Australian Government
Australian Institute of Health and Welfare

Falls in older Australians 2019–20: hospitalisations and deaths among people aged 65 and over

Web report | Last updated: **07 Apr 2022** | Topic: Injury

About

Falls are the most common cause of hospitalised injury and injury death among people aged 65 and over in Australia. This web report presents data on hospitalisations and deaths due to falls for 2019–20, describing the main types of falls, variation among specific populations, and the impact of the COVID-19 pandemic on the nature and prevalence of falls.

Cat. no: INJCAT 226

- Fact sheet
- Data

Findings from this report:

- Falls on the same level were the most common type of fall
- Fractures were the most common type of injury
- 2 in 3 falls hospitalisations were for females
- Over half of hospitalised fall injuries occurred in the home

Summary

In 2019–20, falls among people aged 65 and over resulted in:

133,000 hospitalisations
3,228 per 100,000 population
5,000 deaths
122 per 100,000 population
2 in 3 falls hospitalisations were for females

Rates are crude-per 100,000 population.

Falls is the leading cause of hospitalised injuries and injury deaths among older Australians, making up 77% of all injury hospitalisations and 71% of injury deaths in this age group.

Almost two-thirds (63%) of hospitalisations due to falls were for females, and females have a higher age-standardised rate of falls injury hospitalisation than males.

Over half (53%) of falls deaths were for females, however males had a higher age-standardised rate of deaths due to falls.

One in 2 falls that resulted in hospitalisation occurred in the home and 1 in 5 occurred in a residential aged care facility.

Most hospitalised falls occurred on the same level (60%), such as a slip, trip, or stumble.

Half of hospitalised falls involved a fracture (50%); open wounds were the next most common fall-related injury (14%).

Australians aged 65 and over were 8 times as likely to be hospitalised and 68 times as likely to die from a fall than those aged 15–64.

Older Australians hospitalised due to a fall had an average length of stay in hospital of 9.5 days.

In April 2020, among people aged 65 and over, there were 25% fewer falls hospitalisations than the same month the previous year. By June 2020, with the easing of COVID-19-related restrictions, fall hospital admissions had returned to pre-pandemic levels.

Scope

This report presents information on the 133,000 injury cases due to falls that resulted in hospitalisation and the 5,000 cases due to falls that resulted in death among those aged 65 and over during the period 1 July 2019 to 30 June 2020. Deaths that occurred during hospitalisation may be counted in both the hospitalisations and deaths data.

Hospitalisations data include cases where a person was admitted to hospital with a principal diagnosis of injury and where the leading cause of injury was a fall. Cases where a patient was transferred between hospitals or where a patient's care type changed while in hospital were only counted once.

While multiple external causes may be recorded for a hospitalisation, the records included in this report are generally those for which a fall was the first-listed external cause code in the data record.

This report does not include information on falls that did not result in hospitalisation or death. For each fall hospitalisation or death there are many more cases that are treated by emergency departments, general practitioners, allied health professionals or outpatient clinics.

In addition to the 132,933 hospitalised falls in-scope for this report (where *Fall* was the first-listed external cause in the hospital record), there were 837 other records where *Fall* was listed as an additional external cause of injury but was not the first-listed external cause, which is usually the primary cause of injury. These were not included in the scope of this report.

For more detailed information on the methodology used in this report, see Technical notes.

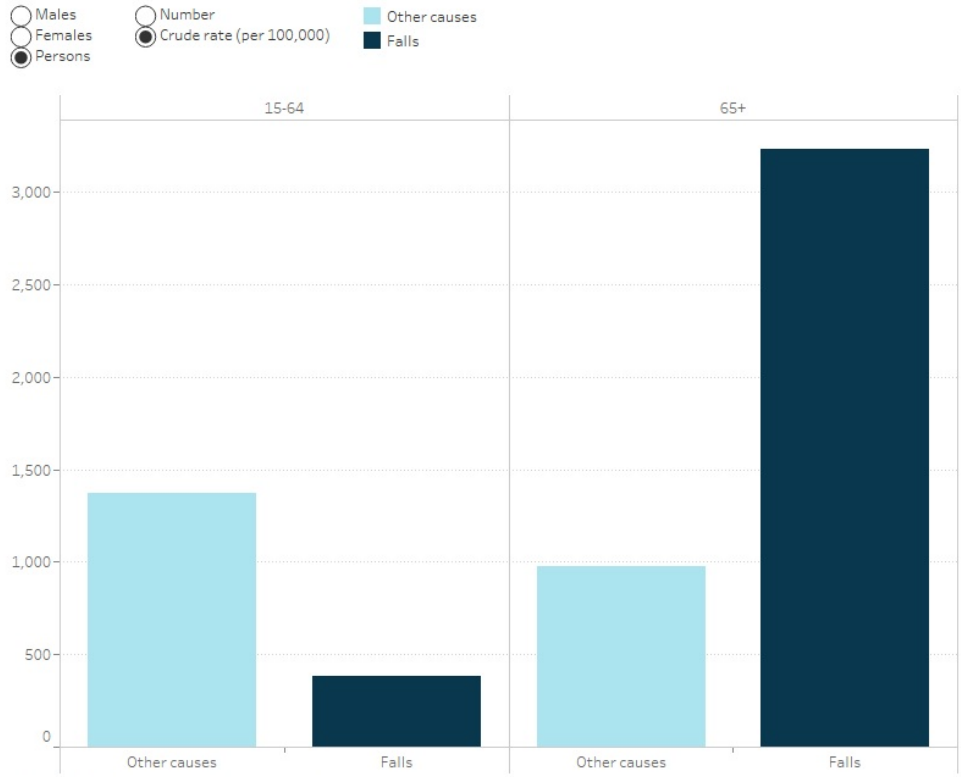
Falls compared to other causes of injury

Compared to other types of serious injury for older people, falls are by far the most common (Figure 1). Falls account for 77% of injury hospitalisations among those aged 65 and over and outnumber all other injury causes combined by a ratio of 3:1.

Australians aged 65 and over were 8 times as likely to be hospitalised and 68 times as likely to die from a fall than those aged 15–64 (Figure 1).

Figure 1: Number and rate of hospitalised injuries and deaths by falls and other causes of injury combined, by age group and sex, 2019–20

Bar chart showing that people aged 65 and older have a much higher rate of hospitalised falls than younger adults. The deaths in this bar chart are highest for falls in the 65 and over age group.



Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au

For more detailed data, see Data tables C1–4.

Impact of falls among older Australians

Older people are at a higher risk for hospitalised falls due to lower bone density, reduced muscle tone and conditions affecting balance and eyesight. These factors can also impact the ability to recover from a fall and quality of life after a fall (AIHW 2020).

Two ways of measuring the impact of injuries from falls are burden of disease estimates and health care expenditure.

Burden of disease estimates

Burden of disease is a measure of the years of healthy life lost from living with or dying from disease or injury for all ages. The most recent data available for all ages are from 2018 (AIHW 2021a, AIHW 2021b), when falls accounted for an estimated:

- 37,704 years of life lost (YLL) among the 4,092 people who died due to a fall, equivalent to 1.2 YLL per 1,000 population
- 37,215 years lived with a disability (YLD) for those who acquired a disability due to a fall, equivalent to 1.3 YLD per 1,000 population
- 74,920 disability-adjusted life years (DALYs) – the total fatal (YLL) and non-fatal (YLD) burden of disease due to falls.

Falls is among the leading causes of burden of disease and injury in Australia, ranking 17th for fatal burden (YLL), 24th for disability (YLD) and 18th for overall burden (DALY) (2018 data). The overall burden of falls in terms of DALYs has risen 17% since 2003.

Older Australians

Among those aged 65 years and over in 2018, falls accounted for an estimated (AIHW 2021a):

- 28,865 YLL among the 3,851 people who died due to a fall, equivalent to 150 YLL per 1,000 population
- 19,170 YLD for those who acquired a disability due to a fall, equivalent to 60 YLD per 1,000 population
- 48,034 DALYs, equivalent to 210 DALYs per 1,000 population.

From 2003 to 2018, there has been an increase in DALYs (AIHW 2021a):

- of 1.6 DALYs per 1,000 for those aged 65–74 years
- 2.9 DALYs per 1,000 for those aged 95+ years.

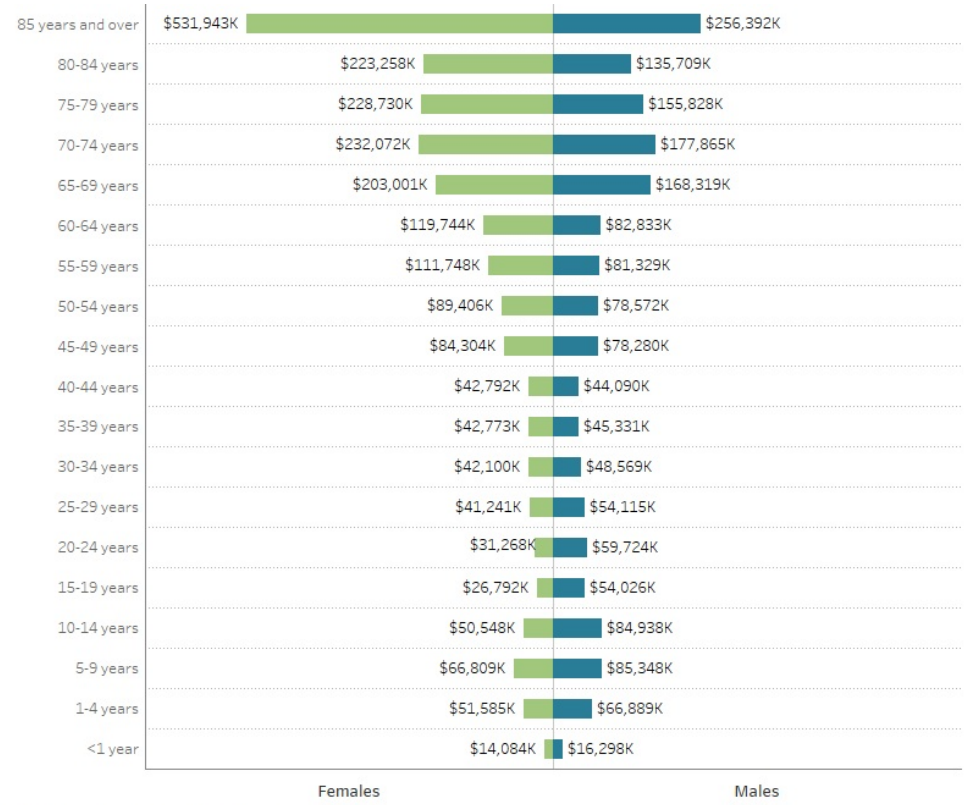
The AIHW estimates that over a third of DALYs due to falls were linked to particular risk factors that can be mitigated against. Among people aged 65 and over, low bone mineral density was the highest risk factor for falls, estimated to account for 23% (17,532) of DALYs due to falls, followed by alcohol use (4.5%; 3,386) (AIHW 2021c).

Health care expenditure

In 2018–19, injury was the fourth highest area of health care spending in Australia at $10.3 billion (7.7% of spending), after musculoskeletal disorders, cardiovascular diseases and cancer. Forty-one per cent ($4.3 billion) of this was spent on treating injuries due falls, equivalent to $153 per capita (AIHW 2021d), with the amount spent increasing substantially in older age (Figure 2). Spending includes the combined cost of hospital, primary health care (for example general practitioners, allied health, and pharmaceuticals) and referred medical services (for example medical imaging and pathology) where data are available (Figure 2).

Figure 2: Expenditure on injuries due to falls by age group and sex, 2018-19

Stacked bar chart showing that the cost per person of falls increases in older age groups, with a marked increase in those aged 80 and over. Most expenditure on falls occurs in hospitals, with care provided in non-hospital healthcare settings and on pharmaceuticals costing less.



Source: AIHW Disease Expenditure Database.
http://www.aihw.gov.au

Demographic variation

Sex and age

In 2019–20, among Australians aged 65 and over (Figure 3):

- 63% of hospitalisations due to falls were for females (84,400 cases) and 37% were for males (48,600 cases)
- the age-standardised rate of falls injury hospitalisations for females was 3,571 cases per 100,000, compared with 2,629 per 100,000 males
- 53% of deaths due to falls were for females (2,700 deaths) and 47% were for males (2,300 deaths)
- the age-standardised rate of falls injury deaths was higher for males (128 per 100,000), compared to females (103 per 100,000).

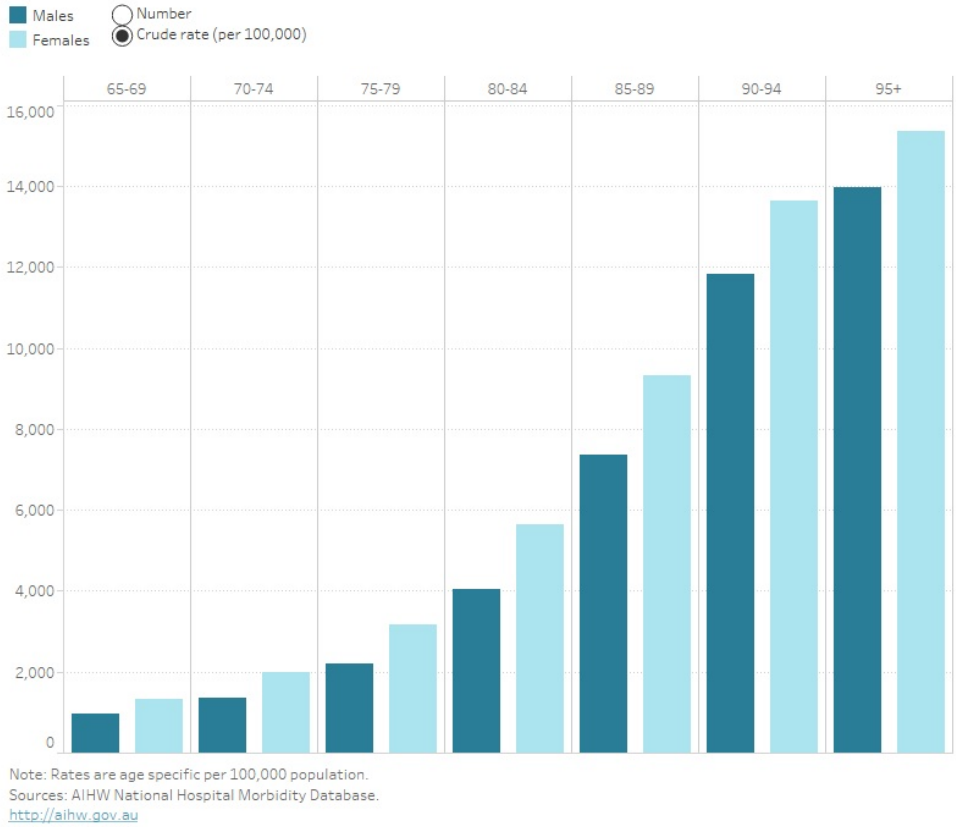
While the rates of falls hospitalisations and falls deaths is higher for females aged 65 and over, this is a reversal of the pattern in people aged under 65 (Figures 1 and 3). Reduced bone density in older women is a major contributing factor to this (AIHW 2020).

In 2019–20, among Australians aged 65 and over:

- 41% of hospitalisations for falls (54,600 hospitalisations) were for people aged 85 and over
- 65% of falls deaths (3,300 deaths) were for people aged 85 and over.

Figure 3: Falls injury hospitalisations and deaths, by age group and sex, 65 years and over, 2019-20

Column chart showing that across all 5-year age groups among older Australians, females had higher numbers and rates of fall related hospitalisations than males. While the rate of fall hospitalisations and deaths increased with age, those aged 85–89 had the highest number of hospitalisations compared to other age groups.



For more detailed data, see Data tables A1–3 and B1–3.

Aboriginal and Torres Strait Islander people

In 2019–20, among Aboriginal and Torres Strait Islander people aged 65 and over:

- there were 1,200 hospitalisations and 32 deaths due to unintentional falls (Tables 1 and 2)
- the age standardised rate of falls was slightly higher for females than males.

Table 1: Number and rate of falls injury hospitalisations by sex, Indigenous Australians aged 65 and over, 2019–20

	Males	Females	Persons

Number	525	695	1,220
Crude rate (per 100,000)	2,704	2,989	2,859
Age-standardised rate (per 100,000)	3,455	3,708	3,602

Source: AIHW National Hospital Morbidity Database.

Table 2: Number and rate of falls injury deaths by sex, Indigenous Australians aged 65 and over, 2019–20

	Males	**Females**	**Persons**
Number	12	20	32
Crude rate (per 100,000)	72	98	86
Age-standardised rate (per 100,000)	n.p.	146	141

n.p. not publishable because of volatility of age-standardised rates based on small numbers.

Note: Deaths data only includes data for New South Wales, Queensland, Western Australia, South Australia, and the Northern Territory.

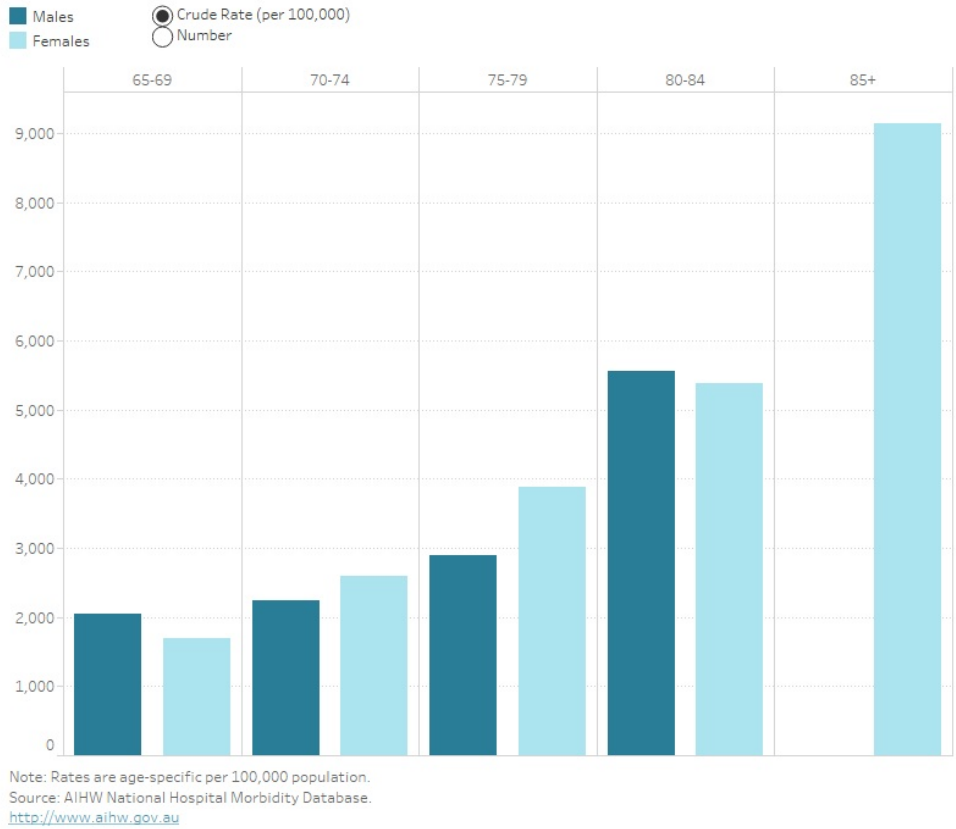
Source: AIHW National Mortality Database.

Among Indigenous Australians (in all age groups except 65–69), females had higher numbers of hospitalised falls than males. Crude rates increased with age for both sexes, but for some 5-year age groups, male rates were higher than female rates (Figure 4).

Deaths data are not presented in Figure 4 because of low numbers.

Figure 4: Falls injury hospitalisations in Indigenous Australians, by age group and sex, 2019-20

Column chart showing that the rate of hospitalised falls among older Indigenous males and females increases with age. Crude rates increased with age for both sexes, but for some 5-year age groups, male rates were higher than female rates.



For more detailed data, see Data tables A4–6 and B4–6.

Indigenous and non-Indigenous Australians

After adjusting for differences in age structure between the populations, Indigenous Australians were 1.2 times as likely to be hospitalised due to a fall than non-Indigenous Australians (Table 3). This pattern continued for deaths due to falls, where Indigenous Australians were 1.3 times as likely to die from a fall compared to Non-Indigenous Australians, although readers are advised to use these data with caution due to low numbers (Table 4).

Table 3: Age-standardised rates (per 100,000) of falls injury hospitalisations by Indigenous status and sex, 65 years and over, 2019–20

	Males	Females	Persons
Indigenous Australians	3,455	3,708	3,602
Non-Indigenous Australians	2,591	3,524	3,103

Notes

1. Population data for rates by Indigenous status are produced using a slightly different method to other rates. See Technical notes for more details.
2. 'Non-Indigenous Australians' includes cases where Indigenous status is missing or not stated.

Source: AIHW National Hospital Morbidity Database.

Table 4: Age-standardised rates (per 100,000) of falls injury deaths by Indigenous status and sex, 65 years and over, 2019–20

	Males	Females	Persons
Indigenous Australians	n.p.	146	141
Non-Indigenous Australians	119	97	107

n.p. not publishable because of volatility of age-standardised rates based on small numbers.

Notes

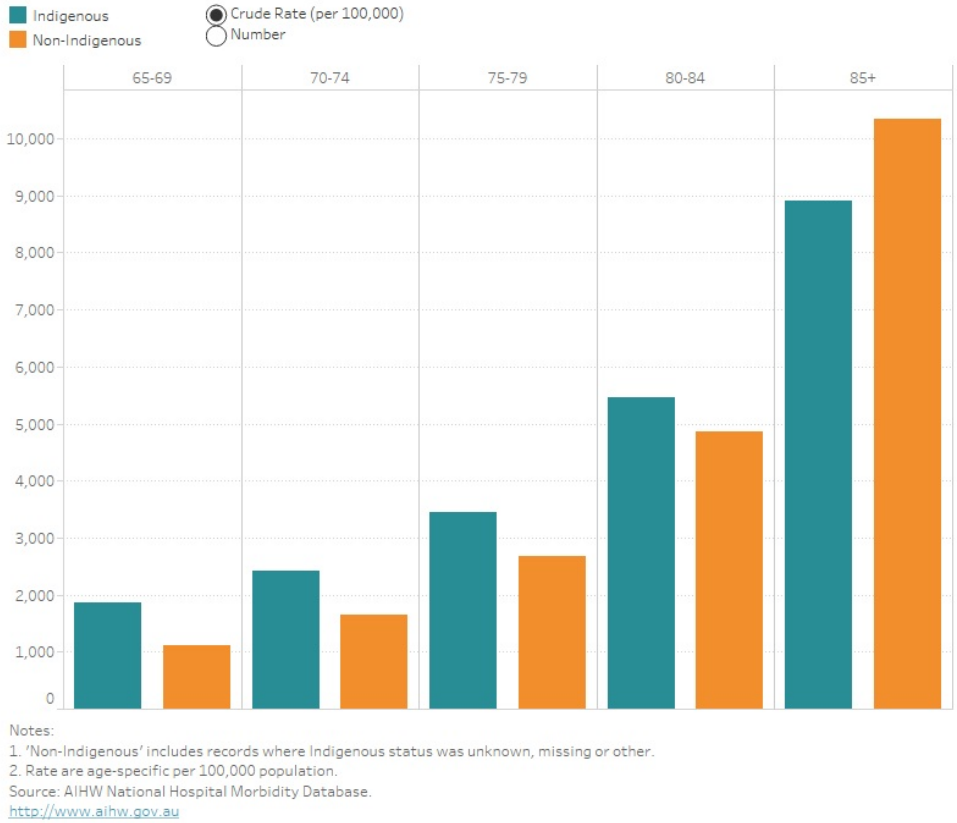
1. Population data for rates by Indigenous status are produced using a slightly different method to other rates. See Technical notes for more details.
2. 'Non-Indigenous Australians' includes cases where Indigenous status is missing or not stated.
3. Deaths data only includes data for New South Wales, Queensland, Western Australia, South Australia, and the Northern Territory.

Source: AIHW National Mortality Database.

The age-specific rate of falls hospitalisations was highest among the 85-and-over age group for both male and female, Indigenous and non-Indigenous Australians (Figure 5).

Figure 5: Falls injury hospitalisations by Indigenous status, by age group, 65 years and over, 2019-20

Column graph showing Indigenous Australians had higher rates of hospitalised falls than non-Indigenous Australians for all age groups except for the 85+ age group. The same trend occurred for the crude rate for deaths.



For more detailed data, see Data tables A4-6 and B4-6.

Remoteness

Older people living in *Major Cities* and *Very Remote* areas had the highest age-standardised rates of hospitalisations for injuries from falls (about 3,300 and 3,000 cases per 100,000 respectively) while the lowest rate was for those living in *Inner regional* areas (about 2,700) (Table 5 and Figure 6). Fall hospitalisation rates have an atypical pattern by remoteness areas compared with most other causes of injury, which generally show that rates of injury rise with increasing remoteness (AIHW 2021e).

Deaths due to falls by remoteness also show a different pattern to other causes of injury. In 2019–20, people living in *Inner Regional* areas had the highest rates (AIHW 2021e) (Table 5 and Figure 6).

Table 5: Age-standardised rates of falls injury hospitalisations and deaths by remoteness, 65 years and over, 2019–20

Hospitalisations (per 100,000)	
Major cities	3,308
Inner regional	2,723
Outer regional	2,795
Remote	2,918
Very remote	2,989
Deaths (per 100,000)	
Major cities	110
Inner regional	127
Outer regional	114
Remote and very remote	119

Notes

1. This is the age standardised rate per 100,000 people aged 65 and over in the estimated resident population of Australia, by remoteness areas.
2. *Remote* and *Very remote* categories are combined for deaths due to low numbers.

Source: AIHW National Hospital Morbidity Database; AIHW National Mortality Database.

Compared to those aged 15–64, people aged 65 and over:

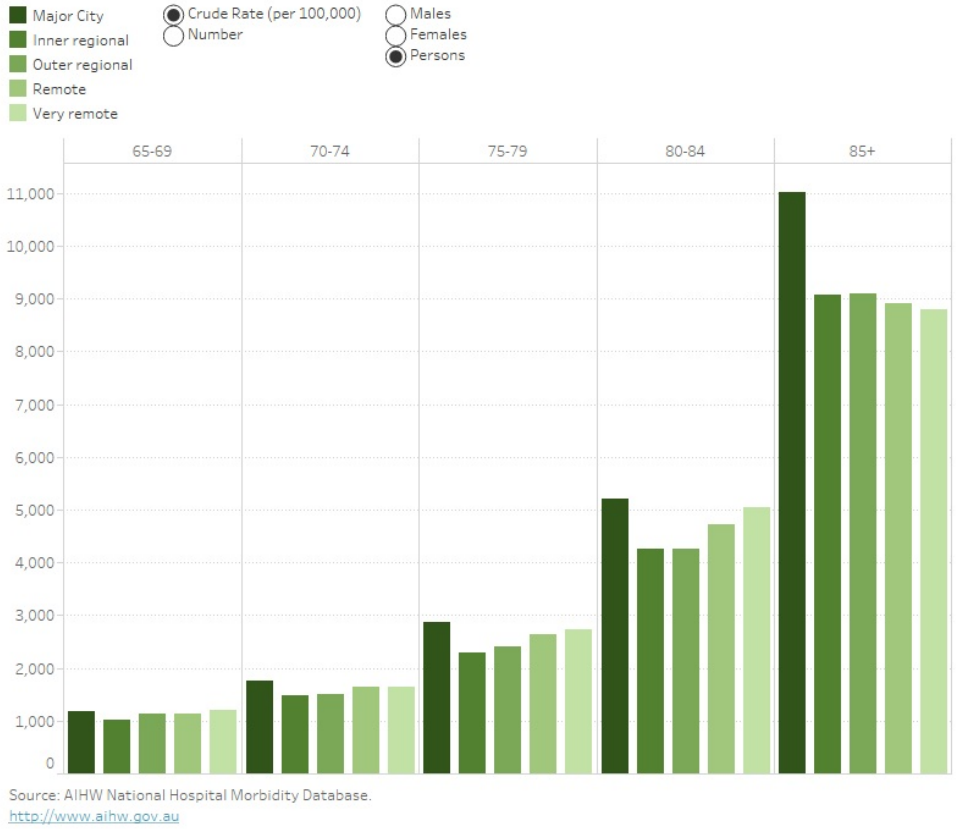
- living in *Major cities* were 9.8 times as likely to be hospitalised due to a fall
- living in *Very Remote* areas were 4.5 times as likely to be hospitalised due to a fall.

Among people aged 85 years and over:

- those living in *Major cities* were 9.4 times as likely to be hospitalised due to a fall than those aged 65–69
- those living in *Remote* areas had 7.9 times as likely to be hospitalised due to a fall than those aged 65–69.

Figure 6: Falls injury hospitalisations and deaths by remoteness, by age group and sex, 65 years and over, 2019-20

Column chart showing people living in *Major Cities* had the highest rate of fall hospitalisations across all ages while the lowest rate was for people living in *Inner regional* areas. People living in *Inner Regional* areas were more likely to die due to a fall than people living in *Very remote* areas.



For information on how statistics by remoteness are calculated, see Technical notes.

For more detailed data, see Data tables A7-9, B7-9 and C7-8.

Socioeconomic position

Table 6 shows the number of older Australians hospitalised for a fall by the socioeconomic position of the area they live in. This approach divides Australia into five socioeconomic groups, which each comprise 20% of Australia's areas, ranging from 1 – the 20% of areas with least disadvantage to 5 – the 20% of areas with the most disadvantage.

In general, the rate of fall hospitalisations among Australians aged 65 and over was higher for people living in areas of least socioeconomic disadvantage and lower for those living in areas of most socioeconomic disadvantage (Table 6). The highest rate was for those living in the second-least disadvantaged areas, who were 1.2 times as likely to be hospitalised due to a fall than those living in the most disadvantaged areas.

The rate of fall deaths was highest for those living in the second-most disadvantaged areas, who were 1.2 times likely to die from a fall compared to those living in the least disadvantaged areas. This trend varies from hospitalisations (Table 6).

Table 6: Age-standardised rates (per 100,000) of falls injury hospitalisations and deaths by socioeconomic position, 65 years and over, 2019-20

	Hospitalisations (per 100,000)	Deaths (per 100,000)
1 - Most disadvantaged	2,810	114
2	3,164	125
3	3,361	117
4	3,440	112
5 - Least disadvantaged	3,366	100

Source: AIHW National Hospital Morbidity Database.

Note: This is the age standardised rate per 100,000 people aged 65 and over in the estimated resident population of Australia, by SEIFA categories.

For information on how statistics by socio-economic position are calculated, see Technical notes.

For more detailed data, see Data tables A10-12 and B10-12.

Which types of falls resulted in hospitalisation and death?

Hospitalisations

In 2019–20, among Australians aged 65 and over hospitalised for a fall:

- 3 in 5 (60%, 80,100) fell on a single-level surface (including a fall on the same level from slipping, tripping, and stumbling and other types of falls on the same level)
- 7.3% (9,700) had a fall involving furniture (including beds, chairs and other types of furniture)
- 7.2% (9,600) fell from one level to another (fall on and from stairs or steps and other fall from one level to another)
- 22% (28,600) of hospitalised falls were of unspecified type (Table 7).

Table 7: Types of fall resulting in hospitalisation, 65 years and over, 2019–20

Type of fall	Number	%	Crude rate (per 100,000)
Fall on same level from slipping, tripping, and stumbling (W01)	46,162	35	1,121
Other fall on same level (W18)	33,630	25	817
All falls on same level (W00, W01, W03 and W18)	*80,094*	*60*	*1,945*
Fall involving bed (W06)	5,905	4.4	143
Fall involving chair (W07)	3,632	2.7	88
Fall involving other furniture (W08)	138	0.1	3.4
Fall involving furniture (including bed, chair and other) (W06–08)	*9,675*	*7.3*	*235*
Fall involving wheelchair (W05)	949	0.7	23
Fall on and from stairs and steps (W10)	7,832	5.9	190
Other fall from one level to another (W17)	1,738	1.3	42
All falls from one level to another (W10 and W17)	*9,570*	*7.2*	*232*
Fall on and from ladder (W11)	2,420	1.8	59
Fall involving ice-skates, skis, roller-skates, skateboards, scooters, and other pedestrian conveyances (W02)	657	0.5	16
Fall from, out of or through building or structure (W13)	659	0.5	16
Other specified types of falls (W04, W09, W12, W14–16)	303	0.2	7.4
Unspecified fall (W19)	28,606	22	695
Total	**132,933**	**100**	**3,228**

Notes
1. Percentages may not tally to 100 due to rounding.
2. Codes in brackets refer to the ICD–10 (11th edition) external cause codes (ACCD 2017).

Source: AIHW National Hospital Morbidity Database.

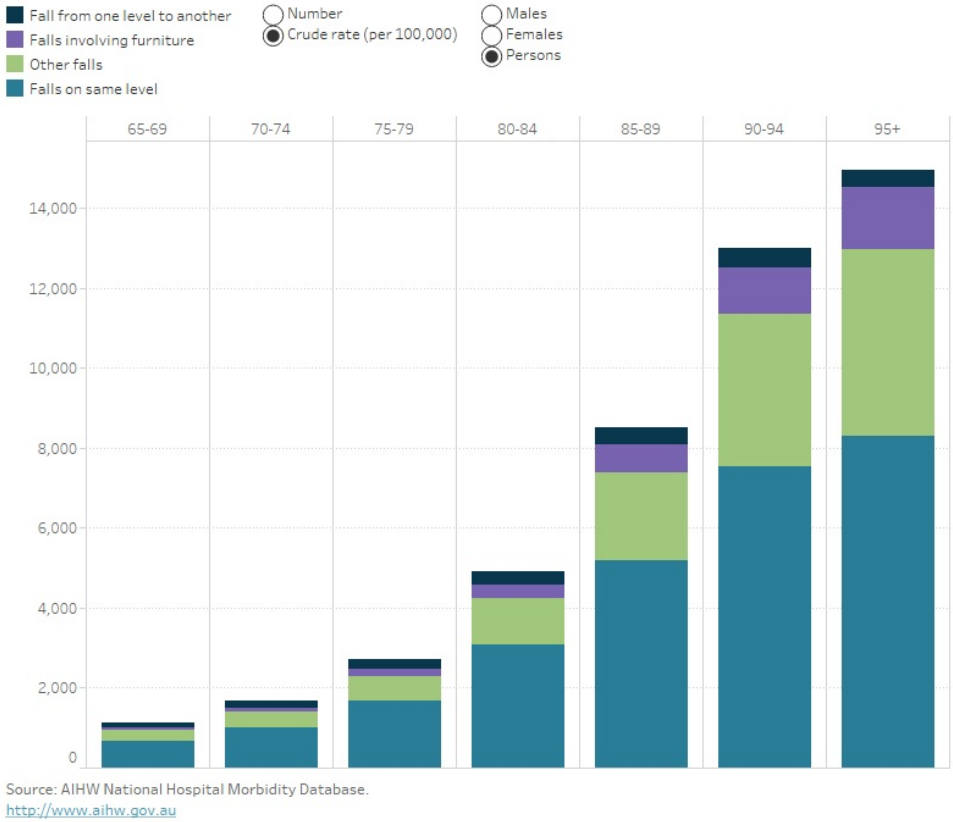
Types of falls with notable differences in rates between younger and older people were:

- falls on the same level – those aged 65 and over were 11 times as likely to be hospitalised for this type of fall compared to those aged 15–64
- fall involving ice-skates, skis, roller-skates, skateboards, scooters, and other pedestrian conveyances – those aged 15–64 were 1.4 times as likely to be hospitalised for this type of fall compared to those aged 65 and over. This was one of the few types of falls with higher rates in a younger age group.

The type of fall with the most notable difference between male and female age-standardised hospitalisation rates was falls involving ladders (95.8 cases per 100,000 males; 26.4 cases per 100,000 females) (Figure 7).

Figure 7: Selected types of falls resulting in hospitalisation, by age group and sex, 65 years and over, 2019-20

Stacked column graph showing that falls on the same level were the most common type of fall leading to hospitalisation, whereas other falls were the most common fall type leading to death in all ages.



For more detailed data, see Data tables A13–15 and C9–10.

Deaths

There is poor coverage of the fall type in the National Mortality Database: 89% of deaths due to falls are classified as 'unspecified' or 'other'. Therefore, data presented here on specific types of falls that resulted in death are likely to be undercounts.

Among the 561 falls resulting in death where type-of-fall data was recorded in the data source, 6.5% occurred on a single-level surface (for example, by slipping or due to a collision) (Table 8). Among falls resulting in death, 1.4% involved stairs or steps (Table 8).

Table 8: Types of falls resulting in death, 65 years and over, 2019–20

Type of fall	Number	%	Crude rate (per 100,000)
Slipping, tripping, or stumbling on same level (W01)	288	5.7	7.0
Other falls on same level (W03 and W18)	38	0.8	0.9
Falls on same level (W01, W03, W18)	*326*	*6.5*	*7.9*
Fall on or from stairs or steps (W10)	54	1.1	1.3
Other fall from one level to another (W17)	16	0.3	0.4
Falls from one level to another (W10, W17)	*70*	*1.4*	*1.7*
Fall while being carried or supported by other persons (W04)	4	0.1	0.1
Fall involving bed, chair, or other furniture (W06-W08)	108	2.1	2.6
Fall involving wheelchair (W05)	11	0.2	0.3
Fall on and from ladder, building, tree, cliff or into water (W13-W16)	42	0.8	1.0
Unspecified fall (W19)	2,897	57.5	70
Other fall excluded from above (X59)	1,576	31.3	38
Total	**5,034**	**100**	**122**

Notes

1. Percentages may not total 100 due to rounding.
2. Codes in brackets refer to the ICD–10 (2019 version) codes (WHO 2019).

Source: AIHW National Mortality Database.

For more detailed data, see Data tables B13–14.

Where did falls occur?

Most hospitalised falls among people aged 65 and over occurred at home (53%), with residential aged care facilities being the next most reported fall location (21%) (Table 9). Note that these data are likely to be underestimates, as 14% of hospitalisations recorded an unspecified or unknown place of occurrence.

Deaths data are not presented by fall location due to the large number of records with missing or unspecified location data.

Table 9: Hospitalised falls by fall location, 65 years and over, 2019–20

Place of occurrence	Number	%	Crude rate (per 100,000)
Outdoor areas (Y92.01)	11,466	8.7	278
Bathroom (Y92.03)	8,560	6.4	208
Indoor living areas NEC (Y92.07)	7,161	5.4	174
Bedroom (Y92.05)	6,989	5.3	170
Kitchen (Y92.04)	5,044	3.8	123
Driveway to home (Y92.00)	1,727	1.3	42
Garage (Y92.02)	1,028	0.8	25
Laundry (Y92.06)	447	0.3	11
Other and unspecified place in the home (Y92.09)	27,446	21	667
Home (Y92.0)	*69,868*	*53*	*1,697*
Aged care facilities (Y92.14)	27,947	21	679
Other and unspecified residential institutions (Y92.10–Y92.13; Y92.15–19)	292	0.2	7.1
Residential institutions (Y92.1)	*28,239*	*21*	*686*
Street or highway (Y92.4)	5,479	4.1	133
Trade or service area (Y92.5)	4,279	3.2	104
Other specified area (Y92.8)	3,027	2.3	74
Health service facility areas (Y92.23–24)	1,999	1.5	49
Sports or athletics area (Y92.3)	647	0.5	16
Industrial or construction area (Y92.6)	106	0.1	2.6
School (Y92.21)	52	0.0	1.3
Unspecified or Unknown (Y92.9)	19,237	14	467
Total	**132,933**	**100**	**3,228**

NEC Not elsewhere classified.

Notes

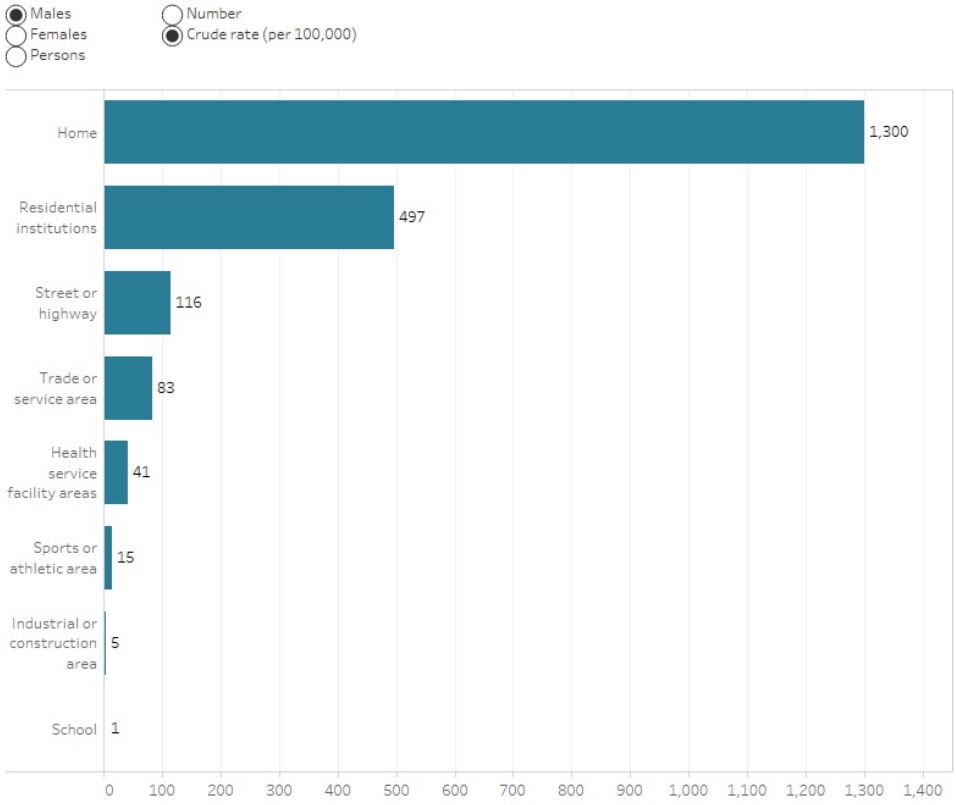
1. Percentages may not tally to 100 due to rounding.
2. Codes in brackets refer to the ICD–10-AM (11th edition) external cause codes (ACCD 2017).

Source: AIHW National Hospital Morbidity Database.

For more detailed data, see Data tables A16–21.

Figure 8: Top specified locations for falls hospitalisations by sex, 65 years and over, 2019–20

Bar graph showing falls in the home followed by residential institutions had the highest number and rate of fall hospitalisations. Residential institutions had the highest number and rate of fall deaths for both males and females.



Notes:
1. 'Persons' includes records where sex was intersex, indeterminate or missing. Therefore, 'Persons' may be greater than the sum of 'Males' and 'Females'.
2. Rates are age-specific per 100,000 population.
3. 'Other specified' and 'Unspecified and unknown' categories not included.
Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au

For more detailed data, see Data tables A16–17.

Falls in the home

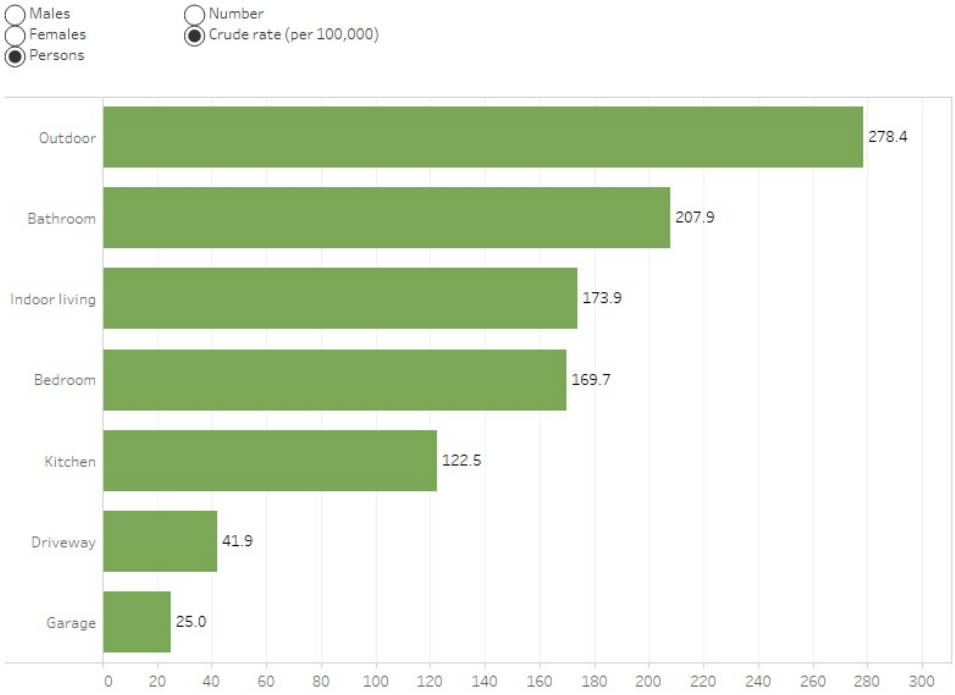
In 2019–20, among the almost 70,000 older Australians whose hospitalisation was caused by a fall in the home, outdoor areas (11,500) and bathrooms (8,600) were the most common locations of falls.

Differences between the sexes in hospitalisations caused by a fall in the home (Figure 9) included that:

- females were 2.3 times as likely to be hospitalised due to a fall in the kitchen than males (crude rate of 166 and 73 cases per 100,000, respectively)
- males were 1.5 times as likely to be hospitalised due to a fall in the garage than females (crude rate of 31 and 20 cases per 100,000, respectively).

Figure 9: Hospitalised falls at home by place of occurrence, 65 years and over, 2019-2020

Bar graph showing that outdoor areas followed by bathroom and indoor living areas were the most common hospitalised fall location at home for both males and females.



Notes:
1. 'Persons' includes records where sex was intersex, indeterminate or missing. Therefore, 'Persons' may be greater than the sum of 'Males' and 'Females'.
2. Rates are age-specific per 100,000 population.
Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au

For more detailed data, see Data tables A18-19.

Falls in residential aged care facilities

In 2019–20, there were 27,900 hospitalisations due to falls that occurred in a residential aged care (RAC) facility among people aged 65 and over, at a rate of 679 hospitalisations per 100,000 people aged 65 and over (Table 9). The definition of an RAC facility used in this report is from the ICD-10-AM and includes nursing homes and retirement villages. Two-thirds (18,500) of hospitalised falls in RAC facilities were for females. Rates increased markedly with age, from 53 hospitalisations per 100,000 for 65–69 year olds to 6,905 per 100,000 for people aged 95 and over.

These rates are per the Australian population aged 65 and over. Another meaningful statistic would be the rate of hospitalised falls among people living in RAC. However due to differences in the classification of residential aged care facilities as a place of occurrence in the hospitalisations data used in this report and available national estimates of the residential aged care population (for example, that used in the AIHW's GEN data (2021f), it is not possible to report the rate of falls hospitalisations within the RAC population here.

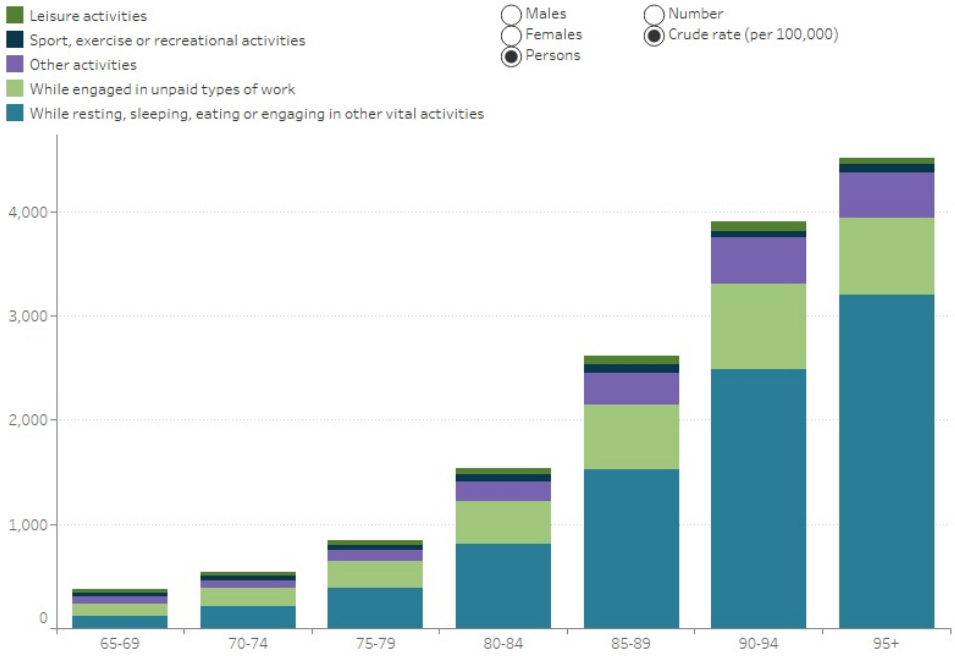
What activities were being carried out at the time of the fall?

Only 31% (41,400) of the hospitalisations records in scope for this report included information on the type of activity that was being undertaken at the time of the fall; 69% (91,500) of cases were coded with *Unspecified activity*. This should be taken into account when interpreting the data in this section.

In 2019–20, among Australians aged 65 and over who were hospitalised due to a fall and where an activity was recorded in the data source, *Resting, sleeping, eating, or engaging in other vital activities* was the most commonly reported activity being undertaken at the time of the fall (21,100; 51% of the 41,400 cases) (Figure 10).

Figure 10: Hospitalised falls by activity and sex, 65 years and over, 2019–20

Stacked column graph showing *Resting, sleeping, eating or other vital activities* was the most reported category of activity being undertaken across all 5-year age groups at the time of a fall resulting in hospitalisation. The second most reported activity was *While engaged in other types of work*.



Notes:
1. 'Persons' includes records where sex was intersex, indeterminate or missing. Therefore, 'Persons' may be greater than the sum of 'Males' and 'Females'.
2. Rates are age-specific per 100,000 population.
3. 'Other activities' includes *While working for income* and *Other specified activity*.
4. Unspecified activities is excluded.
Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au

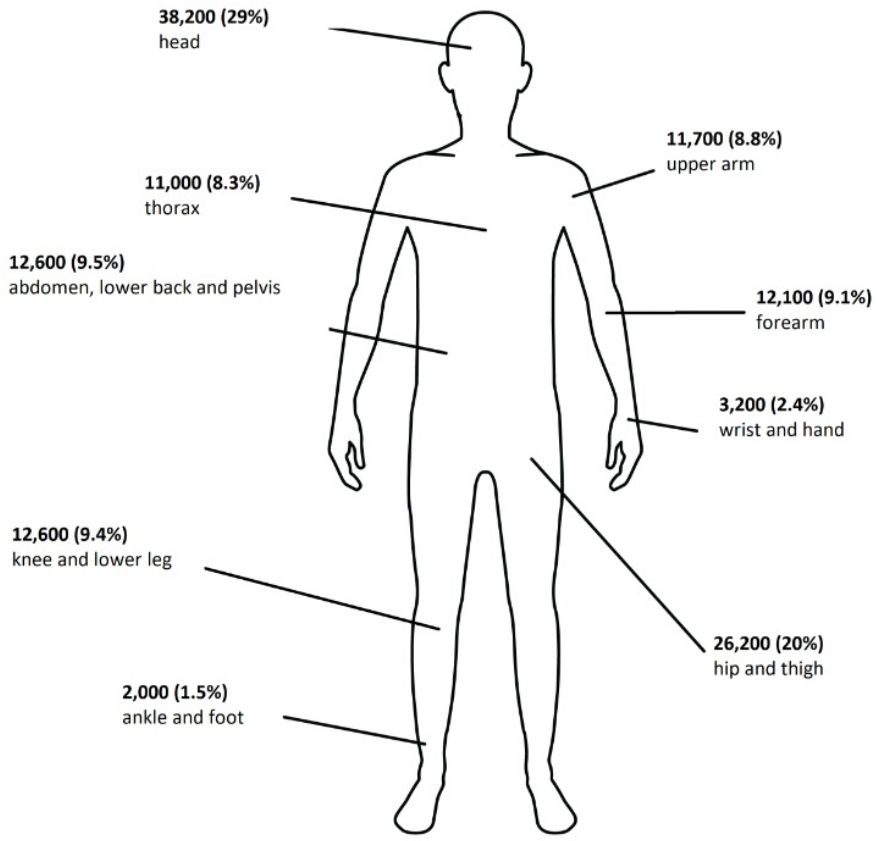
For more detailed data, see Data tables A22-23.

What body part was injured?

The *head* (29%) and *hip and thigh* (20%) were the most common areas of the body injured among older people hospitalised due to falls (Figure 11). In part, this may reflect the inherently serious nature of some injuries, for example, head and neck injuries.

For all body regions, the rate increases with age, this is true when comparing younger and older Australians and age groups within the population aged 65 and over (Figure 12).

Figure 11: Hospitalised falls by principal body part injured, 65 years and over, 2019–20



Notes

1. Percentages may not sum to 100 due to rounding.
2. Injuries to other body regions or information was not provided for 1,225 cases (0.9%)

Source: AIHW National Hospital Morbidity Database.

For more detailed data, see Data tables A24–25.

Notable difference between the sexes for injured body parts were (Figure 12):

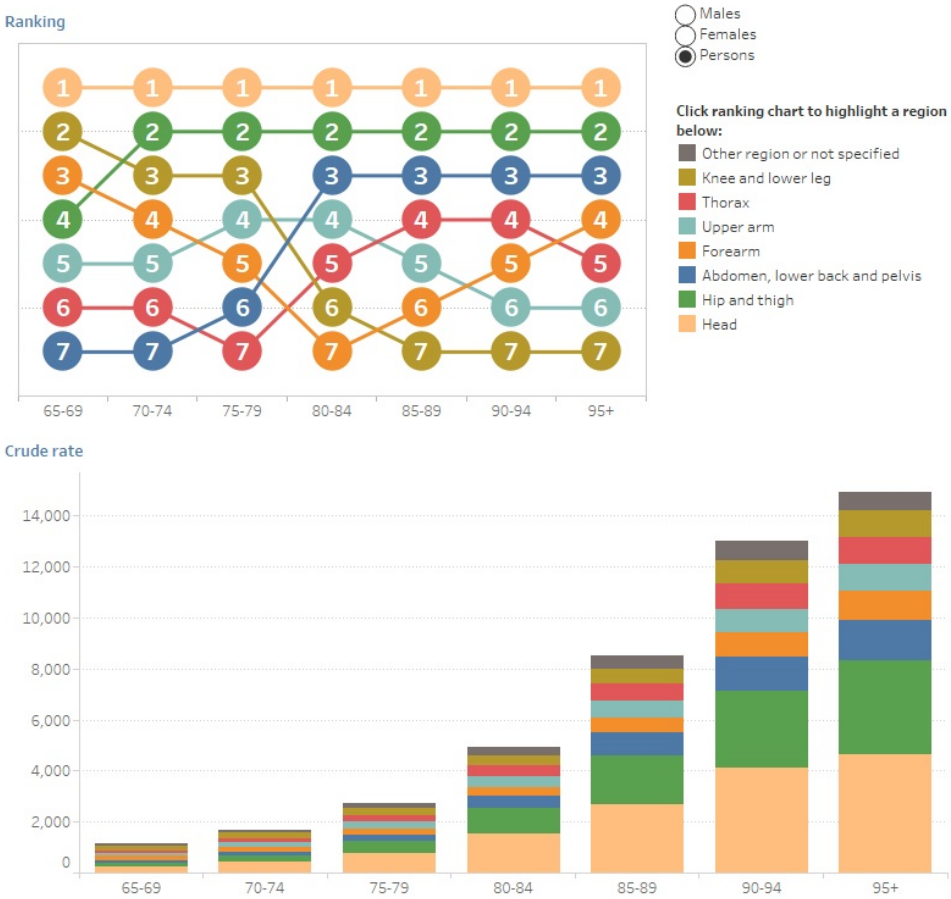
- males had a higher proportion of head and thoracic injuries than females (33% and 11% compared to 26% and 6.8% between sexes respectively)
- females had a higher proportion of forearm and hip and thigh injuries than males (11% and 21% compared to 6.2% and 18% between sexes respectively)

For all body regions, hospitalisation rates were higher in older adults than younger adults; however, there were some key differences in the injury location by age:

- people aged 65 and over were 28 times as likely to be hospitalised for a hip or thigh injury due to a fall than those aged 15–64
- people aged 65 and over were 11 times as likely to be hospitalised for a thorax injury due to a fall than those aged 15–64.

Figure 12: Crude rates of hospitalised falls by selected body region injured, age group and sex, 2019–20

Rank graph showing that injuries to the head were the top ranked body location injured across all age groups. Stacked column graph showing the rate of each body location injured increased across each age group.



For more detailed data, see Data tables A24-25.

What were the type of injuries?

In 2019–20, among Australians aged 65 and over (Table 10 and Figure 13):

- fractures were the most common hospitalised fall injury (50%), followed by open wounds (14%) and superficial injuries (10%)
- females had higher proportions of fractures than males (54% compared to 42%)
- males had higher proportions of open wounds and intracranial injuries than females (17% and 8.3% compared to 11% and 4.9% respectively).

Table 10: Number and percentage of hospitalised falls by type of injury and sex, 65 years and over, 2019–20

Type of injury	Males	Females	Persons
Fracture	20,334 (42%)	45,831 (54%)	66,167 (50%)
Open wound	8,412 (17%)	9,563 (11%)	17,975 (14%)
Superficial injury	5,057 (10%)	8,544 (10%)	13,601 (10%)
Intracranial injury	4,031 (8.3%)	4,092 (4.9%)	8,123 (6.1%)
Other injuries	10,724 (22%)	16,329 (19%)	27,053 (20%)
Total	**48,567 (100%)**	**84,364 (100%)**	**132,933 (100%)**

Notes

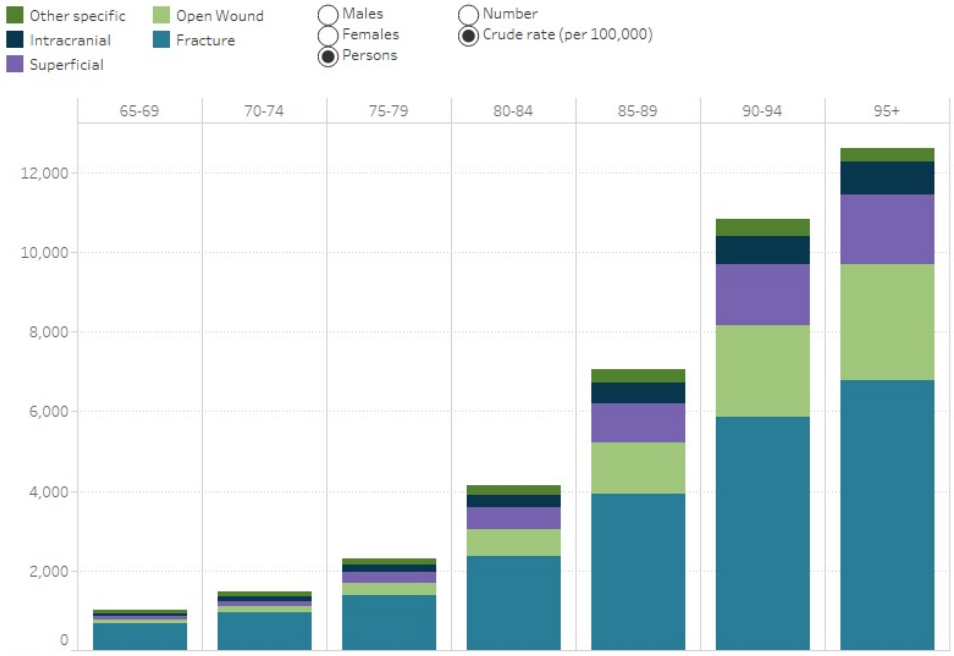
1. 'Total' include records where sex was intersex, indeterminate or missing. Therefore, 'Total' may be greater than the sum of 'Males' and 'Females'.
2. Percentage may not tally to 100 due to rounding.
3. 'Other injuries' includes *Soft-tissue injury, Dislocation, Internal organ or vessel of trunk* and *Other unspecified injuries.*

Source: AIHW National Hospital Morbidity Database.

Across 5-year age groups, the rates for each type of injury increased. Fractures accounted for the largest number and rate of hospitalised fall injuries for both males and females (Figure 13).

Figure 13: Hospitalised falls by selected types of injuries and age group, 2019–20

Stacked column graph showing that with increasing age groups, the rate of each injury type increased. Generally, males had higher rates and number of open wound injuries while females had higher rates and number of fracture injuries.



Notes:
1. 'Persons' include records where sex was intersex, indeterminate or missing. Therefore, 'Persons' may be greater than the sum of 'Males' and 'Females'.
2. Rates are age-specific per 100,000 population.
3. 'Other specified' includes *Dislocation, Internal organ or vessel of trunk* and *Soft tissue injury*.
4. *Other unspecified injuries* not included.
Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au

For more detailed data, see Data tables A26-27.

Location of fractures

Among the 66,200 hospitalisations for fractures caused by a fall, the *hip and thigh* (31%), was the most commonly fractured body part (Table 11 and Figure 14).

Seven in 10 older people hospitalised with a fracture due to a fall were women. Women were much more likely than men to sustain a fracture from a fall to limbs (including hips) and the *Abdomen, lower back, and pelvis*. Differences were comparatively less pronounced between the sexes for fractures to the head, neck and thorax.

Table 11: Number and percentage of hospitalised falls resulting in a fracture injury, by fracture location and sex, 2019-20

Fracture location	Males	Females	Persons
Head	1,168 (1.8%)	1,845 (2.8%)	3,013 (4.6%)
Neck	618 (0.9%)	680 (1.0%)	1,298 (2.0%)
Thorax (includes ribs, sternum and thoracic spine)	4,025 (6.1%)	4,341 (6.6%)	8,367 (13%)
Abdomen, lower back, and pelvis	2,617 (4.0%)	5,712 (8.6%)	8,330 (13%)
Upper arm	1,849 (2.8%)	5,724 (8.7%)	7,573 (11%)
Forearm	1,192 (1.8%)	7,488 (11%)	8,680 (13%)
Wrist and hand	503 (0.8%)	797 (1.2%)	1,300 (2.0%)
Hip and thigh	6,413 (9.7%)	13,942 (21%)	20,355 (31%)
Knee and lower limb	1,646 (2.5%)	4,674 (7.1%)	6,320 (9.6%)
Ankle and foot	303 (0.5%)	626 (0.9%)	929 (1.4%)
Total	**20,334 (31%)**	**45,831 (69%)**	**66,167 (100%)**

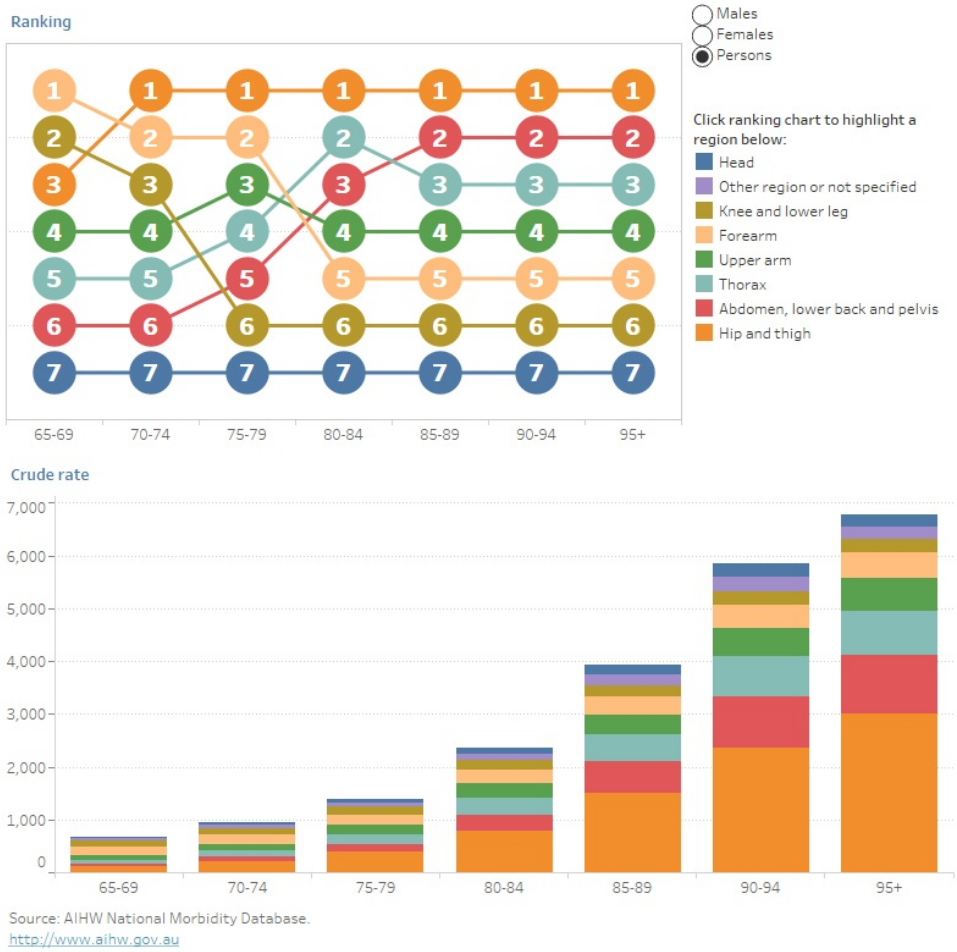
Notes
1. 'Total' include records where sex was intersex, indeterminate or missing. Therefore, 'Total' may be greater than the sum of 'Males' and 'Females'.
2. 'Other, multiple and incompletely specified body regions' removed due to low numbers
3. Percentage may not tally due to rounding.

Source: AIHW National Hospital Morbidity Database.

For females, fractures to the hip and thigh were the most common locations of fractures in every 5-year age group from 75 years and over (Figure 14). For males, fractures to the thorax (for 65–69 and 70–74 years) and hip and thigh (for 75 and over) were the most common types of fracture.

Figure 14: Crude rates of hospitalised falls with a fracture by body region fractured, 65 years and over, 2019–20

Two graphs. First, a rank graph showing the relative rank of different locations of fractures due to falls by sex and 5-year aged groups. Second, a stacked column graph showing that the crude rate of fractures to all body locations increases with each 5-year age group.



For more detailed data, see Data tables A29–30.

How severe are hospitalised injuries due to falls?

Four measures that may indicate the severity of a hospitalised injury are:

- urgency of admission
- average length of stay
- percentage of cases with time in an intensive care unit (ICU)
- percentage of cases involving continuous ventilator support (CVS).

In 2019–20, among hospitalisations due to a fall for those aged 65 and over (Table 12):

- almost all (93%) were classified as an emergency in terms of urgency of admission
- the average length of hospital stay was 9.5 days
- 1.7% included time in an ICU
- 0.4% involved CVS.

Comparing 5-year age groups among those aged 65 and over, the average length of stay was longest among people aged 85–89, while people aged 70–74 had the highest percentage of cases with time in ICU. People aged 65–69 had the highest percentage of cases with time spent on CVS, with that figure dropping as age increased.

In those aged 65 and over, the average length of stay due to a fall was 5.6 days longer than those aged 15–64 (Table 12).

Table 12: Severity of hospitalised falls, by age group, 2019–20

	15–64	65 and over
Average number of days in hospital	3.9	9.5
Percentage (%) of cases with time in ICU	1.5	1.7
Percentage (%) of cases involving CVS	0.8	0.4

Note: Average number of days in hospital (length of stay) includes admissions that are transfers from 1 hospital to another or transfers from 1 admitted care type to another within the same hospital, except where care involves rehabilitation procedures.

Source: AIHW National Hospital Morbidity Database.

For more detailed data, see Data tables A31–39 and C21–25.

How have falls changed over time?

This section compares hospitalisations and deaths data over time and includes the first few months of the COVID-19 pandemic. The effect of the COVID-19 pandemic on the data is considered in more detail in a separate section of this report.

Hospitalisations

Hospitalisations data are divided into two distinct time periods – 2010–11 to 2016–17 and 2017–18 and 2019–20. Comparisons of hospitalisations data between these two time periods is not recommended due to a change in data collection methods between 2016–17 and 2017–18 (see Technical notes for more details). Comparisons presented here are for within each of the two time periods.

Figure 15 shows:

- a 2.4% decrease in the rate of falls hospitalisations in 2019–20 compared to the previous year
- from 2010–11 to 2016–17 there was an average annual increase in age-standardised fall hospitalisations of 2.2%, indicating an increase beyond that expected of an ageing population.

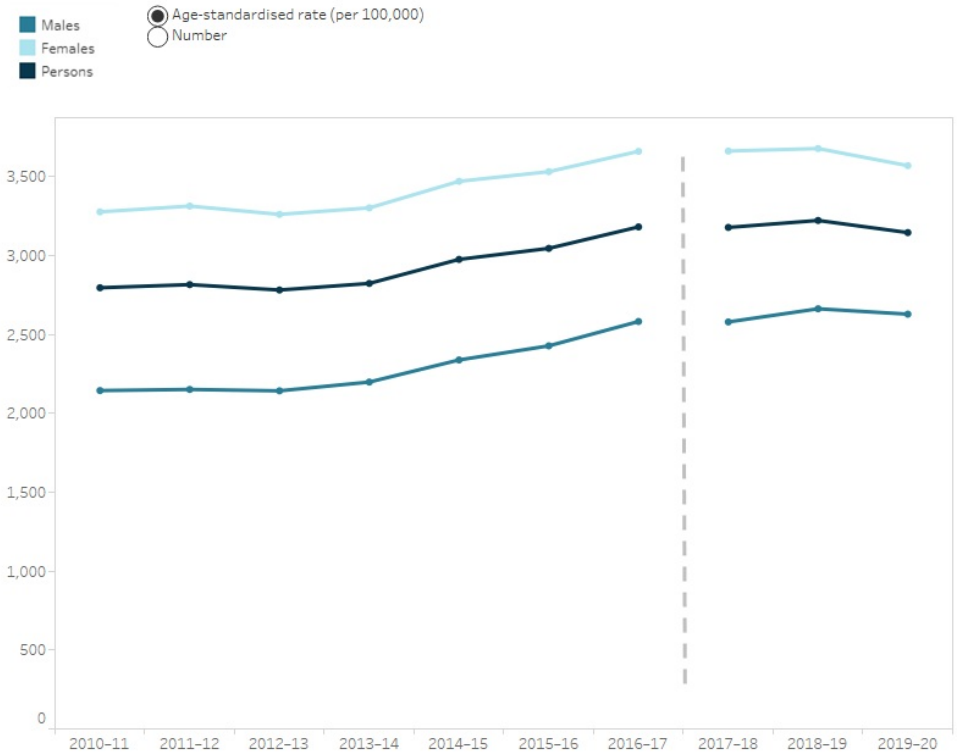
Deaths

Figure 15 shows:

- a 2.9% decrease in the rate of fall deaths in 2019–20 compared to the previous year
- from 2010–11 to 2019–20 there was an average annual increase in age-standardised fall deaths of 0.4%.

Figure 15: Falls injury hospitalisations, by sex, 65 years and over, in 2010–11 to 2019–20

Line graph showing that from 2010–11 to 2016–17 there has been a gradual increase in fall hospitalisations since the break in series from 2018–19 to 2019–20 there has been a slight decrease in fall hospitalisations.



Note: Break in series between 2016-17 and 2017-18. See technical notes for discussion.
Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au/

For more detailed data, see Data tables A40–45 and B15–18.

What were the impacts of COVID-19?

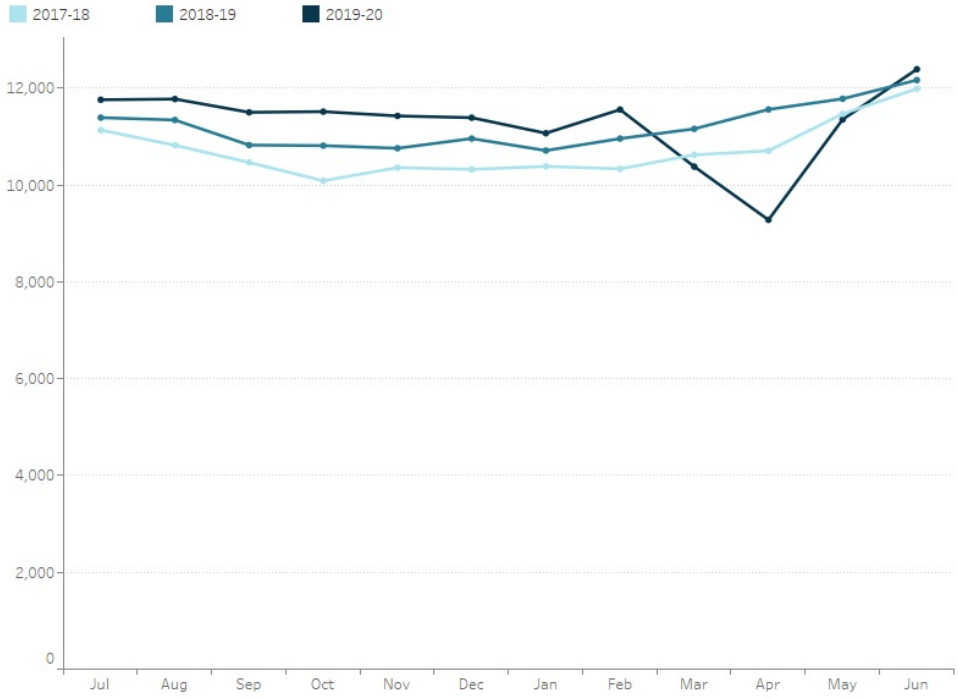
The second half of the 2019–20 reporting period coincided with the beginning of the COVID–19 pandemic in Australia. The social restrictions and behaviour changes associated with the COVID-19 pandemic impacted the number and type of fall hospitalisations and deaths. For example, in April 2020 in Victoria all types of emergency department presentations were 32% lower compared to the same month in 2019 (VISU 2020).

National data show that in April 2020 among people aged 65 and over there were 25% fewer fall hospitalisations than the same month the previous year. However, by June 2020, with the easing of COVID-19-related restrictions, hospital admissions for fall-related injuries had returned to pre-pandemic levels (Figure 16).

In the following chapter, the data for June are based on projected estimates, see technical notes for more details.

Figure 16: Number of hospitalisations and deaths due to falls by month, 65 years and over, 2017–18 to 2019–20

Line graph showing that over 2019–20 the number of fall hospitalisations was comparable to previous years, however from March to May there is a marked decrease in hospitalisations coinciding with the COVID-19 pandemic. There was a slight decrease fall related deaths of April 2019–20; however, a marked decrease is seen annually in fall deaths from December to January.



Notes:
1. June values are projected estimates. See technical notes for more details.
2. National lockdown was introduced in late March 2020 and stayed in place for at least a month, with varying durations across different states and territories.
Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au

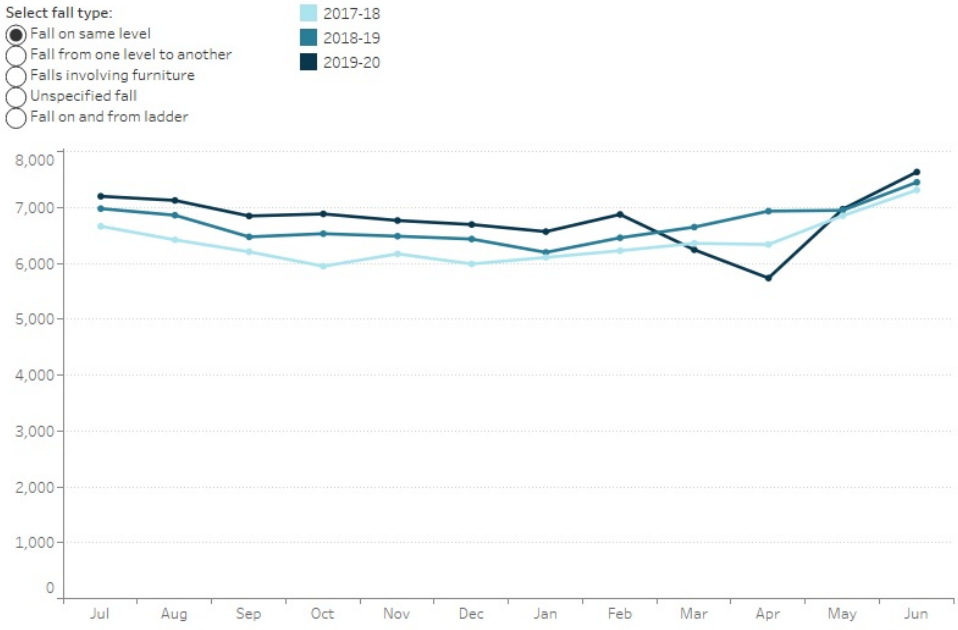
For more detailed data, see Data tables A46–47 and B19.

There were differences in the types of falls during this period compared to the same period in previous years (Figure 17). Compared to data from April 2018–19, hospitalisations for:

- falls from one level to another (includes stairs and steps) decreased by 17% (860 in 2018–19 to 580 in 2019–20)
- falls on or from a ladder increased by 7.8% (230 in 2018–19 to 250 in 2019–20).

Figure 17: Number of hospitalised falls by month and type of fall, 65 years and over, 2017–18 to 2019–20

Line graph showing that most fall types observed a decrease in March to April in 2019–20 compared to previous years, hospitalised falls from a ladder was the only category where hospitalisations increased in 2019–20.



Notes:
1. 'Falls involving furniture' includes *Fall involving bed* , *Falls involving chair*, and *Fall involving other furniture*.
2. 'Fall on same level' includes *Fall on same level from slipping, tripping and stumbling*, *Other fall on same level*, *Fall on same level involving ice and snow* and *Other fall on same level due to collision with, or pushing by, another person*.
3. 'Fall from one level to another' includes *Fall on and from stairs or steps* and *Other fall from one level to another*.
4. June values are projected estimates. See technical notes for more details.
Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au

For more detailed data, see Data tables A48.

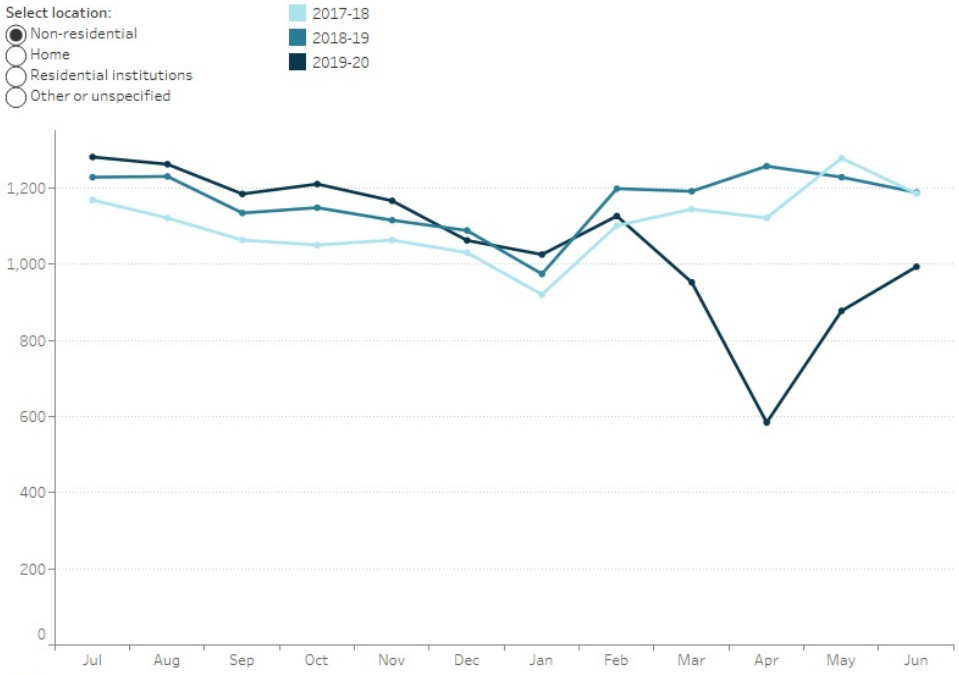
There were notable differences in the data for where falls occurred during this time compared to the previous year (Figure 18). Compared to data from April 2018–19, hospitalisations for:

- falls in non-residential settings (*Health service facility*, *Industrial or construction area*, *School*, *Sports or athletic area*, *Street or highway,* and *Trade or service areas*) decreased by 54% (1,300 in 2018–19 to 580 in 2019–20)
- falls in 'Residential institutions' decreased by 28% (2,500 in 2018–19 to 1,800 in 2019–20)
- falls at 'Home' decreased by 2.7% (5,800 in 2018–19 to 5,600 in 2019–20), much less than the 25% decrease in overall falls hospitalisations.

In May and June of 2020, falls at home increased by about 10% from the previous reporting year. This increase in falls at home exceeded the pre-pandemic number of falls at home.

Figure 18: Number of hospitalised falls by month and location, 65 years and over, 2017-18 to 2019-20

Line graph showing that all locations observed a decrease in number of falls over March to April in 2019–20 compared to previous year, hospitalised falls in the home has the least variation by year.



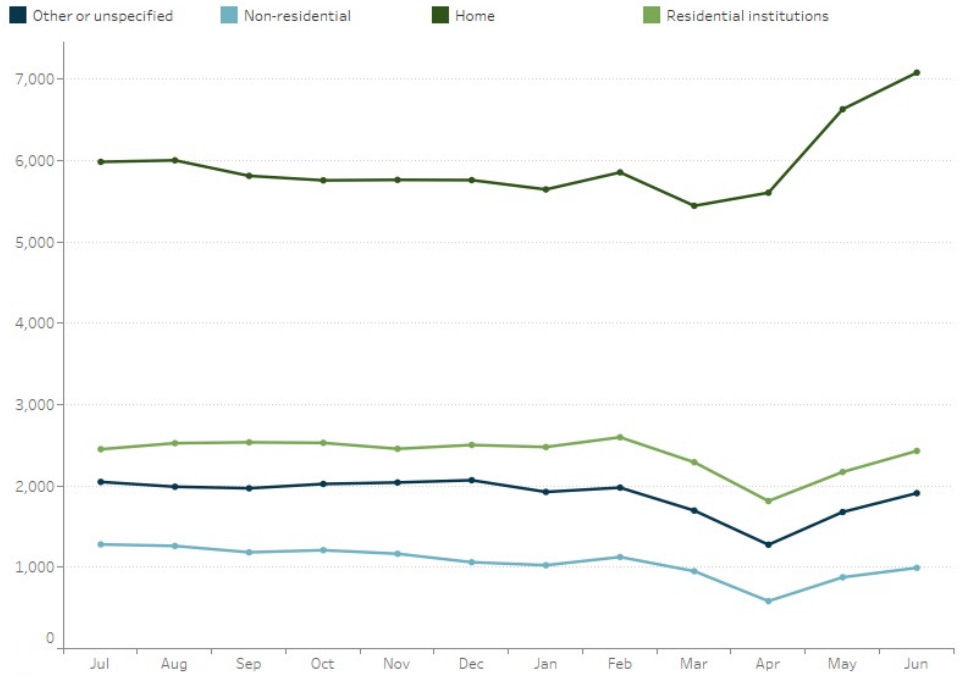
Notes:
1. 'Non-residential' includes *Street or highway*, *Health service facility area*, *Industrial or construction area*, *Trade or service area*, *School* and *Sport or athletic area*.
2. 'Other or unspecified' includes *Unspecified or unknown* and *Other specified area*.
3. June values are projected estimates. See technical notes for more details.
Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au

For more detailed data, see Data tables A49.

In 2019–20 the COVID-19 pandemic led to a reduction in hospitalisations due to falls across all locations in April, with falls in the home the least affected location (Figure 19). In May and June of 2020, the number of falls increased across all locations; however, falls in the home increased beyond pre-pandemic numbers.

Figure 19: Number of hospitalised falls by month and place of occurrence, 65 years and over, 2019–20

Line graph showing that in 2019–20 falls resulting in hospitalisation commonly occurred in the home. All fall locations observed a decrease in in number of falls from March to May coinciding with the COVID-19 pandemic.



Notes:
1. 'Non-residential' includes *Street or highway*, *Health service facility area*, *Industrial or construction area*, *Trade or service area*, *School*, *Sport or athletic area*.
2. 'Other or unspecified' includes *Unspecified or unknown* and *Other specified area*.
3. June values are projected estimates. See technical notes for more details.
Source: AIHW National Hospital Morbidity Database.
http://www.aihw.gov.au

For more detailed data, see Data tables A49.

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Technical notes

Notes

Data quality statement

For more information about the Admitted Patient Care 2019–20 data see:
MyHospitals Admitted patient care 2019–20 appendixes

Amendment

17 May 2022 - Minor text error corrected.

Data

Related material

Resources

Related topics

- Hospitals
- Life expectancy & deaths