 |
| ISS 16-24 | 5.4 | 5.1 |
| ISS 25-40 | 5 | 7.7 |
| ISS 41-75 | 13.5 | 11.8 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 358 (67) | 655 (120) |
| Mean overall | 5.3 | 5.5 |
| ISS <13 | 2.1 | 3.3 |
| ISS 13-15 | 1.8 | 3.6 |
| ISS 16-24 | 6.5 | 5.2 |
| ISS 25-40 | 6.2 | 7.1 |
| ISS 41-75 | 12.3 | 9.6 |

## Table 30: Trauma data profile, St George Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 355 | 439 |
| Mean monthly admissions | 30 | 37 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 11% | 8.3% |
| **Sex** | | |
| Male/Female | 253/102 | 309/130 |
| **Age ranges** | | |
| Mean age | 54.4 | 54.6 |
| 0-4 | 1 (0.3%) | 1.1 (0.3%) |
| 5-9 | 0 (0%) | 0.3 (0.1%) |
| 10-14 | 1 (0.3%) | 0.9 (0.2%) |
| 15-19 | 21 (5.9%) | 21.9 (5%) |
| 20-24 | 23 (6.5%) | 31 (7.1%) |
| 25-29 | 28 (7.9%) | 27.7 (6.3%) |
| 30-34 | 16 (4.5%) | 24.7 (5.6%) |
| 35-39 | 14 (3.9%) | 21.7 (5%) |
| 40-44 | 19 (5.4%) | 23.7 (5.4%) |
| 45-49 | 21 (5.9%) | 28.6 (6.5%) |
| 50-54 | 31 (8.7%) | 30.4 (6.9%) |
| 55-59 | 21 (5.9%) | 27.3 (6.2%) |
| 60-64 | 30 (8.5%) | 34.1 (7.8%) |
| 65-69 | 20 (5.6%) | 28.7 (6.5%) |
| 70-74 | 21 (5.9%) | 33.4 (7.6%) |
| 75-79 | 23 (6.5%) | 29.7 (6.8%) |
| 80-84 | 27 (7.6%) | 32.1 (7.3%) |
| 85+ | 38 (10.7%) | 41.1 (9.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 16.7 | 17.8 |
| ISS <13 | 109 (30.7%) | 91.9 (21%) |
| ISS 13-15 | 73 (20.6%) | 96.6 (22%) |
| ISS 16-24 | 103 (29%) | 155.6 (35.5%) |
| ISS 25-40 | 65 (18.3%) | 82.1 (18.7%) |
| ISS 41-75 | 5 (1.4%) | 12.1 (2.8%) |
| **Mechanism of injury** | | |
| Assault | 16 (4.5%) | 26.6 (6.1%) |
| Falls | 150 (42.3%) | 188 (42.9%) |
| Falls≥ 65 years (% of all MOIs for ≥ 65 years) | 93 (72.1%) | 119 (72.1%) |
| Road trauma | 120 (33.8%) | 139.9 (31.9%) |
| Other transport incident | 32 (9%) | 39.1 (8.9%) |
| All other injuries | 37 (10.4%) | 45.1 (10.3%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 337 (94.9%) | 409.7 (93.4%) |
| Penetrating | 15 (4.2%) | 22.9 (5.2%) |
| Unknown | 3 (0.8%) | 6.1 (1.4%) |
| **Admission type** | | |
| Direct admission | 270 (76.1%) | 350.3 (79.8%) |
| Transfer in | 85 (23.9%) | 87.3 (19.9%) |
| Unknown | 0 (0%) | 1.1 (0.3%) |
| **Arrival modes** | | |
| Ambulance | 266 (74.9%) | 336.1 (76.6%) |
| Helicopter | 48 (13.5%) | 55 (12.5%) |
| Other (private vehicle, fixed wing, unknown) | 41 (11.5%) | 47.6 (10.8%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.1 | 7.2 |
| ISS <13 | 7.4 | 6.9 |
| ISS 13-15 | 7.5 | 7.7 |
| ISS 16-24 | 7.3 | 7.5 |
| ISS 25-40 | 6.1 | 6.5 |
| ISS 41-75 | 4.6 | 5.1 |
| **Hospital length of stay** | | |
| Total bed days | 6,068 | 6,416 |
| Mean overall | 17.1 | 14.6 |
| ISS <13 | 14.3 | 12.6 |
| ISS 13-15 | 12 | 9.6 |
| ISS 16-24 | 18.8 | 13.9 |
| ISS 25-40 | 25.9 | 22.5 |
| ISS 41-75 | 3.2 | 26.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 1,326 (247) | 1,187 (234) |
| Mean overall | 5.4 | 5.1 |
| ISS <13 | 2.8 | 3 |
| ISS 13-15 | 3.1 | 3.2 |
| ISS 16-24 | 6.3 | 5.1 |
| ISS 25-40 | 11 | 7.7 |
| ISS 41-75 | 4 | 11.8 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 668 (123) | 655 (120) |
| Mean overall | 5.4 | 5.5 |
| ISS <13 | 2.7 | 3.3 |
| ISS 13-15 | 4 | 3.6 |
| ISS 16-24 | 5.5 | 5.2 |
| ISS 25-40 | 9 | 7.1 |
| ISS 41-75 | 3.2 | 9.6 |

## Table 31: Trauma data profile, St Vincent's Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 175 | 439 |
| Mean monthly admissions | 15 | 37 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 12.4% | 8.3% |
| **Sex** | | |
| Male/Female | 119/55 | 309/130 |
| **Age ranges** | | |
| Mean age | 53.8 | 54.6 |
| 0-4 | 0 (0%) | 1.1 (0.3%) |
| 5-9 | 0 (0%) | 0.3 (0.1%) |
| 10-14 | 0 (0%) | 0.9 (0.2%) |
| 15-19 | 3 (1.7%) | 21.9 (5%) |
| 20-24 | 12 (6.9%) | 31 (7.1%) |
| 25-29 | 16 (9.2%) | 27.7 (6.3%) |
| 30-34 | 11 (6.3%) | 24.7 (5.6%) |
| 35-39 | 9 (5.2%) | 21.7 (5%) |
| 40-44 | 14 (8%) | 23.7 (5.4%) |
| 45-49 | 7 (4%) | 28.6 (6.5%) |
| 50-54 | 20 (11.5%) | 30.4 (6.9%) |
| 55-59 | 12 (6.9%) | 27.3 (6.2%) |
| 60-64 | 11 (6.3%) | 34.1 (7.8%) |
| 65-69 | 13 (7.5%) | 28.7 (6.5%) |
| 70-74 | 7 (4%) | 33.4 (7.6%) |
| 75-79 | 13 (7.5%) | 29.7 (6.8%) |
| 80-84 | 8 (4.6%) | 32.1 (7.3%) |
| 85+ | 18 (10.3%) | 41.1 (9.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 17 | 17.8 |
| ISS <13 | 37 (21.1%) | 91.9 (21%) |
| ISS 13-15 | 48 (27.4%) | 96.6 (22%) |
| ISS 16-24 | 59 (33.7%) | 155.6 (35.5%) |
| ISS 25-40 | 27 (15.4%) | 82.1 (18.7%) |
| ISS 41-75 | 4 (2.3%) | 12.1 (2.8%) |
| **Mechanism of injury** | | |
| Assault | 12 (6.9%) | 26.6 (6.1%) |
| Falls | 85 (48.6%) | 188 (42.9%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 43 (72.9%) | 119 (72.1%) |
| Road trauma | 54 (30.9%) | 139.9 (31.9%) |
| Other transport incident | 4 (2.3%) | 39.1 (8.9%) |
| All other injuries | 20 (11.4%) | 45.1 (10.3%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 170 (97.1%) | 409.7 (93.4%) |
| Penetrating | 4 (2.3%) | 22.9 (5.2%) |
| Unknown | 1 (0.6%) | 6.1 (1.4%) |
| **Admission type** | | |
| Direct admission | 175 (100%) | 350.3 (79.8%) |
| Transfer in | 0 (0%) | 87.3 (19.9%) |
| Unknown | 0 (0%) | 1.1 (0.3%) |
| **Arrival modes** | | |
| Ambulance | 163 (93.1%) | 336.1 (76.6%) |
| Helicopter | 0 (0%) | 55 (12.5%) |
| Other (private vehicle, fixed wing, unknown) | 12 (6.9%) | 47.6 (10.8%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7 | 7.2 |
| ISS <13 | 6.4 | 6.9 |
| ISS 13-15 | 7.8 | 7.7 |
| ISS 16-24 | 7.5 | 7.5 |
| ISS 25-40 | 5.6 | 6.5 |
| ISS 41-75 | 5.2 | 5.1 |
| **Hospital length of stay** | | |
| Total bed days | 2,794 | 6,416 |
| Mean overall | 16.4 | 14.6 |
| ISS <13 | 18.8 | 12.6 |
| ISS 13-15 | 17.6 | 9.6 |
| ISS 16-24 | 13.5 | 13.9 |
| ISS 25-40 | 19.6 | 22.5 |
| ISS 41-75 | 4.2 | 26.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 377 (88) | 1,187 (234) |
| Mean overall | 4.5 | 5.1 |
| ISS <13 | 3.2 | 3 |
| ISS 13-15 | 1.7 | 3.2 |
| ISS 16-24 | 4.9 | 5.1 |
| ISS 25-40 | 7.7 | 7.7 |
| ISS 41-75 | 2.2 | 11.8 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 254 (54) | 655 (120) |
| Mean overall | 4.7 | 5.5 |
| ISS <13 | 3.2 | 3.3 |
| ISS 13-15 | 2 | 3.6 |
| ISS 16-24 | 6.1 | 5.2 |
| ISS 25-40 | 6.7 | 7.1 |
| ISS 41-75 | 2.3 | 9.6 |

## Table 32: Trauma data profile, Westmead Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 565 | 439 |
| Mean monthly admissions | 47 | 37 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 6.4% | 8.3% |
| **Sex** | | |
| Male/Female | 397/168 | 309/130 |
| **Age ranges** | | |
| Mean age | 51.4 | 54.6 |
| 0-4 | 4 (0.7%) | 1.1 (0.3%) |
| 5-9 | 0 (0%) | 0.3 (0.1%) |
| 10-14 | 1 (0.2%) | 0.9 (0.2%) |
| 15-19 | 32 (5.7%) | 21.9 (5%) |
| 20-24 | 61 (10.8%) | 31 (7.1%) |
| 25-29 | 29 (5.1%) | 27.7 (6.3%) |
| 30-34 | 39 (6.9%) | 24.7 (5.6%) |
| 35-39 | 30 (5.3%) | 21.7 (5%) |
| 40-44 | 42 (7.4%) | 23.7 (5.4%) |
| 45-49 | 34 (6%) | 28.6 (6.5%) |
| 50-54 | 41 (7.3%) | 30.4 (6.9%) |
| 55-59 | 24 (4.2%) | 27.3 (6.2%) |
| 60-64 | 43 (7.6%) | 34.1 (7.8%) |
| 65-69 | 33 (5.8%) | 28.7 (6.5%) |
| 70-74 | 37 (6.5%) | 33.4 (7.6%) |
| 75-79 | 38 (6.7%) | 29.7 (6.8%) |
| 80-84 | 39 (6.9%) | 32.1 (7.3%) |
| 85+ | 38 (6.7%) | 41.1 (9.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 17.5 | 17.8 |
| ISS <13 | 125 (22.1%) | 91.9 (21%) |
| ISS 13-15 | 134 (23.7%) | 96.6 (22%) |
| ISS 16-24 | 186 (32.9%) | 155.6 (35.5%) |
| ISS 25-40 | 106 (18.8%) | 82.1 (18.7%) |
| ISS 41-75 | 14 (2.5%) | 12.1 (2.8%) |
| **Mechanism of injury** | | |
| Assault | 42 (7.4%) | 26.6 (6.1%) |
| Falls | 231 (40.9%) | 188 (42.9%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 139 (75.1%) | 119 (72.1%) |
| Road trauma | 182 (32.2%) | 139.9 (31.9%) |
| Other transport incident | 58 (10.3%) | 39.1 (8.9%) |
| All other injuries | 52 (9.2%) | 45.1 (10.3%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 525 (92.9%) | 409.7 (93.4%) |
| Penetrating | 40 (7.1%) | 22.9 (5.2%) |
| Unknown | 0 (0%) | 6.1 (1.4%) |
| **Admission type** | | |
| Direct admission | 456 (80.7%) | 350.3 (79.8%) |
| Transfer in | 104 (18.4%) | 87.3 (19.9%) |
| Unknown | 5 (0.9%) | 1.1 (0.3%) |
| **Arrival modes** | | |
| Ambulance | 425 (75.2%) | 336.1 (76.6%) |
| Helicopter | 84 (14.9%) | 55 (12.5%) |
| Other (private vehicle, fixed wing, unknown) | 56 (9.9%) | 47.6 (10.8%) |
| **Revised Trauma Score** | | |
| Mean - overall | 6.9 | 7.2 |
| ISS <13 | 6.3 | 6.9 |
| ISS 13-15 | 7.6 | 7.7 |
| ISS 16-24 | 7.2 | 7.5 |
| ISS 25-40 | 6.5 | 6.5 |
| ISS 41-75 | 4.9 | 5.1 |
| **Hospital length of stay** | | |
| Total bed days | 8,288 | 6,416 |
| Mean overall | 14.7 | 14.6 |
| ISS <13 | 10.3 | 12.6 |
| ISS 13-15 | 7.6 | 9.6 |
| ISS 16-24 | 14.4 | 13.9 |
| ISS 25-40 | 27.2 | 22.5 |
| ISS 41-75 | 30 | 26.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 1,468 (259) | 1,187 (234) |
| Mean overall | 5.7 | 5.1 |
| ISS <13 | 3.1 | 3 |
| ISS 13-15 | 4.4 | 3.2 |
| ISS 16-24 | 5.6 | 5.1 |
| ISS 25-40 | 8.7 | 7.7 |
| ISS 41-75 | 18.2 | 11.8 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 1,078 (182) | 655 (120) |
| Mean overall | 5.9 | 5.5 |
| ISS < 13 | 3.2 | 3.3 |
| ISS 13-15 | 2.3 | 3.6 |
| ISS 16-24 | 5.5 | 5.2 |
| ISS 25-40 | 8.2 | 7.1 |
| ISS 41-75 | 15 | 9.6 |

## Appendix 3: Paediatric major trauma service summaries

**Table 33: Trauma data profile, John Hunter Children's Hospital**

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 59 | 80 |
| Mean monthly admissions | 5 | 7 |
| Case fatality rate (ISS > 12 excl. traumatic DOA) | 1.8% | 5.6% |
| **Sex** | | |
| Male/Female | 41/18 | 57/23 |
| **Age ranges** | | |
| Mean age | 8.9 | 7.8 |
| 0-4 | 21 (35.6%) | 30 (37.3%) |
| 5-9 | 6 (10.2%) | 15 (18.7%) |
| 10-14 | 19 (32.2%) | 25 (31.1%) |
| 15-19 | 13 (22%) | 10 (12.4%) |
| 40-44 | 0 (0%) | 0.3 (0.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 19.4 | 20 |
| ISS <13 | 4 (6.8%) | 14 (17.4%) |
| ISS 13-15 | 7 (11.9%) | 11.3 (14.1%) |
| ISS 16-24 | 36 (61%) | 30.3 (37.8%) |
| ISS 25-40 | 10 (16.9%) | 19.7 (24.5%) |
| ISS 41-75 | 2 (3.4%) | 5 (6.2%) |
| **Mechanism of injury** | | |
| Assault | 3 (5.1%) | 4.3 (5.4%) |
| Falls | 13 (22%) | 23 (28.6%) |
| Road trauma | 11 (18.6%) | 14 (17.4%) |
| Other transport incident | 20 (33.9%) | 17.7 (22%) |
| All other injuries | 12 (20.3%) | 21.3 (26.6%) |
| **Injury type** | | |
| Blunt | 51 (86.4%) | 67 (83.4%) |
| Penetrating | 0 (0%) | 3 (3.7%) |
| Unknown | 8 (13.6%) | 10.3 (12.9%) |
| **Admission type** | | |
| Direct admission | 35 (59.3%) | 41.7 (51.9%) |
| Transfer in | 24 (40.7%) | 38.3 (47.7%) |
| Unknown | 0 (0%) | 0.3 (0.4%) |
| **Arrival modes** | | |
| Ambulance | 24 (40.7%) | 39.7 (49.4%) |
| Helicopter | 16 (27.1%) | 12 (14.9%) |
| Other (private vehicle, fixed wing, unknown) | 19 (32.2%) | 28.7 (35.7%) |

| Description | Facility | Peer |
|---|---|---|
| **Revised Trauma Score** | | |
| Mean - overall | 6.9 | 6.4 |
| ISS <13 | 5.4 | 5.9 |
| ISS 13-15 | 7.8 | 7.1 |
| ISS 16-24 | 7.1 | 7.1 |
| ISS 25-40 | 6 | 5.7 |
| ISS 41-75 | 7.1 | 4.6 |
| **Hospital length of stay** | | |
| Total bed days | 510 | 931 |
| Mean overall | 8.6 | 11.6 |
| ISS <13 | 5.8 | 7.6 |
| ISS 13-15 | 4.4 | 6.6 |
| ISS 16-24 | 7.3 | 7.8 |
| ISS 25-40 | 14.1 | 15.8 |
| ISS 41-75 | 26 | 40.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 89 (21) | 243 (48) |
| Mean overall | 4.2 | 5.1 |
| ISS <13 | 1 | 1.9 |
| ISS 13-15 | 0 | 4.9 |
| ISS 16-24 | 5.7 | 3.8 |
| ISS 25-40 | 3.1 | 6.2 |
| ISS 41-75 | 6.5 | 15.2 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 70 (17) | 173 (35) |
| Mean overall | 4.1 | 5 |
| ISS <13 | 1.5 | 2.3 |
| ISS 13-15 | 0 | 5 |
| ISS 16-24 | 6 | 4.5 |
| ISS 25-40 | 2.9 | 5.5 |
| ISS 41-75 | 5.5 | 8.7 |

**Table 34: Trauma data profile, Sydney Children's Hospital**

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 88 | 80 |
| Mean monthly admissions | 7 | 7 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 7% | 5.6% |
| **Sex** | | |
| Male/Female | 62/26 | 57/23 |
| **Age ranges** | | |
| Mean age | 7.2 | 7.8 |
| 0-4 | 39 (44.3%) | 30 (37.3%) |
| 5-9 | 15 (17%) | 15 (18.7%) |
| 10-14 | 26 (29.5%) | 25 (31.1%) |
| 15-19 | 7 (8%) | 10 (12.4%) |
| 40-44 | 1 (1.1%) | 0.3 (0.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 18.9 | 20 |
| ISS <13 | 17 (19.3%) | 14 (17.4%) |
| ISS 13-15 | 19 (21.6%) | 11.3 (14.1%) |
| ISS 16-24 | 25 (28.4%) | 30.3 (37.8%) |
| ISS 25-40 | 22 (25%) | 19.7 (24.5%) |
| ISS 41-75 | 5 (5.7%) | 5 (6.2%) |
| **Mechanism of injury** | | |
| Assault | 4 (4.5%) | 4.3 (5.4%) |
| Falls | 34 (38.6%) | 23 (28.6%) |
| Road trauma | 13 (14.8%) | 14 (17.4%) |
| Other transport incident | 17 (19.3%) | 17.7 (22%) |
| All other injuries | 20 (22.7%) | 21.3 (26.6%) |
| **Injury type** | | |
| Blunt | 76 (86.4%) | 67 (83.4%) |
| Penetrating | 1 (1.1%) | 3 (3.7%) |
| Unknown | 11 (12.5%) | 10.3 (12.9%) |
| **Admission type** | | |
| Direct admission | 35 (39.8%) | 41.7 (51.9%) |
| Transfer in | 53 (60.2%) | 38.3 (47.7%) |
| Unknown | 0 (0%) | 0.3 (0.4%) |
| **Arrival modes** | | |
| Ambulance | 34 (38.6%) | 39.7 (49.4%) |
| Helicopter | 10 (11.4%) | 12 (14.9%) |
| Other (private vehicle, fixed wing, unknown) | 44 (50%) | 28.7 (35.7%) |

| Description | Facility | Peer |
|---|---|---|
| **Revised Trauma Score** | | |
| Mean - overall | 6.3 | 6.4 |
| ISS <13 | 6.1 | 5.9 |
| ISS 13-15 | 6.6 | 7.1 |
| ISS 16-24 | 7.2 | 7.1 |
| ISS 25-40 | 5.8 | 5.7 |
| ISS 41-75 | 4 | 4.6 |
| **Hospital length of stay** | | |
| Total bed days | 1,153 | 931 |
| Mean overall | 13.1 | 11.6 |
| ISS <13 | 5.8 | 7.6 |
| ISS 13-15 | 7.6 | 6.6 |
| ISS 16-24 | 8.4 | 7.8 |
| ISS 25-40 | 14.1 | 15.8 |
| ISS 41-75 | 77.6 | 40.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 278 (55) | 243 (48) |
| Mean overall | 5.1 | 5.1 |
| ISS <13 | 1.2 | 1.9 |
| ISS 13-15 | 5.2 | 4.9 |
| ISS 16-24 | 4 | 3.8 |
| ISS 25-40 | 4.8 | 6.2 |
| ISS 41-75 | 20.8 | 15.2 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 197 (37) | 173 (35) |
| Mean overall | 5.3 | 5 |
| ISS <13 | 1.9 | 2.3 |
| ISS 13-15 | 4.5 | 5 |
| ISS 16-24 | 6.2 | 4.5 |
| ISS 25-40 | 5.6 | 5.5 |
| ISS 41-75 | 10.4 | 8.7 |

**Table 35: Trauma data profile, The Children's Hospital at Westmead**

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 94 | 80 |
| Mean monthly admissions | 8 | 7 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 7% | 5.6% |
| **Sex** | | |
| Male/Female | 68/26 | 57/23 |
| **Age ranges** | | |
| Mean age | 7.7 | 7.8 |
| 0-4 | 30 (31.9%) | 30 (37.3%) |
| 5-9 | 24 (25.5%) | 15 (18.7%) |
| 10-14 | 30 (31.9%) | 25 (31.1%) |
| 15-19 | 10 (10.6%) | 10 (12.4%) |
| 40-44 | 0 (0%) | 0.3 (0.4%) |
| **Injury Severity Score** | | |
| Mean ISS | 21.4 | 20 |
| ISS <13 | 21 (22.3%) | 14 (17.4%) |
| ISS 13-15 | 8 (8.5%) | 11.3 (14.1%) |
| ISS 16-24 | 30 (31.9%) | 30.3 (37.8%) |
| ISS 25-40 | 27 (28.7%) | 19.7 (24.5%) |
| ISS 41-75 | 8 (8.5%) | 5 (6.2%) |
| **Mechanism of injury** | | |
| Assault | 6 (6.4%) | 4.3 (5.4%) |
| Falls | 22 (23.4%) | 23 (28.6%) |
| Road trauma | 18 (19.1%) | 14 (17.4%) |
| Other transport incident | 16 (17%) | 17.7 (22%) |
| All other injuries | 32 (34%) | 21.3 (26.6%) |
| **Injury type** | | |
| Blunt | 74 (78.7%) | 67 (83.4%) |
| Penetrating | 8 (8.5%) | 3 (3.7%) |
| Unknown | 12 (12.8%) | 10.3 (12.9%) |
| **Admission type** | | |
| Direct admission | 55 (58.5%) | 41.7 (51.9%) |
| Transfer in | 38 (40.4%) | 38.3 (47.7%) |
| Unknown | 1 (1.1%) | 0.3 (0.4%) |
| **Arrival modes** | | |
| Ambulance | 61 (64.9%) | 39.7 (49.4%) |
| Helicopter | 10 (10.6%) | 12 (14.9%) |
| Other (private vehicle, fixed wing, unknown) | 23 (24.5%) | 28.7 (35.7%) |

| Description | Facility | Peer |
|---|---|---|
| **Revised Trauma Score** | | |
| Mean - overall | 6.2 | 6.4 |
| ISS <13 | 5.9 | 5.9 |
| ISS 13-15 | 7.7 | 7.1 |
| ISS 16-24 | 6.9 | 7.1 |
| ISS 25-40 | 5.4 | 5.7 |
| ISS 41-75 | 4.6 | 4.6 |
| **Hospital length of stay** | | |
| Total bed days | 1,130 | 931 |
| Mean overall | 12 | 11.6 |
| ISS <13 | 9.5 | 7.6 |
| ISS 13-15 | 6.4 | 6.6 |
| ISS 16-24 | 7.9 | 7.8 |
| ISS 25-40 | 17.7 | 15.8 |
| ISS 41-75 | 20.5 | 40.3 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 362 (67) | 243 (48) |
| Mean overall | 5.4 | 5.1 |
| ISS <13 | 2.6 | 1.9 |
| ISS 13-15 | 4.3 | 4.9 |
| ISS 16-24 | 2.6 | 3.8 |
| ISS 25-40 | 8.4 | 6.2 |
| ISS 41-75 | 13.5 | 15.2 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 252 (50) | 173 (35) |
| Mean overall | 5 | 5 |
| ISS <13 | 2.7 | 2.3 |
| ISS 13-15 | 6 | 5 |
| ISS 16-24 | 2.8 | 4.5 |
| ISS 25-40 | 6.4 | 5.5 |
| ISS 41-75 | 8.5 | 8.7 |

## Appendix 4: Regional trauma service summaries

**Table 36: Trauma data profile, Coffs Harbour Base Hospital**

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 91 | 72 |
| Mean monthly admissions | 8 | 6 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 8.5% | 7.9% |
| **Sex** | | |
| Male/Female | 67/24 | 54/18 |
| **Age ranges** | | |
| Mean age | 53.2 | 54.2 |
| 0-4 | 4 (4.4%) | 1.6 (2.2%) |
| 5-9 | 0 (0%) | 0.9 (1.2%) |
| 10-14 | 3 (3.3%) | 1.9 (2.6%) |
| 15-19 | 6 (6.6%) | 3.5 (4.8%) |
| 20-24 | 4 (4.4%) | 5 (6.9%) |
| 25-29 | 4 (4.4%) | 3 (4.2%) |
| 30-34 | 5 (5.5%) | 3.4 (4.7%) |
| 35-39 | 3 (3.3%) | 2.4 (3.3%) |
| 40-44 | 6 (6.6%) | 3.4 (4.7%) |
| 45-49 | 2 (2.2%) | 3.8 (5.3%) |
| 50-54 | 4 (4.4%) | 4.2 (5.8%) |
| 55-59 | 5 (5.5%) | 3.9 (5.4%) |
| 60-64 | 9 (9.9%) | 6.4 (8.9%) |
| 65-69 | 9 (9.9%) | 4.5 (6.2%) |
| 70-74 | 5 (5.5%) | 5.5 (7.6%) |
| 75-79 | 4 (4.4%) | 4.1 (5.7%) |
| 80-84 | 8 (8.8%) | 6.4 (8.9%) |
| 85+ | 10 (11%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 20.5 | 18.4 |
| ISS <13 | 9 (9.9%) | 7.3 (10.1%) |
| ISS 13-15 | 25 (27.5%) | 19.8 (27.5%) |
| ISS 16-24 | 31 (34.1%) | 29.7 (41.2%) |
| ISS 25-40 | 22 (24.2%) | 14.1 (19.6%) |
| ISS 41-75 | 4 (4.4%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 4 (4.4%) | 3.6 (5%) |
| Falls | 36 (39.6%) | 28.7 (39.8%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 25 (69.4%) | 19.1 (66.3%) |
| Road trauma | 32 (35.2%) | 22.5 (31.2%) |
| Other transport incident | 12 (13.2%) | 9.9 (13.7%) |
| All other injuries | 7 (7.7%) | 7.5 (10.4%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 87 (95.6%) | 68.3 (94.6%) |
| Penetrating | 3 (3.3%) | 3 (4.2%) |
| Unknown | 1 (1.1%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 83 (91.2%) | 61.4 (85%) |
| Transfer in | 8 (8.8%) | 9.7 (13.4%) |
| Unknown | 0 (0%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 85 (93.4%) | 54 (74.8%) |
| Helicopter | 0 (0%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 6 (6.6%) | 13.8 (19.1%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.5 | 7.6 |
| ISS <13 | 7.4 | 7.4 |
| ISS 13-15 | 7.7 | 7.8 |
| ISS 16-24 | 7.8 | 7.7 |
| ISS 25-40 | 7.1 | 7.1 |
| ISS 41-75 | 5.1 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 553 | 532 |
| Mean overall | 6.1 | 7.4 |
| ISS <13 | 5.7 | 9.6 |
| ISS 13-15 | 7.7 | 6.7 |
| ISS 16-24 | 7.4 | 8.6 |
| ISS 25-40 | 2.8 | 5.1 |
| ISS 41-75 | 5 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 80 (31) | 63 (20) |
| Mean overall | 2.6 | 3.1 |
| ISS <13 | 3 | 3.6 |
| ISS 13-15 | 1.8 | 2.8 |
| ISS 16-24 | 2.9 | 3 |
| ISS 25-40 | 2 | 2.8 |
| ISS 41-75 | 2.3 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 36 (14) | 15 (6) |
| Mean overall | 2.6 | 2.3 |
| ISS <13 | 3.5 | 3.1 |
| ISS 13-15 | 2 | 1.7 |
| ISS 16-24 | 3.2 | 2.9 |
| ISS 25-40 | 1 | 1.7 |
| ISS 41-75 | 1.7 | 1.5 |

## Table 37: Trauma data profile, Gosford Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 64 | 72 |
| Mean monthly admissions | 5 | 6 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 6.9% | 7.9% |
| **Sex** | | |
| Male/Female | 43/21 | 54/18 |
| **Age ranges** | | |
| Mean age | 59.4 | 54.2 |
| 0-4 | 2 (3.1%) | 1.6 (2.2%) |
| 5-9 | 0 (0%) | 0.9 (1.2%) |
| 10-14 | 2 (3.1%) | 1.9 (2.6%) |
| 15-19 | 1 (1.6%) | 3.5 (4.8%) |
| 20-24 | 2 (3.1%) | 5 (6.9%) |
| 25-29 | 2 (3.1%) | 3 (4.2%) |
| 30-34 | 4 (6.2%) | 3.4 (4.7%) |
| 35-39 | 3 (4.7%) | 2.4 (3.3%) |
| 40-44 | 0 (0%) | 3.4 (4.7%) |
| 45-49 | 3 (4.7%) | 3.8 (5.3%) |
| 50-54 | 5 (7.8%) | 4.2 (5.8%) |
| 55-59 | 3 (4.7%) | 3.9 (5.4%) |
| 60-64 | 6 (9.4%) | 6.4 (8.9%) |
| 65-69 | 1 (1.6%) | 4.5 (6.2%) |
| 70-74 | 11 (17.2%) | 5.5 (7.6%) |
| 75-79 | 4 (6.2%) | 4.1 (5.7%) |
| 80-84 | 4 (6.2%) | 6.4 (8.9%) |
| 85+ | 11 (17.2%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 16.7 | 18.4 |
| ISS <13 | 6 (9.4%) | 7.3 (10.1%) |
| ISS 13-15 | 21 (32.8%) | 19.8 (27.5%) |
| ISS 16-24 | 28 (43.8%) | 29.7 (41.2%) |
| ISS 25-40 | 9 (14.1%) | 14.1 (19.6%) |
| ISS 41-75 | 0 (0%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 0 (0%) | 3.6 (5%) |
| Falls | 28 (43.8%) | 28.7 (39.8%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 21 (67.7%) | 19.1 (66.3%) |
| Road trauma | 19 (29.7%) | 22.5 (31.2%) |
| Other transport incident | 9 (14.1%) | 9.9 (13.7%) |
| All other injuries | 8 (12.5%) | 7.5 (10.4%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 63 (98.4%) | 68.3 (94.6%) |
| Penetrating | 1 (1.6%) | 3 (4.2%) |
| Unknown | 0 (0%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 64 (100%) | 61.4 (85%) |
| Transfer in | 0 (0%) | 9.7 (13.4%) |
| Unknown | 0 (0%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 56 (87.5%) | 54 (74.8%) |
| Helicopter | 1 (1.6%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 7 (10.9%) | 13.8 (19.1%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.7 | 7.6 |
| ISS <13 | 7.5 | 7.4 |
| ISS 13-15 | 7.8 | 7.8 |
| ISS 16-24 | 7.6 | 7.7 |
| ISS 25-40 | 7.5 | 7.1 |
| ISS 41-75 | 0 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 343 | 532 |
| Mean overall | 5.4 | 7.4 |
| ISS <13 | 2.5 | 9.6 |
| ISS 13-15 | 6.4 | 6.7 |
| ISS 16-24 | 5.1 | 8.6 |
| ISS 25-40 | 5.8 | 5.1 |
| ISS 41-75 | 0 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 0 (0) | 63 (20) |
| Mean overall | 0 | 3.1 |
| ISS <13 | 0 | 3.6 |
| ISS 13-15 | 0 | 2.8 |
| ISS 16-24 | 0 | 3 |
| ISS 25-40 | 0 | 2.8 |
| ISS 41-75 | 0 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 0 (0) | 15 (6) |
| Mean overall | 0 | 2.3 |
| ISS <13 | 0 | 3.1 |
| ISS 13-15 | 0 | 1.7 |
| ISS 16-24 | 0 | 2.9 |
| ISS 25-40 | 0 | 1.7 |
| ISS 41-75 | 0 | 1.5 |

## Table 38: Trauma data profile, Lismore Base Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 65 | 72 |
| Mean monthly admissions | 5 | 6 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 5% | 7.9% |
| **Sex** | | |
| Male/Female | 49/16 | 54/18 |
| **Age ranges** | | |
| Mean age | 52.7 | 54.2 |
| 0-4 | 1 (1.5%) | 1.6 (2.2%) |
| 5-9 | 1 (1.5%) | 0.9 (1.2%) |
| 10-14 | 1 (1.5%) | 1.9 (2.6%) |
| 15-19 | 2 (3.1%) | 3.5 (4.8%) |
| 20-24 | 4 (6.2%) | 5 (6.9%) |
| 25-29 | 6 (9.2%) | 3 (4.2%) |
| 30-34 | 3 (4.6%) | 3.4 (4.7%) |
| 35-39 | 1 (1.5%) | 2.4 (3.3%) |
| 40-44 | 5 (7.7%) | 3.4 (4.7%) |
| 45-49 | 2 (3.1%) | 3.8 (5.3%) |
| 50-54 | 5 (7.7%) | 4.2 (5.8%) |
| 55-59 | 2 (3.1%) | 3.9 (5.4%) |
| 60-64 | 8 (12.3%) | 6.4 (8.9%) |
| 65-69 | 9 (13.8%) | 4.5 (6.2%) |
| 70-74 | 4 (6.2%) | 5.5 (7.6%) |
| 75-79 | 2 (3.1%) | 4.1 (5.7%) |
| 80-84 | 4 (6.2%) | 6.4 (8.9%) |
| 85+ | 5 (7.7%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 16.7 | 18.4 |
| ISS <13 | 5 (7.7%) | 7.3 (10.1%) |
| ISS 13-15 | 19 (29.2%) | 19.8 (27.5%) |
| ISS 16-24 | 34 (52.3%) | 29.7 (41.2%) |
| ISS 25-40 | 7 (10.8%) | 14.1 (19.6%) |
| ISS 41-75 | 0 (0%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 3 (4.6%) | 3.6 (5%) |
| Falls | 27 (41.5%) | 28.7 (39.8%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 14 (58.3%) | 19.1 (66.3%) |
| Road trauma | 21 (32.3%) | 22.5 (31.2%) |
| Other transport incident | 5 (7.7%) | 9.9 (13.7%) |
| All other injuries | 9 (13.8%) | 7.5 (10.4%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 58 (89.2%) | 68.3 (94.6%) |
| Penetrating | 5 (7.7%) | 3 (4.2%) |
| Unknown | 2 (3.1%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 59 (90.8%) | 61.4 (85%) |
| Transfer in | 5 (7.7%) | 9.7 (13.4%) |
| Unknown | 1 (1.5%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 34 (52.3%) | 54 (74.8%) |
| Helicopter | 7 (10.8%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 24 (36.9%) | 13.8 (19.1%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.6 | 7.6 |
| ISS <13 | 6.8 | 7.4 |
| ISS 13-15 | 7.7 | 7.8 |
| ISS 16-24 | 7.7 | 7.7 |
| ISS 25-40 | 6.7 | 7.1 |
| ISS 41-75 | 0 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 436 | 532 |
| Mean overall | 6.7 | 7.4 |
| ISS <13 | 7 | 9.6 |
| ISS 13-15 | 5.8 | 6.7 |
| ISS 16-24 | 7.3 | 8.6 |
| ISS 25-40 | 5.9 | 5.1 |
| ISS 41-75 | 0 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 44 (16) | 63 (20) |
| Mean overall | 2.8 | 3.1 |
| ISS <13 | 3.2 | 3.6 |
| ISS 13-15 | 3.7 | 2.8 |
| ISS 16-24 | 2.2 | 3 |
| ISS 25-40 | 0 | 2.8 |
| ISS 41-75 | 0 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 10 (5) | 15 (6) |
| Mean overall | 2 | 2.3 |
| ISS <13 | 2 | 3.1 |
| ISS 13-15 | 2.5 | 1.7 |
| ISS 16-24 | 0 | 2.9 |
| ISS 25-40 | 1 | 1.7 |
| ISS 41-75 | 0 | 1.5 |

## Table 39: Trauma data profile, Nepean Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 44 | 72 |
| Mean monthly admissions | 4 | 6 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 8% | 7.9% |
| **Sex** | | |
| Male/Female | 27/17 | 54/18 |
| **Age ranges** | | |
| Mean age | 64.8 | 54.2 |
| 0-4 | 0 (0%) | 1.6 (2.2%) |
| 5-9 | 0 (0%) | 0.9 (1.2%) |
| 10-14 | 0 (0%) | 1.9 (2.6%) |
| 15-19 | 4 (9.1%) | 3.5 (4.8%) |
| 20-24 | 1 (2.3%) | 5 (6.9%) |
| 25-29 | 1 (2.3%) | 3 (4.2%) |
| 30-34 | 1 (2.3%) | 3.4 (4.7%) |
| 35-39 | 1 (2.3%) | 2.4 (3.3%) |
| 40-44 | 0 (0%) | 3.4 (4.7%) |
| 45-49 | 3 (6.8%) | 3.8 (5.3%) |
| 50-54 | 2 (4.5%) | 4.2 (5.8%) |
| 55-59 | 2 (4.5%) | 3.9 (5.4%) |
| 60-64 | 2 (4.5%) | 6.4 (8.9%) |
| 65-69 | 2 (4.5%) | 4.5 (6.2%) |
| 70-74 | 7 (15.9%) | 5.5 (7.6%) |
| 75-79 | 2 (4.5%) | 4.1 (5.7%) |
| 80-84 | 6 (13.6%) | 6.4 (8.9%) |
| 85+ | 10 (22.7%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 13.8 | 18.4 |
| ISS <13 | 19 (43.2%) | 7.3 (10.1%) |
| ISS 13-15 | 10 (22.7%) | 19.8 (27.5%) |
| ISS 16-24 | 8 (18.2%) | 29.7 (41.2%) |
| ISS 25-40 | 7 (15.9%) | 14.1 (19.6%) |
| ISS 41-75 | 0 (0%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 3 (6.8%) | 3.6 (5%) |
| Falls | 24 (54.5%) | 28.7 (39.8%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 21 (77.8%) | 19.1 (66.3%) |
| Road trauma | 7 (15.9%) | 22.5 (31.2%) |
| Other transport incident | 4 (9.1%) | 9.9 (13.7%) |
| All other injuries | 6 (13.6%) | 7.5 (10.4%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 42 (95.5%) | 68.3 (94.6%) |
| Penetrating | 2 (4.5%) | 3 (4.2%) |
| Unknown | 0 (0%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 34 (77.3%) | 61.4 (85%) |
| Transfer in | 10 (22.7%) | 9.7 (13.4%) |
| Unknown | 0 (0%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 35 (79.5%) | 54 (74.8%) |
| Helicopter | 0 (0%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 9 (20.5%) | 13.8 (19.1%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.8 | 7.6 |
| ISS <13 | 7.7 | 7.4 |
| ISS 13-15 | 7.8 | 7.8 |
| ISS 16-24 | 7.8 | 7.7 |
| ISS 25-40 | 7.8 | 7.1 |
| ISS 41-75 | 0 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 663 | 532 |
| Mean overall | 15.1 | 7.4 |
| ISS <13 | 15.2 | 9.6 |
| ISS 13-15 | 12.2 | 6.7 |
| ISS 16-24 | 22.5 | 8.6 |
| ISS 25-40 | 10.4 | 5.1 |
| ISS 41-75 | 0 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 102 (28) | 63 (20) |
| Mean overall | 3.6 | 3.1 |
| ISS <13 | 3.8 | 3.6 |
| ISS 13-15 | 1 | 2.8 |
| ISS 16-24 | 3.5 | 3 |
| ISS 25-40 | 3.8 | 2.8 |
| ISS 41-75 | 0 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 36 (5) | 15 (6) |
| Mean overall | 7.2 | 2.3 |
| ISS <13 | 6.7 | 3.1 |
| ISS 13-15 | 0 | 1.7 |
| ISS 16-24 | 11 | 2.9 |
| ISS 25-40 | 5 | 1.7 |
| ISS 41-75 | 0 | 1.5 |

## Table 40: Trauma data profile, Orange Health Service

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 101 | 72 |
| Mean monthly admissions | 8 | 6 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 4% | 7.9% |
| **Sex** | | |
| Male/Female | 84/17 | 54/18 |
| **Age ranges** | | |
| Mean age | 48.9 | 54.2 |
| 0-4 | 3 (3%) | 1.6 (2.2%) |
| 5-9 | 2 (2%) | 0.9 (1.2%) |
| 10-14 | 5 (5%) | 1.9 (2.6%) |
| 15-19 | 3 (3%) | 3.5 (4.8%) |
| 20-24 | 13 (12.9%) | 5 (6.9%) |
| 25-29 | 5 (5%) | 3 (4.2%) |
| 30-34 | 4 (4%) | 3.4 (4.7%) |
| 35-39 | 2 (2%) | 2.4 (3.3%) |
| 40-44 | 7 (6.9%) | 3.4 (4.7%) |
| 45-49 | 7 (6.9%) | 3.8 (5.3%) |
| 50-54 | 5 (5%) | 4.2 (5.8%) |
| 55-59 | 2 (2%) | 3.9 (5.4%) |
| 60-64 | 5 (5%) | 6.4 (8.9%) |
| 65-69 | 11 (10.9%) | 4.5 (6.2%) |
| 70-74 | 8 (7.9%) | 5.5 (7.6%) |
| 75-79 | 6 (5.9%) | 4.1 (5.7%) |
| 80-84 | 7 (6.9%) | 6.4 (8.9%) |
| 85+ | 6 (5.9%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 19.2 | 18.4 |
| ISS <13 | 2 (2%) | 7.3 (10.1%) |
| ISS 13-15 | 26 (25.7%) | 19.8 (27.5%) |
| ISS 16-24 | 52 (51.5%) | 29.7 (41.2%) |
| ISS 25-40 | 21 (20.8%) | 14.1 (19.6%) |
| ISS 41-75 | 0 (0%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 2 (2%) | 3.6 (5%) |
| Falls | 32 (31.7%) | 28.7 (39.8%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 22 (57.9%) | 19.1 (66.3%) |
| Road trauma | 34 (33.7%) | 22.5 (31.2%) |
| Other transport incident | 25 (24.8%) | 9.9 (13.7%) |
| All other injuries | 8 (7.9%) | 7.5 (10.4%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 101 (100%) | 68.3 (94.6%) |
| Penetrating | 0 (0%) | 3 (4.2%) |
| Unknown | 0 (0%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 78 (77.2%) | 61.4 (85%) |
| Transfer in | 16 (15.8%) | 9.7 (13.4%) |
| Unknown | 7 (6.9%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 57 (56.4%) | 54 (74.8%) |
| Helicopter | 21 (20.8%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 23 (22.8%) | 13.8 (19.1%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.8 | 7.6 |
| ISS <13 | 7.4 | 7.4 |
| ISS 13-15 | 7.8 | 7.8 |
| ISS 16-24 | 7.8 | 7.7 |
| ISS 25-40 | 7.6 | 7.1 |
| ISS 41-75 | 0 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 503 | 532 |
| Mean overall | 5 | 7.4 |
| ISS <13 | 2.5 | 9.6 |
| ISS 13-15 | 4.5 | 6.7 |
| ISS 16-24 | 6 | 8.6 |
| ISS 25-40 | 3.5 | 5.1 |
| ISS 41-75 | 0 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 25 (9) | 63 (20) |
| Mean overall | 2.8 | 3.1 |
| ISS <13 | 1.5 | 3.6 |
| ISS 13-15 | 2.5 | 2.8 |
| ISS 16-24 | 5 | 3 |
| ISS 25-40 | 3 | 2.8 |
| ISS 41-75 | 0 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 10 (7) | 15 (6) |
| Mean overall | 1.4 | 2.3 |
| ISS <13 | 1 | 3.1 |
| ISS 13-15 | 1.5 | 1.7 |
| ISS 16-24 | 2 | 2.9 |
| ISS 25-40 | 1.3 | 1.7 |
| ISS 41-75 | 0 | 1.5 |

## Table 41: Trauma data profile, Port Macquarie Base Hospital

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 65 | 72 |
| Mean monthly admissions | 5 | 6 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 7.9% | 7.9% |
| **Sex** | | |
| Male/Female | 45/20 | 54/18 |
| **Age ranges** | | |
| Mean age | 53.8 | 54.2 |
| 0-4 | 0 (0%) | 1.6 (2.2%) |
| 5-9 | 1 (1.5%) | 0.9 (1.2%) |
| 10-14 | 1 (1.5%) | 1.9 (2.6%) |
| 15-19 | 6 (9.2%) | 3.5 (4.8%) |
| 20-24 | 3 (4.6%) | 5 (6.9%) |
| 25-29 | 2 (3.1%) | 3 (4.2%) |
| 30-34 | 4 (6.2%) | 3.4 (4.7%) |
| 35-39 | 4 (6.2%) | 2.4 (3.3%) |
| 40-44 | 3 (4.6%) | 3.4 (4.7%) |
| 45-49 | 2 (3.1%) | 3.8 (5.3%) |
| 50-54 | 4 (6.2%) | 4.2 (5.8%) |
| 55-59 | 5 (7.7%) | 3.9 (5.4%) |
| 60-64 | 5 (7.7%) | 6.4 (8.9%) |
| 65-69 | 2 (3.1%) | 4.5 (6.2%) |
| 70-74 | 5 (7.7%) | 5.5 (7.6%) |
| 75-79 | 6 (9.2%) | 4.1 (5.7%) |
| 80-84 | 6 (9.2%) | 6.4 (8.9%) |
| 85+ | 6 (9.2%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 20 | 18.4 |
| ISS <13 | 2 (3.1%) | 7.3 (10.1%) |
| ISS 13-15 | 15 (23.1%) | 19.8 (27.5%) |
| ISS 16-24 | 31 (47.7%) | 29.7 (41.2%) |
| ISS 25-40 | 16 (24.6%) | 14.1 (19.6%) |
| ISS 41-75 | 1 (1.5%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 7 (10.8%) | 3.6 (5%) |
| Falls | 17 (26.2%) | 28.7 (39.8%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 9 (36%) | 19.1 (66.3%) |
| Road trauma | 31 (47.7%) | 22.5 (31.2%) |
| Other transport incident | 5 (7.7%) | 9.9 (13.7%) |
| All other injuries | 5 (7.7%) | 7.5 (10.4%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 55 (84.6%) | 68.3 (94.6%) |
| Penetrating | 8 (12.3%) | 3 (4.2%) |
| Unknown | 2 (3.1%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 64 (98.5%) | 61.4 (85%) |
| Transfer in | 1 (1.5%) | 9.7 (13.4%) |
| Unknown | 0 (0%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 59 (90.8%) | 54 (74.8%) |
| Helicopter | 2 (3.1%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 4 (6.2%) | 13.8 (19.1%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.5 | 7.6 |
| ISS <13 | 7.7 | 7.4 |
| ISS 13-15 | 7.8 | 7.8 |
| ISS 16-24 | 7.6 | 7.7 |
| ISS 25-40 | 6.9 | 7.1 |
| ISS 41-75 | 7.6 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 327 | 532 |
| Mean overall | 5 | 7.4 |
| ISS <13 | 13.5 | 9.6 |
| ISS 13-15 | 4.1 | 6.7 |
| ISS 16-24 | 5.6 | 8.6 |
| ISS 25-40 | 3.9 | 5.1 |
| ISS 41-75 | 1 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 45 (20) | 63 (20) |
| Mean overall | 2.2 | 3.1 |
| ISS <13 | 1 | 3.6 |
| ISS 13-15 | 2 | 2.8 |
| ISS 16-24 | 1.5 | 3 |
| ISS 25-40 | 4.6 | 2.8 |
| ISS 41-75 | 1 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 6 (6) | 15 (6) |
| Mean overall | 1 | 2.3 |
| ISS <13 | 1 | 3.1 |
| ISS 13-15 | 0 | 1.7 |
| ISS 16-24 | 1 | 2.9 |
| ISS 25-40 | 1 | 1.7 |
| ISS 41-75 | 0 | 1.5 |

**Table 42: Trauma data profile, Tamworth Hospital**

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 98 | 72 |
| Mean monthly admissions | 8 | 6 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 9.8% | 7.9% |
| **Sex** | | |
| Male/Female | 78/20 | 54/18 |
| **Age ranges** | | |
| Mean age | 52.2 | 54.2 |
| 0-4 | 4 (4.1%) | 1.6 (2.2%) |
| 5-9 | 1 (1%) | 0.9 (1.2%) |
| 10-14 | 3 (3.1%) | 1.9 (2.6%) |
| 15-19 | 5 (5.1%) | 3.5 (4.8%) |
| 20-24 | 4 (4.1%) | 5 (6.9%) |
| 25-29 | 3 (3.1%) | 3 (4.2%) |
| 30-34 | 5 (5.1%) | 3.4 (4.7%) |
| 35-39 | 6 (6.1%) | 2.4 (3.3%) |
| 40-44 | 3 (3.1%) | 3.4 (4.7%) |
| 45-49 | 10 (10.2%) | 3.8 (5.3%) |
| 50-54 | 7 (7.1%) | 4.2 (5.8%) |
| 55-59 | 5 (5.1%) | 3.9 (5.4%) |
| 60-64 | 10 (10.2%) | 6.4 (8.9%) |
| 65-69 | 3 (3.1%) | 4.5 (6.2%) |
| 70-74 | 5 (5.1%) | 5.5 (7.6%) |
| 75-79 | 6 (6.1%) | 4.1 (5.7%) |
| 80-84 | 9 (9.2%) | 6.4 (8.9%) |
| 85+ | 9 (9.2%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 18.3 | 18.4 |
| ISS <13 | 15 (15.3%) | 7.3 (10.1%) |
| ISS 13-15 | 27 (27.6%) | 19.8 (27.5%) |
| ISS 16-24 | 29 (29.6%) | 29.7 (41.2%) |
| ISS 25-40 | 26 (26.5%) | 14.1 (19.6%) |
| ISS 41-75 | 1 (1%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 4 (4.1%) | 3.6 (5%) |
| Falls | 31 (31.6%) | 28.7 (39.8%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 23 (71.9%) | 19.1 (66.3%) |
| Road trauma | 28 (28.6%) | 22.5 (31.2%) |
| Other transport incident | 19 (19.4%) | 9.9 (13.7%) |
| All other injuries | 16 (16.3%) | 7.5 (10.4%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 93 (94.9%) | 68.3 (94.6%) |
| Penetrating | 4 (4.1%) | 3 (4.2%) |
| Unknown | 1 (1%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 77 (78.6%) | 61.4 (85%) |
| Transfer in | 21 (21.4%) | 9.7 (13.4%) |
| Unknown | 0 (0%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 69 (70.4%) | 54 (74.8%) |
| Helicopter | 11 (11.2%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 18 (18.4%) | 13.8 (19.1%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.4 | 7.6 |
| ISS <13 | 7.1 | 7.4 |
| ISS 13-15 | 7.8 | 7.8 |
| ISS 16-24 | 7.5 | 7.7 |
| ISS 25-40 | 7 | 7.1 |
| ISS 41-75 | 6 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 1,109 | 532 |
| Mean overall | 11.4 | 7.4 |
| ISS <13 | 5.2 | 9.6 |
| ISS 13-15 | 8 | 6.7 |
| ISS 16-24 | 23.6 | 8.6 |
| ISS 25-40 | 5.3 | 5.1 |
| ISS 41-75 | 1 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 148 (48) | 63 (20) |
| Mean overall | 3.1 | 3.1 |
| ISS <13 | 3 | 3.6 |
| ISS 13-15 | 2.4 | 2.8 |
| ISS 16-24 | 4.4 | 3 |
| ISS 25-40 | 1.6 | 2.8 |
| ISS 41-75 | 0 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 21 (10) | 15 (6) |
| Mean overall | 2.1 | 2.3 |
| ISS <13 | 2.2 | 3.1 |
| ISS 13-15 | 0 | 1.7 |
| ISS 16-24 | 2.5 | 2.9 |
| ISS 25-40 | 1.7 | 1.7 |
| ISS 41-75 | 0 | 1.5 |

**Table 43: Trauma data profile, The Tweed Hospital**

| Description | Facility | Peer |
|---|---|---|
| Total admissions | 34 | 72 |
| Mean monthly admissions | 3 | 6 |
| Case fatality rate (ISS >12 excl. traumatic DOA) | 13.8% | 7.9% |
| **Sex** | | |
| Male/Female | 25/9 | 54/18 |
| **Age ranges** | | |
| Mean age | 58.3 | 54.2 |
| 0-4 | 0 (0%) | 1.6 (2.2%) |
| 5-9 | 1 (2.9%) | 0.9 (1.2%) |
| 10-14 | 1 (2.9%) | 1.9 (2.6%) |
| 15-19 | 1 (2.9%) | 3.5 (4.8%) |
| 20-24 | 2 (5.9%) | 5 (6.9%) |
| 25-29 | 3 (8.8%) | 3 (4.2%) |
| 30-34 | 1 (2.9%) | 3.4 (4.7%) |
| 35-39 | 0 (0%) | 2.4 (3.3%) |
| 40-44 | 1 (2.9%) | 3.4 (4.7%) |
| 45-49 | 1 (2.9%) | 3.8 (5.3%) |
| 50-54 | 2 (5.9%) | 4.2 (5.8%) |
| 55-59 | 1 (2.9%) | 3.9 (5.4%) |
| 60-64 | 5 (14.7%) | 6.4 (8.9%) |
| 65-69 | 3 (8.8%) | 4.5 (6.2%) |
| 70-74 | 1 (2.9%) | 5.5 (7.6%) |
| 75-79 | 0 (0%) | 4.1 (5.7%) |
| 80-84 | 4 (11.8%) | 6.4 (8.9%) |
| 85+ | 7 (20.6%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 15.7 | 18.4 |
| ISS <13 | 5 (14.7%) | 7.3 (10.1%) |
| ISS 13-15 | 10 (29.4%) | 19.8 (27.5%) |
| ISS 16-24 | 13 (38.2%) | 29.7 (41.2%) |
| ISS 25-40 | 6 (17.6%) | 14.1 (19.6%) |
| ISS 41-75 | 0 (0%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 3 (8.8%) | 3.6 (5%) |
| Falls | 19 (55.9%) | 28.7 (39.8%) |
| Falls ≥ 65 years (% of all MOIs for ≥ 65 years) | 14 (93.3%) | 19.1 (66.3%) |
| Road trauma | 6 (17.6%) | 22.5 (31.2%) |
| Other transport incident | 3 (8.8%) | 9.9 (13.7%) |
| All other injuries | 3 (8.8%) | 7.5 (10.4%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |
| Blunt | 33 (97.1%) | 68.3 (94.6%) |
| Penetrating | 0 (0%) | 3 (4.2%) |
| Unknown | 1 (2.9%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 27 (79.4%) | 61.4 (85%) |
| Transfer in | 6 (17.6%) | 9.7 (13.4%) |
| Unknown | 1 (2.9%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 12 (35.3%) | 54 (74.8%) |
| Helicopter | 0 (0%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 22 (64.7%) | 13.8 (19.1%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.5 | 7.6 |
| ISS <13 | 7.8 | 7.4 |
| ISS 13-15 | 7.8 | 7.8 |
| ISS 16-24 | 7.7 | 7.7 |
| ISS 25-40 | 6 | 7.1 |
| ISS 41-75 | 0 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 252 | 532 |
| Mean overall | 7.4 | 7.4 |
| ISS <13 | 3.2 | 9.6 |
| ISS 13-15 | 7.1 | 6.7 |
| ISS 16-24 | 11.2 | 8.6 |
| ISS 25-40 | 3.2 | 5.1 |
| ISS 41-75 | 0 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 19 (7) | 63 (20) |
| Mean overall | 2.7 | 3.1 |
| ISS <13 | 1 | 3.6 |
| ISS 13-15 | 2.7 | 2.8 |
| ISS 16-24 | 3 | 3 |
| ISS 25-40 | 3.5 | 2.8 |
| ISS 41-75 | 0 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 8 (2) | 15 (6) |
| Mean overall | 4 | 2.3 |
| ISS <13 | 0 | 3.1 |
| ISS 13-15 | 0 | 1.7 |
| ISS 16-24 | 0 | 2.9 |
| ISS 25-40 | 4 | 1.7 |
| ISS 41-75 | 0 | 1.5 |

**Table 44: Trauma data profile, Wagga Wagga Base Hospital**

| Description | Facility | Peer |
|---|---|---|
| Total Admissions | 82 | 72 |
| Mean monthly admissions | 7 | 6 |
| Case fatality rate (ISS > 12 excl. traumatic DOA) | 6.6% | 7.9% |
| **Sex** | | |
| Male / Female | 67 / 15 | 54 / 18 |
| **Age ranges** | | |
| Mean age | 52.3 | 54.2 |
| 0-4 | 1 (1.2%) | 1.6 (2.2%) |
| 5-9 | 1 (1.2%) | 0.9 (1.2%) |
| 10-14 | 3 (3.7%) | 1.9 (2.6%) |
| 15-19 | 3 (3.7%) | 3.5 (4.8%) |
| 20-24 | 9 (11%) | 5 (6.9%) |
| 25-29 | 3 (3.7%) | 3 (4.2%) |
| 30-34 | 2 (2.4%) | 3.4 (4.7%) |
| 35-39 | 2 (2.4%) | 2.4 (3.3%) |
| 40-44 | 4 (4.9%) | 3.4 (4.7%) |
| 45-49 | 3 (3.7%) | 3.8 (5.3%) |
| 50-54 | 7 (8.5%) | 4.2 (5.8%) |
| 55-59 | 9 (11%) | 3.9 (5.4%) |
| 60-64 | 8 (9.8%) | 6.4 (8.9%) |
| 65-69 | 4 (4.9%) | 4.5 (6.2%) |
| 70-74 | 5 (6.1%) | 5.5 (7.6%) |
| 75-79 | 5 (6.1%) | 4.1 (5.7%) |
| 80-84 | 9 (11%) | 6.4 (8.9%) |
| 85+ | 4 (4.9%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 18.2 | 18.4 |
| ISS < 13 | 5 (6.1%) | 7.3 (10.1%) |
| ISS 13-15 | 28 (34.1%) | 19.8 (27.5%) |
| ISS 16-24 | 38 (46.3%) | 29.7 (41.2%) |
| ISS 25-40 | 9 (11%) | 14.1 (19.6%) |
| ISS 41-75 | 2 (2.4%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 6 (7.3%) | 3.6 (5%) |
| Falls | 31 (37.8%) | 28.7 (39.8%) |
| Falls >= 65 years (% of all MOIs for >= 65 years) | 17 (63%) | 19.1 (66.3%) |
| Road trauma | 29 (35.4%) | 22.5 (31.2%) |
| Other transport incident | 9 (11%) | 9.9 (13.7%) |
| All other injuries | 7 (8.5%) | 7.5 (10.4%) |

| Description | Facility | Peer |
|---|---|---|
| **Injury type** | | |

| | | |
|---|---|---|
| Blunt | 76 (92.7%) | 68.3 (94.6%) |
| Penetrating | 6 (7.3%) | 3 (4.2%) |
| Unknown | 0 (0%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 69 (84.1%) | 61.4 (85%) |
| Transfer in | 13 (15.9%) | 9.7 (13.4%) |
| Unknown | 0 (0%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 65 (79.3%) | 54 (74.8%) |
| Helicopter | 2 (2.4%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 15 (18.3%) | 13.8 (19.1%) |
| **Revised Trauma Score** | | |
| Mean - overall | 7.7 | 7.6 |
| ISS < 13 | 7.8 | 7.4 |
| ISS 13-15 | 7.8 | 7.8 |
| ISS 16-24 | 7.7 | 7.7 |
| ISS 25-40 | 7.6 | 7.1 |
| ISS 41-75 | 3.4 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 387 | 532 |
| Mean overall | 4.7 | 7.4 |
| ISS < 13 | 10.2 | 9.6 |
| ISS 13-15 | 5.5 | 6.7 |
| ISS 16-24 | 3.7 | 8.6 |
| ISS 25-40 | 4.4 | 5.1 |
| ISS 41-75 | 1 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 80 (26) | 63 (20) |
| Mean overall | 3.1 | 3.1 |
| ISS < 13 | 2.2 | 3.6 |
| ISS 13-15 | 4.7 | 2.8 |
| ISS 16-24 | 2.8 | 3 |
| ISS 25-40 | 2.5 | 2.8 |
| ISS 41-75 | 0 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 21 (15) | 15 (6) |
| Mean overall | 1.4 | 2.3 |
| ISS < 13 | 2 | 3.1 |
| ISS 13-15 | 1 | 1.7 |
| ISS 16-24 | 1.4 | 2.9 |
| ISS 25-40 | 1.4 | 1.7 |
| ISS 41-75 | 1 | 1.5 |

**Table 45: Trauma data profile, Wollongong Hospital**

| Description | Facility | Peer |
|---|---|---|
| Total Admissions | 78 | 72 |

| | | |
|---|---|---|
| Mean monthly admissions | 6 | 6 |
| Case fatality rate (ISS > 12 excl. traumatic DOA) | 12.5% | 7.9% |
| **Sex** | | |
| Male / Female | 55 / 23 | 54 / 18 |
| **Age ranges** | | |
| Mean age | 56.4 | 54.2 |
| 0-4 | 1 (1.3%) | 1.6 (2.2%) |
| 5-9 | 2 (2.6%) | 0.9 (1.2%) |
| 10-14 | 0 (0%) | 1.9 (2.6%) |
| 15-19 | 4 (5.1%) | 3.5 (4.8%) |
| 20-24 | 8 (10.3%) | 5 (6.9%) |
| 25-29 | 1 (1.3%) | 3 (4.2%) |
| 30-34 | 5 (6.4%) | 3.4 (4.7%) |
| 35-39 | 2 (2.6%) | 2.4 (3.3%) |
| 40-44 | 5 (6.4%) | 3.4 (4.7%) |
| 45-49 | 5 (6.4%) | 3.8 (5.3%) |
| 50-54 | 1 (1.3%) | 4.2 (5.8%) |
| 55-59 | 5 (6.4%) | 3.9 (5.4%) |
| 60-64 | 6 (7.7%) | 6.4 (8.9%) |
| 65-69 | 1 (1.3%) | 4.5 (6.2%) |
| 70-74 | 4 (5.1%) | 5.5 (7.6%) |
| 75-79 | 6 (7.7%) | 4.1 (5.7%) |
| 80-84 | 7 (9%) | 6.4 (8.9%) |
| 85+ | 15 (19.2%) | 8.3 (11.5%) |
| **Injury Severity Score** | | |
| Mean ISS | 20.8 | 18.4 |
| ISS < 13 | 5 (6.5%) | 7.3 (10.1%) |
| ISS 13-15 | 17 (22.1%) | 19.8 (27.5%) |
| ISS 16-24 | 33 (42.9%) | 29.7 (41.2%) |
| ISS 25-40 | 18 (23.4%) | 14.1 (19.6%) |
| ISS 41-75 | 4 (5.2%) | 1.2 (1.7%) |
| **Mechanism of injury** | | |
| Assault | 4 (5.1%) | 3.6 (5%) |
| Falls | 42 (53.8%) | 28.7 (39.8%) |
| Falls >= 65 years (% of all MOIs for >= 65 years) | 25 (75.8%) | 19.1 (66.3%) |
| Road trauma | 18 (23.1%) | 22.5 (31.2%) |
| Other transport incident | 8 (10.3%) | 9.9 (13.7%) |
| All other injuries | 6 (7.7%) | 7.5 (10.4%) |
| **Injury type** | | |
| Blunt | 75 (96.2%) | 68.3 (94.6%) |
| Penetrating | 1 (1.3%) | 3 (4.2%) |
| Unknown | 2 (2.6%) | 0.9 (1.2%) |
| **Admission type** | | |
| Direct admission | 59 (75.6%) | 61.4 (85%) |
| Transfer in | 17 (21.8%) | 9.7 (13.4%) |
| Unknown | 2 (2.6%) | 1.1 (1.5%) |
| **Arrival modes** | | |
| Ambulance | 68 (87.2%) | 54 (74.8%) |
| Helicopter | 0 (0%) | 4.4 (6.1%) |
| Other (private vehicle, fixed wing, unknown) | 10 (12.8%) | 13.8 (19.1%) |

| Description | Facility | Peer |
|---|---|---|
| **Revised Trauma Score** | | |
| Mean - overall | 7.4 | 7.6 |
| ISS < 13 | 6.7 | 7.4 |
| ISS 13-15 | 7.8 | 7.8 |
| ISS 16-24 | 7.7 | 7.7 |
| ISS 25-40 | 7.2 | 7.1 |
| ISS 41-75 | 4.9 | 5.2 |
| **Hospital length of stay** | | |
| Total bed days | 742 | 532 |
| Mean overall | 9.5 | 7.4 |
| ISS < 13 | 27 | 9.6 |
| ISS 13-15 | 8.4 | 6.7 |
| ISS 16-24 | 8.9 | 8.6 |
| ISS 25-40 | 8.9 | 5.1 |
| ISS 41-75 | 2 | 2.7 |
| **ICU length of stay** | | |
| ICU total bed days (number of ICU admissions) | 87 (19) | 63 (20) |
| Mean overall | 4.6 | 3.1 |
| ISS < 13 | 9.6 | 3.6 |
| ISS 13-15 | 1 | 2.8 |
| ISS 16-24 | 3.4 | 3 |
| ISS 25-40 | 2.4 | 2.8 |
| ISS 41-75 | 4 | 2.4 |
| **Hospital ventilation days** | | |
| Total ventilation bed days (number of ventilated cases) | 4 (1) | 15 (6) |
| Mean overall | 4 | 2.3 |
| ISS < 13 | 0 | 3.1 |
| ISS 13-15 | 0 | 1.7 |
| ISS 16-24 | 4 | 2.9 |
| ISS 25-40 | 0 | 1.7 |
| ISS 41-75 | 0 | 1.5 |

## Appendix 5: Calculation of the Injury Severity Score

An ISS is calculated for each patient based on the AIS injury severity classification of their specific injuries. The ISS value ranges from 1 to 75 and is calculated as:

***ISS = A2 + B2 + C2***

Where A, B and C are the highest AIS severity codes in each of the (up to) three most severely injured ISS body regions.

The six ISS body regions are:

- head or neck
- face
- chest
- abdominal or pelvic contents
- extremities or pelvic girdle
- external.

The following example shows how an ISS is calculated from a set of injuries.

**Table 46: ISS calculation example**

| ISS body region | Injury | AIS severity code | Include in ISS calculation? |
|---|---|---|---|
| Head or neck | Small subdural haematoma | AIS-4 | Yes |
| Chest | Bilateral lung contusion | AIS-4 | No |
| Chest | Bilateral flail chest | AIS-5 | Yes |
| Abdominal or pelvic contents | Superficial spleen laceration | AIS-2 | Yes |
| Extremities or pelvic girdle | Left phalange (little toe) fracture | AIS-1 | No |

Based on the above injuries, the ISS is calculated as:

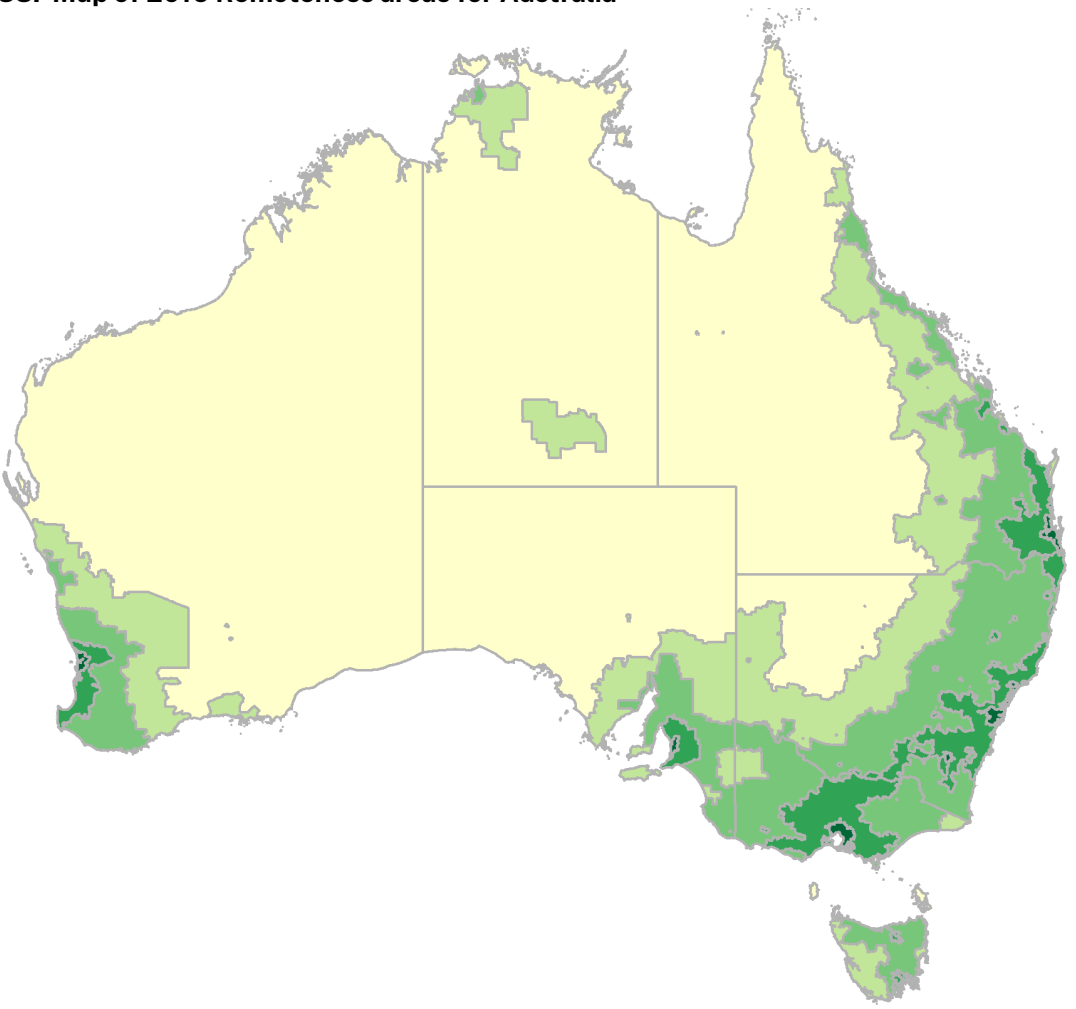
$$ISS = 4^2 + 5^2 + 2^2$$

***ISS = 45 (critical injury)***

## Appendix 6: Australian Statistical Geography Standard Remoteness Areas

The Australian Statistical Geography Standard (ASGS) Remoteness Areas (RA) is based on the Accessibility and Remoteness Index of Australia which defines locations in terms of remoteness, i.e. the physical distance of a location from the nearest urban centre (access to goods and services) based on population size (Figure **38**).

**Figure 38: Map of 2016 Remoteness areas for Australia**



Remoteness Areas: Major Cities of Australia; Inner Regional Australia; Outer Regional Australia; Remote Australia; Very Remote Australia

Charts based on data available at ABS, http://www.abs.gov.au/websitedbs/d3310114.nsf/home/remoteness+structure

For further information on ASGS-RA, please see The Australian Statistical Geography Standard (ASGS) Remoteness Structure on the Australian Bureau of Statistics website. Catalogue number 1270.0.55.005 Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2016

# Glossary

**Abbreviated Injury Scale (AIS)** is an anatomically based, consensus-derived, global severity scoring system that classifies each injury by body region, according to its relative importance on a six-point ordinal scale. The AIS is the basis for the Injury Severity Score (ISS) calculation of the multiply injured patient.

**Age-specific rate** is an annualised rate given as per 100,000 persons, based on the estimated NSW population during the reporting period (end of December). Source: Australian Bureau of Statistics. National, state and territory population, Dec 2020. Available from: https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/dec-2020/31010do001_202012.xls

**Age-standardised rate** is an annualised rate given as per 100,000 persons, standardised to the Australian population at 30 June 2001. Source: Australian Bureau of Statistics. Standard Population for Use in Age-Standardisation Table. Australian Demographic Statistics, Mar 2013. Catalogue No. 3101. Canberra: ABS, Dec 2013.10

**Case fatality rate** is the proportion of deaths for a designated population expressed as a percentage. The NSW Trauma Minimum Data Set does not include all survivors with an ISS of less than or equal to 12. The case fatality rate in this report is only calculated on patients with an ISS of greater than 12 and will be expressed as 'case fatality rate for ISS >12'.

**Definitive care** is defined as the hospital providing the highest level of care to meet all the clinical needs of the patient. Many patients receive definitive care at regional trauma services, but a small number of patients are transferred to a major trauma service (higher level) for specialised care.

**Geriatric population** is defined as those aged 65 years or older.

**Location of injury** is defined as either metropolitan or rural based on the recorded postcode of injury. The process used to define the two categories is outlined in the Methodology section.

**Injury Severity Score (ISS)** assesses the combined effects of the multiply injured patient and is based on an anatomical injury severity classification, the AIS. The ISS is an internationally recognised scoring system which correlates with mortality, morbidity and other measures of severity. The ISS is calculated as the sum of the squares of the highest AIS code in each of the three most severely injured ISS body regions.

ISS body regions consist of six anatomical regions as defined in the AIS dictionary:

- head or neck
- face
- chest
- abdominal or pelvic contents
- extremities or pelvic girdle
- external.

**Isolated fractured neck of femur** is defined as the AIS codes 853161.3 and 853162.3 and where no other injury is recorded.

**Major trauma** is defined as all patients of any age, who were admitted to a designated NSW trauma service within seven days of sustaining an injury, and:

- had an ISS >12 (moderate to critically injured), or
- were admitted to an intensive care unit (irrespective of ISS) following injury or died in hospital (irrespective of ISS) following injury, except those with an isolated fractured neck of femur injury sustained from a fall from a standing height (<1m) and those aged 65 years or older who died with minor soft tissue injury only.

**Major trauma services** can provide the full spectrum of care for major and moderately injured patients, from initial resuscitation through to rehabilitation and discharge. There are currently seven adult and three paediatric designated major trauma services in NSW.

**Mechanism of injury** refers to the mechanisms whereby energy is transferred from the environment to the person.

**Minor soft tissue injury** is defined as a superficial injury including abrasions, contusions, and lacerations (AIS codes: 910000.1; 910200.1; 910400.1; 910600.1, 810099.1, 810202.1, 810402.1, 810600.1, 810602.1, 710099.1, 710202.1, 710402.1, 710600.1, 710602.1, 510099.1, 510202.1, 510402.1, 510600.1, 510602.1, 410099.1, 410202.1, 410402.1, 410600.1, 410602.1, 310099.1, 310202.1, 310402.1, 310600.1, 310602.1, 210099.1, 210202.1, 210402.1, 210600.1, 210602.1).

**Not further specified** is an injury descriptor used in AIS coding where detailed information is lacking, including injury type or severity. Other transport incident is defined as a patient involved in an accident involving a device designed primarily for, or being used at the time primarily for, conveying persons or goods from one place to another (ICD-10 codes: V00 – V99 inclusive) that did not meet place of occurrence road trauma criteria.

**Polytrauma** is defined as serious injury (AIS severity >2) in two or more ISS body regions.

**Regional trauma services** can provide all aspects of care to patients with minor to moderate trauma, and definitive care to a limited number of major trauma patients in collaboration with the major trauma service. A regional trauma service provides initial assessment, stabilisation, definitive care and initiates transfer to a major trauma service when a patient requires services not available at the regional trauma service. There are currently 10 designated regional trauma services in NSW.

**Road trauma** is defined as a patient involved in an accident involving a device designed primarily for, or being used at the time primarily for, conveying persons or goods from one place to another (ICD-10 codes: V00 – V89 inclusive) AND had a street, highway and other paved roadways as the place of occurrence of the external cause (ICD-10 codes: Y92.4 inclusive).

**Revised Trauma Score** is a physiological scoring system used for predicting death. It consists of the first set of vital signs data obtained on the patient after arrival at hospital including Glasgow Coma Scale, systolic blood pressure and respiratory rate. Values for the Revised Trauma Score are in the range 0 to 7.8408. The lower the score, the higher the likelihood of death.

**Standardised mortality ratio** is a ratio between the observed number of deaths in a study population and the number of deaths that would be expected, based on the age or ISS specific rates in a standard population and the age or ISS distribution of the study population.

**Traumatic death on arrival** is defined as a patient presenting to the emergency department with no recordable pulse or blood pressure (pulse rate = 0; systolic blood pressure = 0), no motor response elicited during the Glasgow Coma Scale (GCS) assessment (GCS motor score = 1), and the post emergency disposition recorded as 'died'.

# Abbreviations

| | |
|---|---|
| **AIS** | Abbreviated Injury Scale |
| **ASGS-RA** | Australian Statistical Geography Standard Remoteness Areas |
| **CCLHD** | Central Coast Local Health District |
| **DBP** | Diastolic blood pressure |
| **DOA** | Dead on arrival |
| **ED** | Emergency department |
| **FWLHD** | Far West Local Health District |
| **GCS** | Glasgow Coma Scale |
| **HNELHD** | Hunter New England Local Health District |
| **ICD** | International Classification of Diseases |
| **ICU** | Intensive care unit |
| **ISLHD** | Illawarra Shoalhaven Local Health District |
| **ISS** | Injury Severity Score |
| **ITIM** | NSW Institute of Trauma and Injury Management |
| **JH&FMHN** | Justice Health & Forensic Mental Health Service Network |
| **LOS** | Length of stay |
| **MLHD** | Murrumbidgee Local Health District |
| **MNCLHD** | Mid North Coast Local Health District |
| **NBMLHD** | Nepean Blue Mountains Local Health District |
| **NNSWLHD** | Northern New South Wales Local Health District |
| **NSLHD** | Northern Sydney Local Health District |
| **PH** | Pre-hospital |
| **REF** | Referral |
| **RTS** | Revised Trauma Score |
| **SaO2** | Arterial oxygen saturation |
| **SBP** | Systolic blood pressure |
| **SCHN** | Sydney Children's Hospitals Network |
| **SESLHD** | South Eastern Sydney Local Health District |
| **SLHD** | Sydney Local Health District |
| **SNSWLHD** | Southern New South Wales Local Health District |
| **SVHN** | St Vincent's Health Network |
| **SWSLHD** | South Western Sydney Local Health District |
| **WNSWLHD** | Western New South Wales Local Health District |
| **WSLHD** | Western Sydney Local Health District |

# Acknowledgements

The ITIM wishes to acknowledge the NSW Trauma Services for their contribution of data to the NSW Trauma Registry.

**ACI team**

- Hardeep Singh, Data Officer, NSW ITIM (Project lead)
- Emma Curtin, TORQUE Registry Support Nurse, NSW ITIM
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