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2023 WESTERN AUSTRALIAN FALLS REPORT

The incidence of falls-related fatalities, hospitalisations, and emergency department attendances.

ACKNOWLEDGEMENTS

Injury Matters would like to acknowledge the following people and organisations, who contributed to the development of the 2023 Western Australian Falls Report (Report):

- Australian Institute of Health and Welfare
- City of Albany
- City of Armadale
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- Royal Perth Hospital
- Umbrella Multicultural Community Care
- WA Department of Health, Epidemiology Directorate
- WorkCover WA

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Injury Matters acknowledge the Whadjuk Noongar people as the traditional custodians of the land on which we live and work and recognises Aboriginal and Torres Strait Islander peoples continuing connection to land, waters and community across Western Australia.

ABOUT INJURY MATTERS

At Injury Matters, we work with people and organisations across Western Australia (WA) to innovate and deliver injury prevention and recovery solutions. Solutions that keep people safer and healthier at home, at work and on the go. Solutions that save lives and make our community stronger.

injury matters
PREVENTION TO RECOVERY

Moving the injury conversation and solutions forward, together.

Our approach is as expansive and inclusive as our remit, which spans everything from road safety to trauma recovery and falls to substance-related harm. As a not-for-profit organisation, we work with local communities, industry, government and our health, emergency, and social services partners, drawing on the latest research, evidence and lived experience here in WA to:

- Raise awareness of injury risks, consequences, and solutions.
- Prevent injuries through a range of education and support programs.
- Support the recovery of people, families and communities impacted by injury and trauma.
- Advise and enable local and national agencies and policymakers to make smarter, safer, more informed policy decisions to support the needs of the community we work alongside.

Together, we find and share injury prevention, recovery and policy solutions that keep everyone safer and healthier – solutions that reduce the far-reaching physical, emotional, and financial impact caused by injuries and trauma.

STAY ON YOUR FEET®

Funded by the Western Australian Department of Health, Injury Matters has delivered the Stay On Your Feet® Program for over twenty years.

Stay On Your Feet® is WA's leading falls prevention program for older adults living in the community.

Stay On Your Feet® aims to prevent falls and falls-related injuries among older adults and promotes how to keep active and alert through the Move Improve Remove campaigns.

Move Your Body, Improve Your Health and Remove Hazards are three steps to keep active, healthy and alert to prevent slips, trips and falls.

Visit www.injurymatters.org.au to connect with us and to sign up to our newsletter.

GOVERNMENT OF WESTERN AUSTRALIA
Department of Health
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CONTENTS

PURPOSE

This Report provides the diverse falls prevention sector with a central report, which outlines:

- The incidence of falls in WA: Fatalities, hospitalisations, emergency department attendances, and workplace insurance claims.
- Populations at risk: Population groups experiencing a higher incidence of falls in WA.
- Causes: Mechanism of falls in WA.
- Diagnoses: Injury diagnoses and nature following a fall in WA.
- Initiatives: Local falls prevention activities. With limited resources available to support falls prevention initiatives, gaining an overview of these concepts is vital to reducing the impact of falls in WA.

Falls are defined as "inadvertently coming to rest on the ground, floor or other lower level".[1]

FOREWORD

The 2023 WA Falls Report provides insight into the current state of falls in Western Australia. It reflects on the growing burden evident across the previous four editions of this annual publication.

In addition to the rising total incidence of falls-related injuries, the concerning frequency of falls among our older adult population is apparent throughout this Report. There is no questioning that without coordinated action across all sectors and additional investment in falls prevention initiatives we will continue to see increases in the number of falls-related fatalities, hospitalisations and emergency department presentations in WA.

At Injury Matters we are passionate about changing this trend by creating a safer WA and reducing the impact of injuries on our community. Thanks to the ongoing support from the WA Department of Health, we can deliver the Stay On Your Feet® program and support health professionals and community members to reduce the incidence of falls among Western Australian older adults living independently in the community.

I am proud to say that the results from our 2023 external program evaluation[2] indicate that the Stay On Your Feet® program is successfully working towards its goal and is highly valued by program participants. 83% of older adults who participated in the program evaluation indicated that they were more aware of falls prevention strategies and 80% of professionals were more confident discussing falls prevention strategies with their patients since engaging in the program.

Complementing our activities, Injury Matters welcomes the inclusion of active ageing strategies within the recently released 'An Age-Friendly WA: State Seniors Strategy 2023 – 2033'[3] and the 'Western Australian Health Promotion Strategic Framework 2022 – 2026'[4] and the opportunities these key documents offer for improved facilitation of collective falls prevention action across the state.

Every statistic within this Report is a person within our community who has had their life impacted by a fall. I urge you not to forget this and join us in reducing the impact of falls in WA.

Sandy Lukjanowski

CHIEF EXECUTIVE, INJURY MATTERS

TECHNICAL NOTES

This Report is the fifth edition of Injury Matters' annual Western Australian Falls Report. To consistently monitor the incidence of falls in WA, the same data inclusion criteria has been used across reports. However, there are several external factors that may influence the accuracy of the counts and therefore may contribute to variance across years. In order to provide a well-rounded representation of the incidence of falls in WA, this Report includes data collated from several sources. Unless otherwise noted, the data included in this Report was obtained through the WA Department of Health Epidemiology Directorate.[5]

Fatalities:[5]
Falls-related fatalities were provided by the WA Department of Health Epidemiology Directorate. Falls-related fatalities in WA from 1 January 2020 to 31 December 2020 were sourced from the Cause of Death Unit Record File (COD URF) with the underlying cause of death utilised to identify the falls-related deaths within the dataset. At time of extraction, falls-related fatalities for 2020 are preliminary, hence are subject to change.

Falls-related fatalities have been identified as W00 to W19 within the International Classification of Diseases, Tenth Revision (ICD-10). Cases recorded for WA residents only.

Hospitalisations:[5]
Falls-related hospitalisations in WA from 1 January 2021 to 31 December 2021 were identified from the WA Department of Health Hospital Morbidity Data System and all four external causes recorded in the WA Hospital Morbidity Data Collection were included. Due to this use of external causes, it is possible that a higher number of falls-related deaths could be identified within the hospitalisation data than those within the mortality dataset.

Falls-related hospitalisations have been identified as W00 to W19 within the International Classification of Diseases, Tenth Revision, Australian Modification (ICD-10-AM), regardless of the principle diagnosis. Cases recorded with the following attributes were excluded; cancelled procedures, healthy newborns, boarders, organ procurements, aged care residents and funding (duplicate) cases. Please note that due to the use of codes S00-S99, T00-31, T33-T71, T73-T75 and T78-T79, total hospitalisation counts provided for injury diagnosis (p.27) are smaller than those included in the rest of the Report.

In order to succinctly present the place in which the falls incident occurred resulting in hospitalisation, locations have been grouped into general locations, see p.19. The ICD-10-AM codes included within each category includes: home (Y92.00-Y92.09, Y92.89), residential institution (Y92.10, Y92.14, Y2.18, Y2.19), school (Y92.21), health service area (Y92.23-Y92.24), other specified institution, place and public admin area (Y92.29, Y92.88), sports and athletics areas (Y92.30-Y92.39), public street / transport path (Y92.41, Y92.42, Y92.48, Y92.49), trade and service area (Y92.50-Y92.53, Y92.58-62), industrial and construction area (Y92.63, Y92.65-Y92.69), farm (Y92.70), countryside (Y92.80-Y92.84, Y92.86) and car park (Y92.87).

Likewise, the causes of hospitalisations categories were collapsed into general categories, see p.24. The ICD-10-AM codes included within each category includes: Fall on same level from slipping, tripping, and stumbling (W00.0-01.2); Fall involving pedestrian conveyance (W02.0-02.9); Other fall on same level due to collision with, or pushing by, another person (W03.); Fall while bring carried or supported by another person (W04); Fall involving wheelchair (W05.); Fall from bed (W06.0-06.9); Fall from chair (W07.0-07.9); Fall from playgroup equipment (W09.0-09.9); Fall from an escalator, travelator, stairs or steps (W10.0-10.2, W10.9); Fall on or from ladder (W11.); Fall on and from, our of or through a balcony, window, roof, floor or other structure (W13.0-13.5, W13.8-13.9); Fall from tree (W14.); Diving or jumping into water causing injury other than drowning or submersion (W16.0-W16.2, W16.9); Fall from one level to another (W17.0-17.5, W17.8-17.9); Fall from, off, or into an object on the same level (W18.0-18.2, W18.8-18.9); Unspecified fall (W19.) and Other (W08.0-08.2, W08.8, W08.9, W12., W15.).

Alcohol-related hospitalisations have been identified as falls-related cases in which ICD-10-AM codes F10.0-F10.2, T51.0 or Z72.1 were recorded in any diagnostic data field.

Emergency department visits:[5]
Falls-related emergency department attendances in WA from 1 January 2021 to 31 December 2021 were identified from the WA Department of Health's Emergency Department Data Collection. Falls-related emergency department attendances were identified as an external cause code of 3 (fall), 4 (fall on same level), 5 (fall < one meter) and 6 (fall > one meter). Please note that only WA residents have been included and that external cause codes can be incomplete in regional emergency departments.

Health expenditure data:[6]
Falls-related health expenditure data for 1 July 2019 to 30 June 2020 was provided by the Australian Institute of Health and Welfare (AIHW) utilising data from the Disease expenditure in Australia 2019-20 study. This expenditure data has been estimated by ABDS condition, age group and sex for an admitted patient, emergency department, and outpatient hospital services, out-of-hospital medical services and prescription pharmaceuticals. Please note that sums may not add to totals due to services not reported by demographics. For the full methodology of the dataset visit https://ow.ly/4Fi250P14AG.[6]

Residential aged care data[7]
The National Aged Care Mandatory Quality Indicator Program's quarterly publications were accessed to obtain the residential aged care data outlined on page 20. Additional detail regarding the data scope, including the program rationale and measurement, is available in the Quality Indicators Program Manual at https://ow.ly/GsFH50P14BJ.

Workers' compensation claims data:[8]
All data regarding claims lodged in the Western Australian workers' compensation scheme from 1 January 2021 to 30 December 2021 were provided by WorkCover WA. Falls-related counts within the Report refer to a claim classified under the mechanism of incident Major Group 0 (falls, trips and slips of a person). All claims reported are 'lost-time claims', meaning that the incident resulted in an absence from work of at least one day or shift. Data breakdowns regarding the agency of injury/disease, bodily location and the mechanism of the incident are based on the Australian Safety and Compensation Council Type of Occurrence Classification System 3rd edition, revision 1 published by Safe Work Australia. The industry type is based on the Australian and New Zealand Standard Industrial Classification (ANZSIC) system 2006.

Work-related traumatic injury fatality data:[9]
Data regarding the incidence of work-related traumatic falls fatalities, was provided by the WA Department of Mines, Industry Regulation and Safety; Regulatory Support Division, for the five-year time period from 1 July 2016 to 30 June 2021. The total count of work-related traumatic injury fatalities refers to fatalities that result from a physical trauma or poisoning in WA in accordance with the Work Health and Safety Act 2020, Occupational Safety and Health Act 1984, Energy Safety Act 2006, Electricity Act 1945, Gas Standards Act 1972, Mines Safety and Inspection Act 1994, Petroleum (Submerged Lands) Act 1982, Petroleum and Geothermal Energy Resources Act 1967 and the Petroleum Pipelines Act 1969.

The falls-related counts provided within the Report were identified as all incidents reported within the mechanism of incident Major Group 0 (falls, trips and slips of a person). All reference to the individual industry type is based on the Australian and New Zealand Standard Industrial Classification (ANZSIC) published by the Australian Bureau of Statistics. Data is preliminary, as some investigations may still be ongoing.

Royal Perth Hospital falls-related admissions:[10]
Falls-related admissions to Royal Perth Hospital from 1 January 2021 to 30 December 2021 were identified from the Royal Perth Hospital Trauma Registry. The data includes all falls-related trauma patients presenting for treatment within seven days of their injury and who were hospitalised for over 24hrs, as well as all trauma-related deaths regardless of hospital length of stay. Minor injuries refers to those with an Injury Severity Score (ISS) under 16 and major injuries are those with an ISS over 15.

DEFINITIONS

Age-Standardised Rates (ASR) were calculated per 100,000 person years. Direct standardisation used all age groups of the 2001 Australian Standard Population to compare rates between population groups and different years for the same population group.

Age Specific Rates (ASPR) included within this Report were calculated by dividing the number of events, such as hospital admissions for an age group by its respective population for that age group. These rates are provided per 100,000 person years.

Average Length of Stay includes the average of the lengths of stay for all hospital episodes of care.

Emergency Department attendances included within this Report refers to falls-related incidents in which an individual presented to an emergency department in WA.

Fatalities identified within this Report are deaths which were solely identified as falls-related.

Hospitalisations are defined as an emergency or elective falls-related episode of care in a hospital. This does not include emergency department presentations.

Hospitalisation costs are derived based on Australian Refined Diagnostic Related Group average costs from the National Hospital Cost Data Collection. Total cost is calculated without adjustment for CPI. As such, it cannot be compared with cost data for other years.

Standardised Rate Ratios (SRR) included within this Report refer to the ratio of two standardised rates between a particular health region and that of the WA State population. Indirect standardisation method was used.

LIMITATIONS

There are a number of limitations to identifying the exact incidence of falls-related injuries in WA. This can be attributed to challenges associated with coding fatalities, hospitalisations and emergency department attendances across different data sources. These challenges include the use of human discretion in the coding process and difficulties identifying a fall as the underlying cause of the fatality, hospitalisation or emergency department attendance. The nature of these variances make it challenging to correlate data across different sections of the Report and therefore we recommend interpreting each section of the Report in isolation.

In addition to these coding challenges, many falls-related injuries are treated at home or in general practice and are not captured in the aforementioned data sources. Therefore, the data included within this Report must be viewed as an indicative measure rather than the exact prevalence of falls-related injuries in WA.

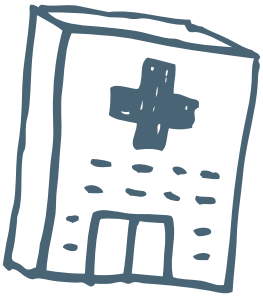
KEY FINDINGS

463 falls-related fatalities in 2020

33,252 falls-related hospitalisations in 2021

47,644 falls-related emergency department attendances in 2021

On average, individuals spent **7.7 days in hospital due to a falls-related incident** in 2021



MALES EXPERIENCED A HIGHER RATE AND NUMBER OF FALLS-RELATED FATALITIES IN 2020

FOR THE FIFTH YEAR, THE KIMBERLEY HAD THE HIGHEST RATE OF FALLS-RELATED HOSPITALISATIONS IN 2021

FEMALES EXPERIENCED A HIGHER NUMBER OF FALLS-RELATED HOSPITALISATIONS AND EMERGENCY DEPARTMENT ATTENDANCES IN 2021

In 2021, falls-related hospitalisations cost an estimated **$310,987,115**

EVERY 19 HOURS SOMEONE DIED DUE TO A FALLS-RELATED INJURY IN 2020

EVERY 15 MINUTES SOMEONE WAS ADMITTED TO HOSPITAL DUE TO A FALLS-RELATED INJURY IN 2021

INDIVIDUALS AGED 85+ WERE MOST IMPACTED

EVERY 11 MINUTES SOMEONE ATTENDED THE EMERGENCY DEPARTMENT DUE TO A FALLS-RELATED INJURY IN 2021

FALLS-RELATED INJURIES IN WA

Falls continue to cause significant burden to the Western Australian community and healthcare system, being the leading cause of injury fatalities in 2020 (35.0% of fatalities) and injury hospitalisations in 2021 (accounting for 24% of admissions). In 2021 falls also contributed to 13% of emergency department attendances due to an injury, placing further pressure on our healthcare workers.

	NUMBER	ASR
Fatalities	463	14.1
Hospitalisations	33,252	1,069.9
ED Attendances	47,644	1,692.1

Table 1. Number and age-standardised rate (ASR) of falls-related fatalities (2020), hospitalisations (2021) and emergency department attendances (2021), WA.[5]

FATALITIES

Between 1 January 2020 and 31 December 2020, 463 people died due to a falls-related incident in WA, a rapid increase of 31% from 2019. This increase follows four years of the incidence falls-related fatalities remaining steady (demonstrated in Figure 1).

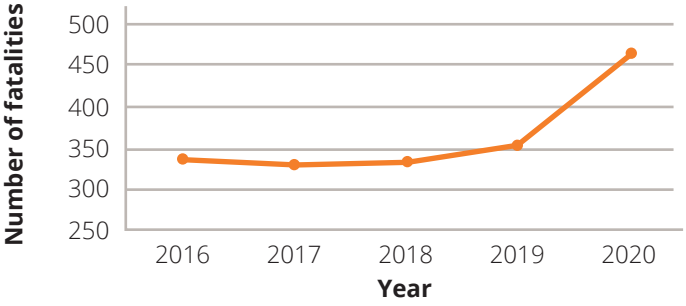


Figure 1. Number of falls-related fatalities, WA, 2016 to 2020.[5,11–14]

HOSPITALISATIONS

Following on from recent trends, the WA falls-related hospital attendance rate increased in 2021, with 33,252 falls-related hospitalisations equating to 1,070 hospitalisations per 100,000 people (Figure 2).

In 2021, the most common point of entry into a WA hospital due to a falls-related injury was an emergency department (66%, n=21,781). This was followed by non-waitlist elective hospitalisation (n=7,251), direct emergency admission (n=3,296) and a waitlist elective hospitalisation (n=924).

The home was the primary residence of those admitted to hospital (77%, n=25,664). This is followed by an acute hospital (23%, n=7,482) and a residential aged care facility (0.2%, n=63).

The 33,252 falls-related hospitalisations resulted in an average of 7.7 days in hospital, totalled 255,372 hospital bed days and cost an estimated $310,987,115.

69% of falls-related hospital patients were discharged to their home/other (n=23,093), 18% were transferred to an acute hospital (n=5,886) and 7% to a residential aged care facility (n=2,370). Of particular note is that 2,307 falls patients who did not previously reside in a residential aged care facility were discharged to a residential aged care facility and that falls accounted for 17% of all hospital transfers into a residential aged care facility.

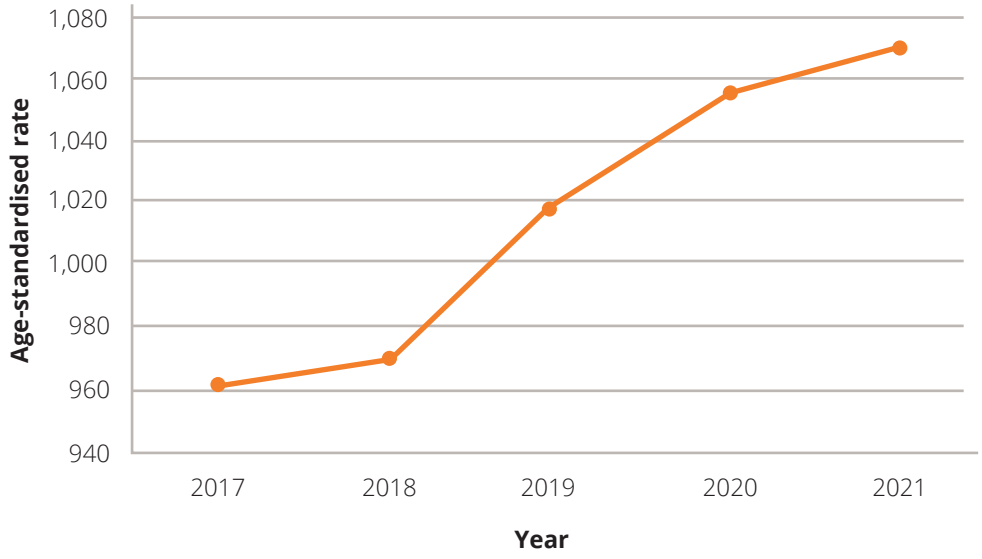


Figure 2. Age-standardised rate of falls-related hospitalisations, WA, 2017 to 2021.[4,11–14]

EMERGENCY DEPARTMENT ATTENDANCES

In 2021, 47,644 emergency department (ED) attendances in WA resulted from a falls-related injury. The age-standardised rate of these emergency department attendances was 1,692 attendances per 100,000 population. As depicted in Figure 3, the rate of falls-related ED attendances has fluctuated in WA over the last five years, including a 13% increase from 2020 to 2021.[14]

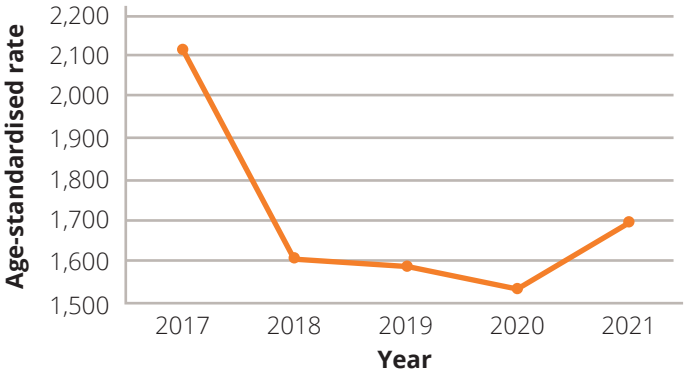


Figure 3. Age-standardised rate of falls-related ED attendances, WA, 2017 to 2021.[5,11–14]

Data indicates that private transport was the leading mode of transport to the ED among falls patients (70% of all falls-related ED attendances, n=33,452), followed by arrival via an ambulance (29%, n=13,918). Overall, 8% of helicopter rescues and 7% of ambulance transportations to a WA hospital in 2021 were due to a falls-related incident.

Over half of falls-related ED attendances in 2021 were assigned a triage category of 'semi-urgent' meaning they required care within 60 minutes (54%, n=25,710) or 'urgent' meaning they required care within 30 minutes (35%, n=16,785).

COVID-19'S IMPACT ON THE INCIDENCE OF FALLS

Aside from the direct implications that a COVID-19 infection has on disease burden, the behaviour change that resulted from social distancing during the pandemic also has the potential to indirectly influence an individual's health and wellbeing, including increasing their falls risk.

Sedentary behaviour, insufficient physical activity levels and social isolation are all risk factors for falls. For personal and community safety, government restrictions or voluntary isolation kept most Western Australians housebound more than usual during 2020 and 2021, increasing susceptibility to these falls risk factors.

Prior to the global pandemic, the incidence of falls-related hospitalisations in Australia has been increasing by approximately 2% a year.[15] These increases alone are placing an extra burden on our healthcare system, however in combination with a global pandemic and the potential for additional long-term implications on an individual's falls risk this causes growing concern.

Modelling from the United Kingdom suggests that without mitigation, the number of falls will increase by 4-6%, suggesting that Australia too will experience an increased rate of falls due to COVID-19-related implications.[16]

Photo by Lisa Gageler

HEALTH EXPENDITURE

Given the complexity of falls-related injuries and the potential for varying degrees of severity, a number of health services may be accessed following a fall.

As indicated in Table 2, $446,232,366 was spent in WA on falls-related payments to health services during the 2019/20 financial year.[6] This total expense was made up of several different areas, however 'public hospital admitted patients', 'private hospital services' and 'public hospital emergency departments' contributed to the greatest expenditure.

A larger percent of falls-related health expenditure was attributed to females than males, $226,844,193 compared with $187,443,052. Falls-related health expenditure also varied across age groups, with individuals 80 years and over accounting for the highest expenditure. For additional age group analysis, refer to Figure 4.

For further information regarding the health expenditure data provided by the Australian Institute of Health and Welfare[6], please refer to the technical notes located on page 2.

AREA OF EXPENDITURE	COST
Public hospital admitted patient	$186,215,107
Private hospital services	$82,344,495
Public hospital emergency dept.	$71,973,101
Dental expenditure	$28,850,943
Public hospital outpatient	$28,232,135
General practicitioner services	$17,282,154
Medical imaging	$15,867,190
Pharmaceutical benefits scheme	$8,244,182
Specialist services	$4,421,532
Allied health and other services	$1,847,383
Pathology	$954,139
ALL AREAS	**$446,232,366**

Table 2. Falls-related health expenditure by area, WA, 2019-20.[6]

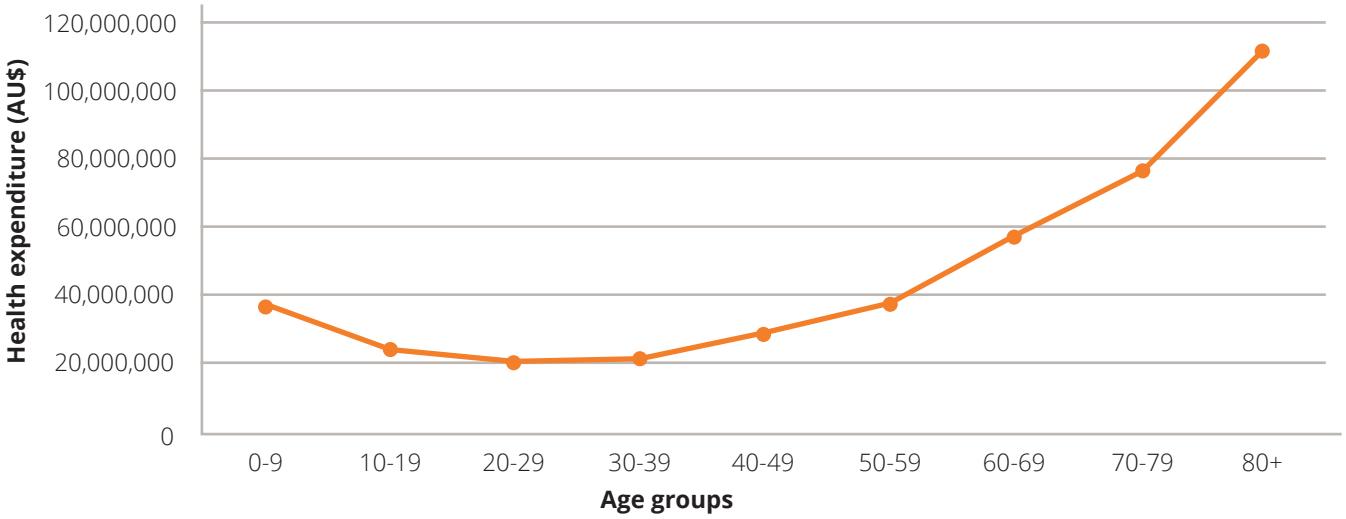


Figure 4. Falls-related health expenditure by age groups, WA, 2019-20.[6]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GENDER

In WA, data collected regarding the gender of individuals who die, are hospitalised, or attend an ED is limited to females and males. Therefore, the data included within this Report is based on whether the person identified as female or male.

The falls-related fatality data indicates that males experienced a higher number and age-standardised rate of falls-related fatalities in 2020, matching the heightened representation in 2019.[14] However contrasting data from the previous four years[11–14], in 2021 males also experienced the highest rate of falls-related hospitalisations. Females did however experience the highest number of hospitalisations and rate of falls-related ED attendances in 2021. See Table 3.

FATALITIES

In 2020, males accounted for a higher total count (n=251) and rate (18 per 100,000 population) of falls-related fatalities in WA, when compared to females (n=212, and a rate of 11). This increase in the rate of falls-related fatalities among males is a notable increase from that reported in 2019 (n=189 and 14).[14]

	NUMBER		ASR	
	Female	Male	Female	Male
Fatalities	212	251	11.2	17.8
Hospitalisations	18,207	15,045	1,032.5	1,055.9
ED Attendances	24,947	22,683	1,718.9	1,652.7

Table 3. Number and age-standardised rate (ASR) of falls-related fatalities (2020), hospitalisations (2021) and emergency department attendances (2021) by gender, WA.[5]

HOSPITALISATIONS

While females experienced a higher number of falls-related hospitalisations than males in 2021, 18,207 and 15,045 respectively, it was males who experienced the highest age standardised rate of falls-related hospitalisations (1,056 vs. 1,033).

The variance was not significant in the length of stay in hospital due to a falls-related incident, with females staying in hospital for an average of 7.7 days and males 7.6 days.

The higher number of hospitalisations and average length of stay among females is reflected in females experiencing a higher total number of bed days spent in hospital (140,822 vs 114,550) and a larger total hospitalisation cost ($165,119,212 vs $145,867,903).

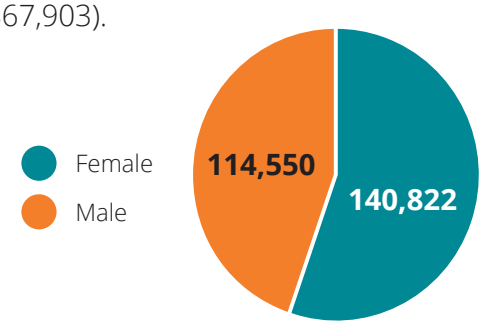


Figure 5. Total number of days spent in hospital due to a falls-related hospitalisation by gender, WA, 2021.[5]

EMERGENCY DEPARTMENT ATTENDANCES

In 2021 falls-related ED attendances were significantly higher among females than males. Females attended the ED 24,947 times (1,719 per 100,000 females), while males experienced 22,683 attendances (1,653 per 100,000 males). In comparison to ED attendances in 2020, it was females who experienced a greater increase in the rate of ED attendances, from 1,553 in 2020.[14]

HEALTH AND WELLBEING SURVEY 2021

To assist in monitoring the health status and identifying the health needs of Western Australians, in 2021 10,346 adults aged 16 years and over completed a telephone survey as part of the WA Health and Wellbeing Surveillance System.[17]

Data collated through the telephone surveys indicate that the prevalence of injuries that required treatment from a health professional did not differ significantly by sex with 28% of male and 27% of female respondents falling into this category.

However, the prevalence of falls-related injuries did differ by sex as 8% of female respondents reported a falls-related injury in the past twelve months that required treatment from a health professional compared to 6% of male respondents.

AGE

Data on the incidence of falls across the lifespan is important for identifying age-related factors that increase risk. While falls are more common in older adults, Western Australians of any age can experience a fall.

FATALITIES

Falls-related fatalities increased across the lifespan in 2020, with individuals aged 85 years and over experiencing the highest number and age-specific rate of falls-related fatalities (n=257, 534 per 100,000 people). This burden among older adults is similar to that of previous years, with the number of falls-related fatalities continuing to increase significantly after the age of 45 in 2020.[14]

HOSPITALISATIONS

Further highlighting the burden of falls among older adults, in 2021 individuals aged 65-84 years experienced the highest number of falls-related hospitalisations (n=12,977) and individuals aged 85 years and over experienced the highest rate of falls-related hospitalisations (16,923 per 100,000). The dramatic increase in the rate of falls-related hospitalisations among older adults is depicted in Figure 6.

As previously highlighted, in comparison to 2020[14], Western Australia experienced an additional 1,544 hospitalisations in 2021. Individuals aged 65+ were primarily responsible for the increase in falls-related hospitalisations, accounting for 77% of the rise (n=1,195). As demonstrated in Figure 7, this increase is in addition to increases in hospitalisations among older adults over the past five years. Of additional note is that all age groups experienced a higher number of hospitalisations in 2021, except for individuals aged 0-4 years who attended to hospital 99 incidents less than in 2020.[14]

The average length of stay in hospital is another variable that differed by age in 2021, with older adults experiencing the highest average length of stay. Figure 8 demonstrates that individuals aged 85 years and over experienced the highest average length of stay at 9.1 days. This average length of stay in hospital among individuals aged 85 years and over did slightly decrease from a duration of 9.8 days in 2020, whilst individuals aged 15 to 24 spent on average 2.5 days extra in hospital in 2021, in comparison to 2020.[14]

Given the high number of falls-related hospital admissions and the longer average length of stay in hospital among older adults, in 2021 individuals aged 65-84 and 85+ experienced the highest total bed days in hospital as the result of a falls-related incident (115,254 and 77,967 respectively) and the highest total cost ($133,595,390 and $79,216,463).

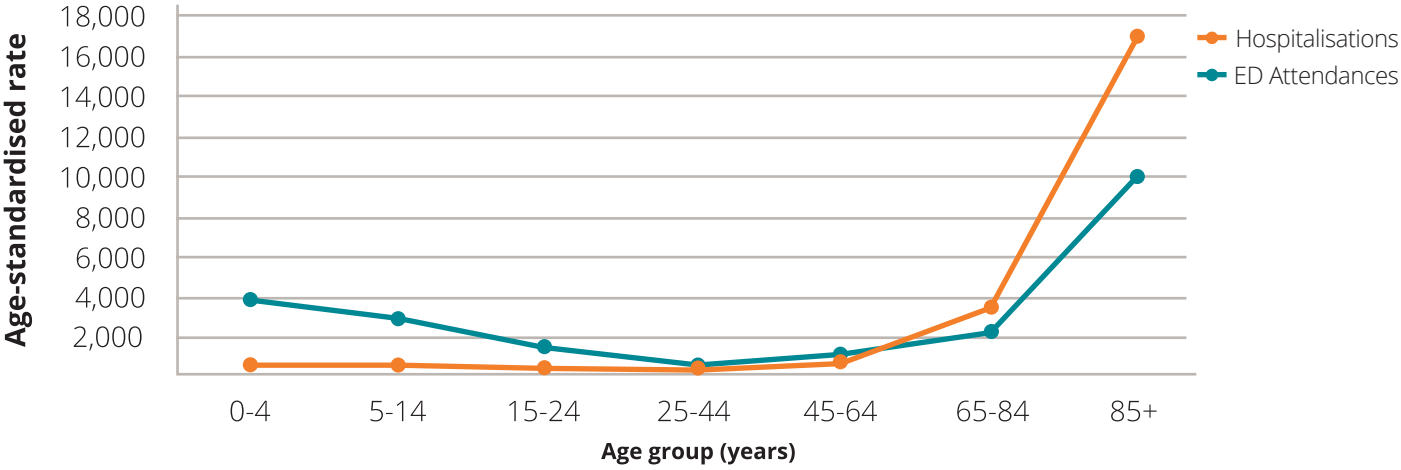


Figure 6. Age-standardised rate of falls-related hospitalisations and emergency department attendances by age groups, WA, 2021.[5]

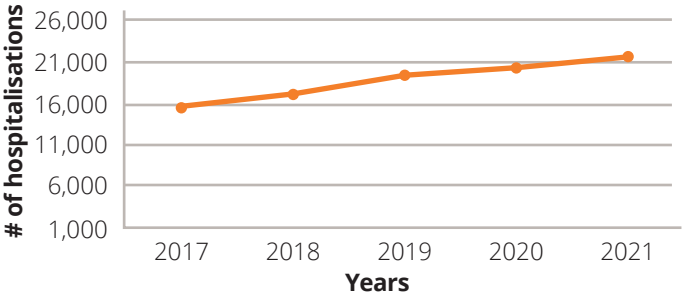


Figure 7. Number of falls-related hospitalisations among individuals aged 65+, WA, 2017 to 2021.[5,11–14]

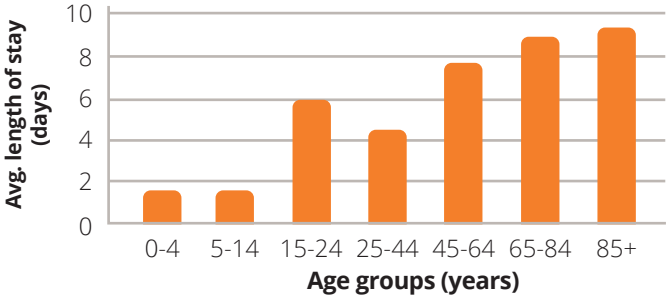


Figure 8. The average length of stay in hospital following a falls-related incident by age groups, WA, 2021.[5]

OVER THE PAST FIVE YEARS THERE HAS BEEN A

35.4% INCREASE

IN THE NUMBER OF FALLS-RELATED HOSPITALISATIONS AMONG INDIVIDUALS AGED 65+.[5,11]

EMERGENCY DEPARTMENT ATTENDANCES

Following on from historical trends in WA, as outlined in Table 4 older adults and children recorded the highest rate of falls-related emergency department attendances in 2021. Despite individuals aged 85+ and 0-4 years experiencing the highest rate of falls-related ED attendances, children aged 5-14 experienced the highest number of falls-related attendances (n=10,220).

Notably, the 5,081 falls-related ED attendances in 2021 accounted for 11% of all ED attendances among individuals aged 85+ in WA.

As displayed in Figure 9, following lower rates from 2018 to 2020, there was a considerable increase in the number of falls-related ED attendances among children from 2020 to 2021. Of the additional 5,484 falls-related ED attendances in 2021, children aged 0-14 years accounted for 68% of the increase (n=3,720).

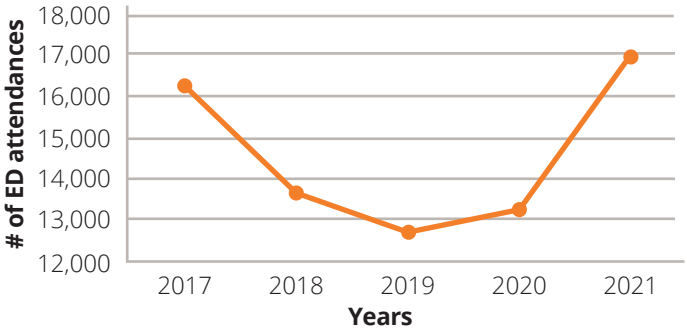


Figure 9. Number of falls-related ED attendances among individuals aged 0 - 14, WA, 2017 to 2021.[5,11–14]

	0-4		5-14		15-24		25-44		45-64		65-84		85+		
	n	ASPR	n	ASPR	n	ASPR	n	ASPR	n	ASPR	n	ASPR	n	ASPR	TOTAL
Fa.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32	4.8	164	44.9	257	533.6	463
Hos.	1,104	646.1	1,787	497.5	1,077	330.9	2,699	344.6	5,065	745.7	12,977	3,402.5	8,543	16,922.5	33,255
ED At.	6,724	3,934.9	10,220	2,845.1	4,318	1,326.6	5,838	745.5	6,678	983.1	8,785	2,303.4	5,081	10,064.8	47,644

Table 4. Number (n) and age-standardised rate (ASPR) of falls-related fatalities (2020), hospitalisations (2021) and ED presentations (2021) by age groups (years), WA.[5]
Note: Fa. = Fatalities | Hos. = Hospitalisations | ED At. = ED Attendances.

AGE AND FALLS

Age-related biological changes, including changes in balance, strength, mobility, vision and cognition, can place older adults at an increased risk of experiencing a fall.[18] Additionally, the common presence of co-existing medical conditions and the frequent use of medications places older adults at a heightened risk of experiencing a fall.[19]

Western Australia has an ageing population[20] and therefore the prevention of falls is of increased importance. Thanks to a growing body of evidence, we are now more aware than ever of the actions we can take to reduce the incidence of falls among this at-risk population group.[21,22] Active ageing strategies, including moving our body, improving our health and removing hazards are effective preventive measures to reduce the burden of falls in WA.

CITY OF ARMADALE *case study*

Keeping our bodies active as we age is an important part of healthy ageing. Being physically active by completing exercise for 30 minutes each day and conducting strength and balance exercises is important for older adults physical, mental and social health.

In 2021, the City of Armadale successfully received an Injury Matters Stay On Your Feet® Community Grant to raise awareness of the local outdoor fitness equipment available to support older adults to build their strength and balance to prevent falls.

To build older adults' overall confidence to utilise the outdoor fitness equipment, the City of Armadale delivered free Move Your Body Fitness Sessions at three different local sites. The 33 low-impact sessions were frequently attended by local older adults and focused on utilising the various equipment available to strengthen their legs and build their balance.

In addition to the Fitness Sessions, three tailored circuit workouts for various abilities were developed for all parks and reserves with outdoor fitness equipment to encourage physical activity in the community and the safe use of the equipment. These tailored workouts were promoted to the community via online flyers and the installation of signage at outdoor fitness equipment sites. There are six signs installed at each location, the first being an introduction sign for the workout, the second being a warmup, three outlining the beginner, intermediate and advanced workouts and the sixth being the cool down.

The Move Your Body Fitness Sessions and the circuit workouts have been well received by local community members and have benefited their physical and mental wellbeing.

"**This program has restarted my life...** I had no friends and now I go out for coffee with others from the session. I have also been jogging at the sessions, **I haven't done that for 20 years**."

"Group exercise for me is empowering... It was lots of fun, kept me motivated and **improved my physical and mental health**."

"These sessions have been really helpful with my everyday activities. I was at the grocery store the other day and I dropped something. I usually would've had to ask someone else to pick it up but I was able to pick it up by myself **I couldn't do that before**."

STAY ON YOUR FEET®
OLDER ADULT ONLINE LEARNING
case study

For over twenty years the Western Australian Department of Health has funded Injury Matters to deliver the Stay On Your Feet® program, WA's leading falls prevention program for older adults living in the community. Over the program's history, various activities have been conducted to raise awareness of how older adults can keep active and alert to prevent slips, trips and falls.

Thanks to technological advances and improved digital literacy among older adults there are now more avenues than ever to support older adults prevent falls. Recognising that more older adults use the internet to access health-related information, Injury Matters developed a suite of online learning modules to support older adults obtain reliable falls prevention information.

Available via www.stayonyourfeet.com.au, the 'Move Your Body' and 'Improve Your Health' online learning modules provide older adults with an interactive opportunity to improve their awareness and knowledge of various falls prevention protective factors. This additional avenue for older adults to access falls prevention information from the comfort of their own homes has proved valuable in reaching new members of our community, particularly individuals who may not be able to access in person activities due to personal or geographical limitations.

"After completing this module, I will **find an exercise activity that I can enjoy** with my family and friends."

"**I will move more** and try to achieve more than three hours a week."

"I am going to **talk through the suggestions** with my GP."

INDIGENOUS STATUS

Aboriginal and Torres Strait Islander peoples included within this dataset were identified based on an individual's self-identification during their presentations to health services or in records of their health outcomes.

Falls remain a key health issue impacting Aboriginal and Torres Strait Islander peoples with eight individuals dying in 2020, 1,550 individuals being hospitalised in 2021 and 1,515 individuals attending an ED in 2021 due to a falls-related incident. In WA Aboriginal and Torres Strait Islander peoples represent 3.3% of our population[20], however in 2021 Aboriginal and Torres Strait Islander peoples accounted for 5% of all falls-related hospitalisations.

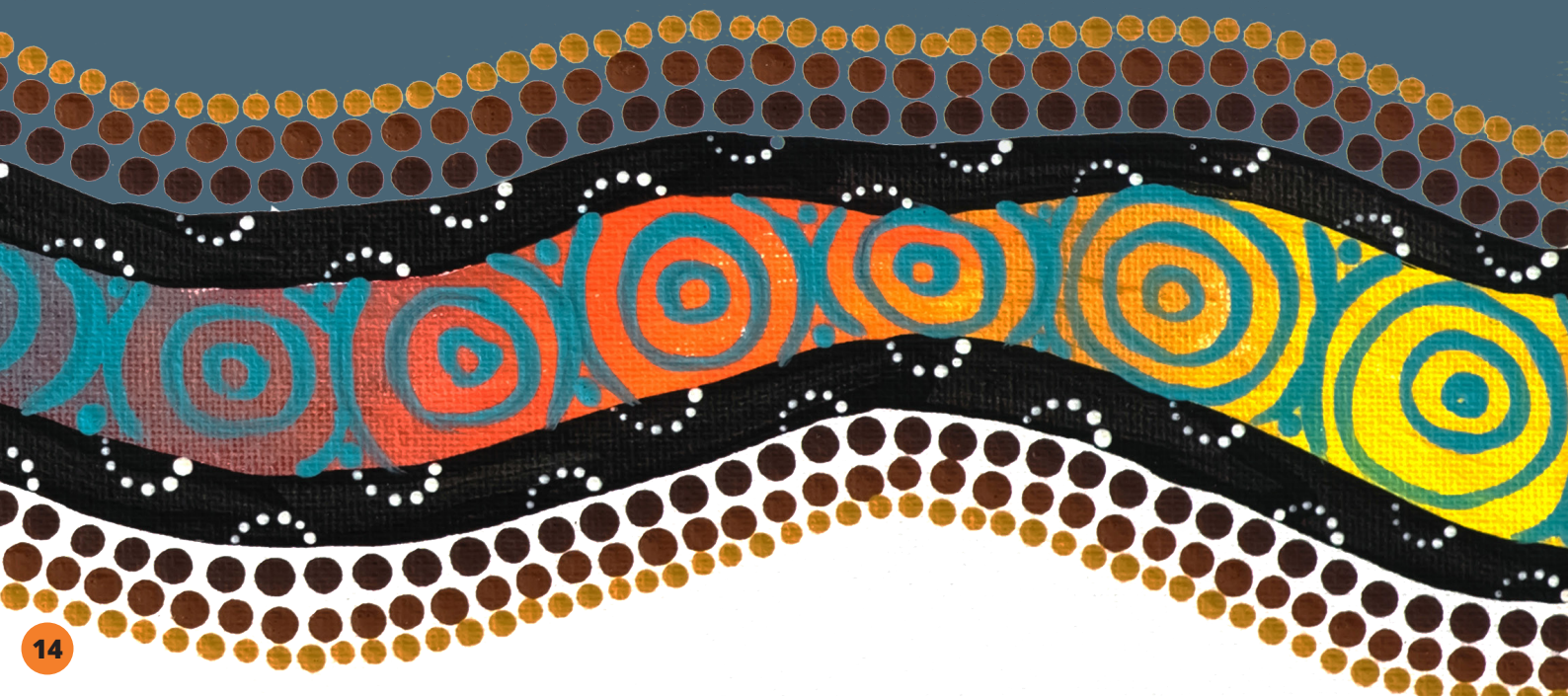
This years' datasets indicate an increase in the number of falls-related fatalities, hospitalisations and ED attendances among Aboriginal and Torres Strait Islander people. However, compared to the overall increase in these three metrics, Aboriginal and Torres Strait Islander people did not experience a proportional increase in falls-related fatalities or ED attendances as non-Aboriginal peoples.

	NUMBER	PROPORTION
Fatalities	8	1.7%
Hospitalisations	1,550	4.7%
ED Attendances	1,515	3.2%

Table 5. Number of falls-related fatalities (2020), hospitalisations (2021) and ED attendances (2021) to Aboriginal and Torres Strait Islander peoples and proportion of total count, WA.[5]

Aboriginal communities have a number of cultural elements embedded that support active ageing and provide unique protective strategies for falls prevention, such as cultural connection, self-determination, kinship and a holistic view of health.[23,24]

Despite these protective factors, similar to inequalities in other health outcomes, Aboriginal peoples are at a heightened risk of experiencing a fall. Some contributing factors to this increased risk include; low socioeconomic contexts, alcohol use, disruption to culture, less access to prevention efforts and adequate health care.[25,26] Additionally, Aboriginal peoples experience higher rates of epilepsy, head injury and hearing impairments which can place individuals at an increased falls-risk.[27]



UMBRELLA MULTICULTURAL COMMUNITY CARE SERVICES

case study

Umbrella Multicultural Community Care supports older people from culturally and linguistically diverse (CaLD) backgrounds to maintain independence and remain living in their own homes. With support from Injury Matters via the provision of a Stay On Your Feet® Community Grant, Umbrella developed and implemented the 'Let's Get Moving' program in 2022.

Aiming to promote strength and balance activities among older adults, the project involved the delivery of 17 educational and practical workshops to older adults from CaLD backgrounds. These workshops were co-developed and facilitated by a Polish-speaking physiotherapist and exercise instructor with experience working with older adult multicultural groups. Due to the bilingual facilitator and proactive recruitment activities with a local Polish Roman Catholic Centre, the majority of participants were born in Poland, resulting in the group connecting over their shared language and cultural background.

The workshops involved an interactive educational component, tailored balance and strength exercises, and a discussion on how the participants could include additional physical activity into their daily routines. To encourage the completion of daily strength and balance exercises, participants were also provided with at-home exercise resources.

Additionally, program registration documents and falls prevention information flyers were translated to Polish, ensuring that those who speak Polish as their primary language felt included and could access the information. The focus on multicultural programming and language support is critical to creating an inclusive and equitable system for people of all backgrounds. The underlying values of Umbrella and the inbuilt effort to create an inclusive program is reflected in the successful achievement of the program objectives and the sense of community built among participants.

Upon completion of the program, all participants agreed that the sessions were helpful, that they are more aware of how they can improve their balance, are more confident in their everyday activities and more knowledgeable of how to prevent falls.

At the first and final workshop the 4-Stage Balance Test and the 30-Second Sit to Stand falls risk assessment tools were administered by a Physiotherapist. The results from these tools indicate that 92% of participants improved their balance and 75% improved their strength after participating in the eight sessions.

Reflecting the program's success, under the leadership of two program volunteer participants continued to meet over the New Year period to exercise together. Due to the program's ongoing interest and active ageing benefits, Umbrella continues to deliver the program once a week as part of the Multicultural Village Hub program. The Hub is supported by Independent Living Assessment (ILA), the Village Hubs National Grant Manager, and is funded by the Australian Government Department of Social Services.

GEOGRAPHICAL LOCATION

Data included in this Report indicates that residents from the metropolitan areas of WA experienced the highest number of fatalities, hospitalisations and ED attendances. However, this is to be expected given the larger number of people that reside in WA's metropolitan areas.

The true burden of falls within regional areas of WA becomes evident when analysing the age-standardised rate of falls. Residents in the South West recorded the highest rate of falls-related fatalities in 2020 and the Kimberley region recorded the highest rate of falls-related hospitalisations in 2021.

Note: Regional ED attendances included within this Report are underreported due to the incomplete use of external cause codes within regional emergency departments. ED attendance data is outlined in Table 6, however no additional commentary is provided regarding the ED attendance data.

FATALITIES

With an age-standardised rate of 15 per 100,000 people the South West region of WA had the highest rate of falls-related fatalities in 2020, followed by the East Metropolitan region (15 per 100,000). As outlined in Table 6, the Metropolitan regions of WA accounted for the majority of falls-related fatalities (79%, n=365).

Overall minimal variance existed when comparing the geographical location of falls-related fatalities in 2019 and 2020, including the Pilbara region having zero falls-related fatalities for two consecutive years.[5,14]

HOSPITALISATIONS

Similar to that of falls-related fatalities, the metropolitan areas of WA recorded the highest number of falls-related hospitalisations in 2021 (78%, n=26,076). Differences exist within each of these metropolitan areas as the South Metropolitan area had the largest number and rate of falls-related hospitalisations (1,079 per 100,000 people and n=9,272), compared to the other metropolitan regions. Aligning to the highest number of falls-related hospitalisations, the South ($84,988,960), North ($83,572,441) and East ($76,799,482) Metropolitan health regions had the highest costs associated with falls.

Table 6 shows that in 2021 all regional areas experienced a higher falls-related hospitalisation rate than the metropolitan regions, except for the Great Southern and South West who experienced a rate similar to the metropolitan regions.

For the fifth year in a row, the Kimberley health region experienced the highest rate of falls-related hospitalisations in 2021 (2,023 per 100,00, n=640).[5,11-14] Further data analysis regarding the incidence of falls-related hospitalisations in the Kimberley highlights that unlike the overall hospitalisation dataset, in the Kimberley males accounted for a higher number of falls-related fatalities and all age groups experienced a higher rate of hospitalisations, except for individuals aged 85+ who recorded a similar rate. Of additional note is that Kimberley residents aged 45-64 experienced a falls-related hospitalisation rate significantly higher than the overall state rate (2,487 compared to 746 per 100,000 people).

There was variation across the average length of stay in hospital for a falls-related hospitalisation. In 2021 Wheatbelt residents had the highest average length of stay (12.1 days), followed by the Great Southern (8.9 days) and South West (8.3 days).

KIMBERLEY RESIDENTS EXPERIENCED A FALLS-RELATED HOSPITALISATION RATE 136% HIGHER THAN THE STATE RATE IN 2021.[5]

	FATALITIES			HOSPITAL ADMISSIONS			ED ATTENDANCES		
	n	ASR	SRR	n	ASR	SRR	n	ASR	SRR
East Metro	116	14.89	1.05	8,090	1,036.2	0.98	13,225	1,773.60	1.05
North Metro	128	13.43	0.95	8,714	978.75	0.93	19,102	2,450.03	1.44
South Metro	121	13.25	0.94	9,272	1,079.34	1.04	13,771	1,909.85	1.13
Goldfields	<10	N/A	1.48	603	1,177.35	1.11	94	170.93	0.10
Great Southern	16	N/A	1.07	899	1,010.31	0.92	104	152.68	0.09
Kimberley	<6	N/A	N/A	640	2,022.88	2.36	96	256.95	0.16
Midwest	11	N/A	0.95	946	1,204.01	1.11	133	195.32	0.11
Pilbara	0	N/A	N/A	387	1,138.40	1.20	98	203.29	0.11
South West	40	15.2	1.10	2,458	1,031.90	0.95	225	118.69	0.07
Wheatbelt	18	N/A	1.11	1,243	1,193.39	1.09	584	746.99	0.42
Unknown	-	-	-	-	-	-	212	N/A	N/A
All	463	14.12	1.00	33,252	1,055.91	1.00	47,644	1,692.1	1

Table 6. Number (n), age-standardised rate (ASR) and standardised rate ratio (SRR) of falls-related fatalities (2020), hospitalisations (2021) and ED attendances (2021) by health region, WA.[5]
Note: Age-standardised rates are only provided for counts >=20 and standardised rate ratios (SRR) are only provided for counts >=6.

FALLS IMPACT OUR REGIONAL AREAS

A number of environmental and behavioural factors can contribute to individuals living in rural and remote areas of Australia experiencing greater health inequalities than those living in metropolitan areas. After adjusting for age, the burden of disease and injury in Australia increases with remoteness, with individuals living in 'remote and very remote' areas experiencing a burden of disease 1.4 times higher than individuals residing in 'major cities'.[28] Additionally, difficulties accessing primary healthcare services in regional WA may lead to regional residents attending hospital for minor falls-related injuries, increasing pressure on regional hospitals.

CITY OF ALBANY LIBRARY *case study*

In 2022, the City of Albany Public Library received an Injury Matters Stay On Your Feet® Community Grant to deliver three sessions to the older adult community regarding removing hazards for falls prevention. These sessions included local health service providers delivering sessions in their respective fields, i.e. an eye health session with an Optometrist, a falls prevention session with an Occupational Therapist and a foot health session with a Podiatrist. Additionally, take-home packs with relevant information pertaining to each session and general falls prevention information were provided for all participants at the end of the sessions.

Receiving the grant enabled the Library to partner with the City of Albany's Community Development Team to run the 'Active & Healthy Ageing' program, which ran 14 sessions for a two-week period for the local community. The 'Active & Healthy Ageing' program also connected the Library with organisations such as Dementia Australia, Advocare and VisAbility WA.

Overall 199 people participated in the 'Active & Healthy Ageing' program, with participants providing positive feedback on the program and reporting that they will implement the activities at home.

Due to the interest expressed by local older adults and the partnerships made from the local 'Active & Healthy Ageing' program, aspects of this grant project are still being delivered. One such example is the use of resources purchased via the grant to roll out Seniors Strength classes in the Library in collaboration with the City of Albany Community Development Team. These sessions have proven popular among older adults who feel uncomfortable in a gym setting but wish to attend regular sessions in a familiar setting to improve their physical and mental wellbeing.

"A lot of issues I am becoming aware of were explained and also how to deal with them."

"I learnt about possible ways of avoiding injuries and some strengthening exercises."

"I learnt about how best to set up my environment and habits to reduce the risk of falls."

PLACE OF OCCURRENCE

While a fall can happen anywhere, they can occur more frequently in some locations due to their frequency of use, the activities conducted within the area and the potential hazards within the area.

For information regarding what locations are included within each place of occurrence, please refer to the technical notes on page 2.

In 2021, the home remained the leading place of occurrence of a fall that resulted in hospitalisation, accounting for 44% of falls-related hospitalisations (n=14,576). Within the home, falls primarily occurred in outdoor areas (n=2,157), the bathroom (n=1,827) and the bedroom (n=1,683), all of which have been the leading locations within the home for the previous four years.[11–14]

As outlined in Table 7, health service areas (n=4,162), residential institutions (n=2,551) and public street / transport paths (n=1,266) were additional leading locations of a fall that resulted in hospitalisation in 2021. Within the residential institution category, aged care facility was the leading location accounting for 2,477 falls-related hospitalisations.

Similar to previous Annual WA Falls Reports, the most common location for falls-related hospitalisations did not differ greatly between genders in 2021. However once again, females experienced a larger proportion of falls-related hospitalisations within a home or residential institute compared to males, 57% of all female hospitalisations compared to 44% of male hospitalisations. Health service areas was another location where notable discrepancies exist, with it being the location of 5% more falls-related hospitalisations among males than females in 2021.

OVER HALF OF FALLS-RELATED HOSPITALISATIONS IN 2021 WERE THE RESULT OF A FALL THAT OCCURRED WITHIN THE HOME OR AN AGED CARE FACILITY (51%, n=17,053).[5]

PLACE OF OCCURRENCE	NUMER OF HOSPITALISATIONS		
	FEMALE	MALE	TOTAL
HOME	8,829	5,747	14,576
HEALTH SERVICE AREA	1,884	2,278	4,162
RESIDENTIAL INSTITUTION	1,624	927	2,551
PUBLIC STREET/TRANSPORT PATH	716	550	1,266
SPORTS AND ATHLETICS AREAS	292	549	841
OTHER SPECIFIED INSTITUTION, PLACE AND PUBLIC ADMINISTRATION AREA	299	326	625
SCHOOL	204	273	477
COUNTRYSIDE	173	215	388
TRADE AND SERVICE AREA	179	190	369
CAR PARK	152	88	240
INDUSTRIAL AND CONSTRUCTION AREA	10	46	56
FARM	25	26	51
UNSPECIFIED PLACE OF OCCURENCE/NOT REPORTED	3,820	3,830	7,650
ALL	**18,207**	**15,045**	**33,252**

Table 7. Number of falls-related hospitalisations by place of occurrence and gender, WA, 2021.[5]

RESIDENTIAL AGED CARE *case study*

As part of the National Aged Care Mandatory Quality Indicator Program, it is a requirement for all Australian Government subsidised residential aged care services to report against five quality indicators, one of which relates to falls and major injury.[7]

Within the Program, 'falls' are recorded as eligible care recipients who experience a fall (one or more), while 'falls that resulted in major injury' are those that result in one or more of the following; bone fractures, joint dislocations, closed head injuries with altered consciousness and/or subdural haematoma.

In 2022, on average, 35% of eligible aged care recipients in WA experienced one or more falls and 2.3% experienced a fall that resulted in major injury.[7]

AN AVERAGE OF 35% OF ELIGIBLE WA AGED CARE RECIPIENTS EXPERIENCED ONE OR MORE FALLS IN 2022.[7]

WORKPLACE DATA

Every environment has different elements that can increase an individual's falls risk and workplaces are no exception. Due to the various risk factors and the large quantity of time that is spent at work, it is vital that the working environment is free from potential hazards and that we conduct tasks as safely as possible to reduce our falls risk.

In 2021, 4,149 lost-time compensation claims were lodged involving workplace falls, accounting for 26% of all lost-time claims lodged in the WA workers' compensation scheme.[8] The average lost-time claim cost for a work-related fall was $70,836 and the median days lost for workplace falls was 56 days/shifts off work, both of which were higher than the figures for total lost-time claims lodged.

Demographic data relating to lost-time claims due to falls-related incidents indicates that males accounted for the largest share of claims in 2021, at (55%, n=2,279). The prevalence of claims also varied by age with individuals aged 45 to 54 accounting for the highest number of falls-related lost-time claims lodged in 2021 (25%, n=1,021), however the highest rate occurred in workers aged between 60 and 64 (6.3 claims per 1,000 employees).

As outlined in Table 8 the incidence of workplace falls-related claims varied by industry in 2021, with the 'Education and training' (n=618), 'Health care and social assistance' (n=561) and 'Construction' (n=534) industries contributing to the highest number of claims.

The majority of workplace falls-related injury claims in 2021 involved an indoor or outdoor environmental agency (87% of claims, n=3,606) and were due to falls on the same level (71% of claims, n=2,946). Obtaining a sprain or strain was the most common type of injury sustained in the falls-related incident (2,558 claims, 62%), whilst the lower limbs were the most common bodily location to be injured (2,135 claims, 51%).

Workplace falls-related incidents can also result in fatalities, with 13 people dying due to a workplace fall in WA from 1 July 2016 to 30 June 2021.[9] Of these 13 fatalities, 12 were due to a fall from a height and the remaining fatality was due to a fall on the same level. The risk of a workplace falls-related incident occurring in any industry is reflected in a falls-related fatality occurring in ten different subdivisions from 2016 to 2021, including three fatalities in the 'Building Construction' subdivision.

For further information regarding the workplace claims data provided by WorkCover WA[8] and the workplace fatality data provided by the Government of Western Australia's Department of Mines, Industry Regulation and Safety[9], please refer to the technical notes located on page 2.

$293.9 MILLION IN LOST-TIME CLAIMS WERE LODGED IN THE WA WORKERS' COMPENSATION SCHEME IN 2021 DUE TO FALLS.[8]

INDUSTRY DIVISION	CLAIMS
EDUCATION AND TRAINING	618
HEALTHCARE AND SOCIAL ASSISTANCE	561
CONSTRUCTION	534
MINING	468
MANUFACTURING	313
TRANSPORT, POSTAL, AND WAREHOUSING	246
ACCOMODATION AND FOOD SERVICES	229
RETAIL TRADE	221
PUBLIC ADMINISTRATION AND SAFETY	196
WHOLESALE TRADE	130
ADMINISTRATIVE AND SUPPORT SERVICES	128
AGRICULTURE, FORESTRY AND FISHING	123
OTHER SERVICES	120
ARTS AND RECREATION SERVICES	101
PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES	56
ELECTRICITY, GAS, WATER, AND WASTE SERVICES	43
RENTAL, HIRING, AND REAL ESTATE SERVICES	38
INFORMATION MEDIA AND TELECOMMUNICATIONS	17
FINANCIAL AND INSURANCE SERVICES	7
TOTAL	**4,149**

WHEN PEOPLE FALL

Tables 9, 10 and 11 outline the month, day of the week and time of the day that people die, are hospitalised and attend an ED due to a falls-related incident.

Aside from a smaller count in December (n=21) and a spike in October (n=51), the number of falls-related fatalities was fairly evenly distributed across the months of the year in 2020. The distribution of falls-related fatalities was also similar across days of the week (Table 10).

There was little variation across the incidence of falls-related hospitalisations and ED attendances by day of the week in 2021, however the number of ED attendances was at a minimum during the month of February.

The number of hospitalisations and ED attendances did vary by day of the week in 2021 (Table 10). Falls-related hospitalisations were the lowest on the weekend, whilst falls-related ED attendances were the highest on the weekend.

As seen in previous years[11-14], falls-related hospitalisations and ED attendances are much lower overnight from 9pm to 5:59am. Following this trough, there is a noticeable increase in the number of falls-related hospital and ED attendances from 9 am to 5:59 pm (see Figure 10).

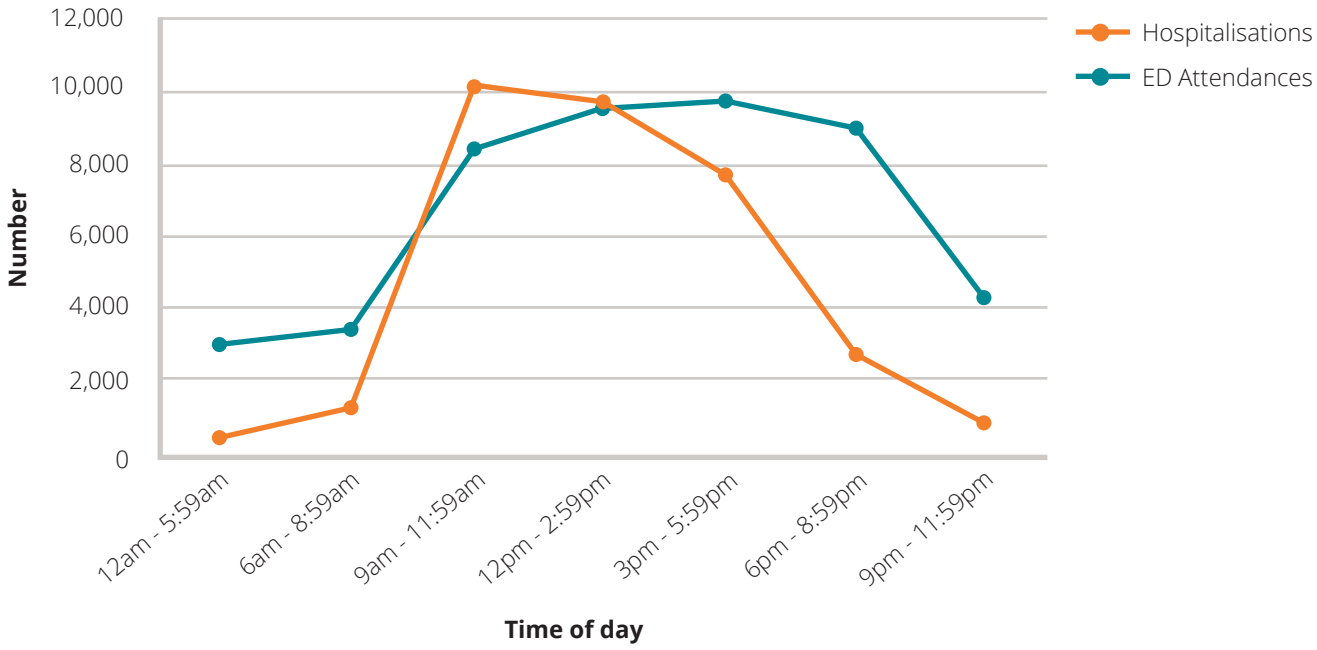


Figure 10. Number of falls-related hospitalisations and ED attendances by time, WA, 2021.[5]

Photo by Samuel T

	FATALITIES (n=463)	HOSPITAL ADMISSIONS (n=33,252)	ED ATTENDANCES (n=47,644)
JANUARY	31	2,691	3,825
FEBRUARY	33	2,501	3,298
MARCH	40	2,810	4,278
APRIL	29	2,737	3,804
MAY	43	2,794	4,379
JUNE	45	2,895	4,116
JULY	46	2,763	3,786
AUGUST	41	2,901	4,218
SEPTEMBER	45	2,750	3,993
OCTOBER	51	2,875	4,026
NOVEMBER	38	2,811	4,015
DECEMBER	21	2,724	3,906

Table 9. Number of falls-related fatalities (2020), hospitalisations (2021) and ED attendances (2021) by month, WA.[5]

	FATALITIES (n=463)	HOSPITAL ADMISSIONS (n=33,252)	ED ATTENDANCES (n=47,644)
SUNDAY	61	2,560	7,599
MONDAY	67	4,972	6,896
TUESDAY	75	5,433	6,342
WEDNESDAY	68	5,536	6,411
THURSDAY	61	5,540	6,389
FRIDAY	65	5,827	6,782
SATURDAY	66	3,384	7,225

Table 10. Number of falls-related fatalities (2020), hospitalisations (2021) and ED attendances (2021) by day, WA.[5]

	FATALITIES (n=463)	HOSPITAL ADMISSIONS (n=33,252)	ED ATTENDANCES (n=47,644)
12AM - 5:59AM	-	596	2,964
6AM - 8:59AM	-	1,075	3,338
9AM - 11:59AM	-	10,117	8,777
12PM - 2:59PM	-	9,907	9,535
3PM - 5:59PM	-	7,772	9,818
6PM - 8:59PM	-	2,822	8,939
9PM - 11:59PM	-	963	4,273

Table 11. Number of falls-related fatalities (2020), hospitalisations (2021) and ED attendances (2021) by time, WA.[5]

CAUSES OF HOSPITALISATIONS

For further information regarding the data source and the coding used to group the falls description categories, please refer to the Technical Notes on page 2.

Of the 26,232 falls-related hospitalisations that had a cause specified in 2021 (79% of all hospitalisations), 29% were due to a fall on the same level from slipping, tripping or stumbling (n=9,534), followed by a fall from, off, or into an object on the same level (n=8,107, 24%).

The causes of falls-related hospitalisations in 2021 differed among age groups. A fall on the same level from slipping, tripping or stumbling accounted for 32% (n=6,931) of falls-related hospitalisations among older adults aged 65+, compared to 12% (n=355) of hospitalisations among children aged 0-14. The leading cause of falls-related hospitalisations among children aged 0-14 years was a fall involving playground equipment (20%, n=586).

As outlined in Table 12, the cause of the fall influenced the average length of time spent in hospital. Falls-related incidents that involved a wheelchair (13.0 days), fall from bed (10.8 days) and fall from chair (9.0 days) resulted in the longest average length of stays in hospital. Similar to that of previous years[13,14], the high average length of stay due to a fall from a bed or a chair can be attributed to the high average length of stay within assistive equipment causality that aligns to these categories, including falls involving a special purpose bed (19.4 days), commode chair (20.7 days) and a bath chair (14.7 days).

FALL DESCRIPTION	HOSPITALISATIONS	
	n	ALoS
Fall on same level from slipping, tripping, or stumbling	9,534	7.7
Fall from, off, or into an object on the same level	8,107	8.1
Fall from bed	1,573	10.8
Fall from an escalator, curb, stairs or step	1,472	5.4
Fall from one level to another	966	3.6
Fall from chair	921	9.0
Fall involving pedestrian conveyance	774	2.6
Fall from playground equipment	636	1.26
Fall from, out of, or through a balcony, bridge, roof, floor or other structure	580	5.46
Fall on or from ladder	547	4.7
Other fall on same level due to collision with, or pushing by, another person	470	2.1
Fall involving wheelchair	208	13.0
Other	133	4.2
Diving or jumping into water causing injury other than drowning or submersion	130	3.6
Fall from tree	92	2.0
Fall while being carried or supported by another person	89	3.8
Unspecified fall	7,020	9.3
All	**33,252**	**7.7**

Table 12. Number (n) and average length of stay in hospital (ALoS) of falls-related hospitalisations by cause, WA, 2021.[5]

ALCOHOL

Drinking alcohol continues to be a leading risk factor for alcohol-related injuries, including among falls hospitalisations with falls-related hospitalisations accounting for 39% of the 30,000 alcohol-related injuries in Australia in 2019-20.[29]

Due to the impact of alcohol use on an individual's psychomotor function; coordination, reaction time, cognitive ability, judgement and visual focus[30,31], any amount of alcohol use can increase the risk of a fall[32] and harm the individuals overall well-being.[33]

Due to data limitations this Report only presents those falls-related hospitalisations where alcohol was recorded as a contributing factor and therefore is not conclusive of the role of alcohol in all falls-related hospitalisations.

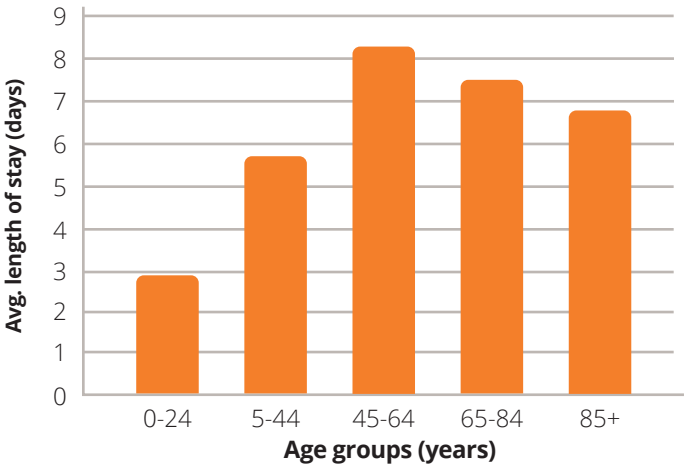


Figure 11. Average length of stay in hospital due to an alcohol-related fall by age groups, WA, 2021.[5]

In 2021 7% (n=2,168) of patients had consumed alcohol prior to their admission, which is a slight increase from the 6% reported in 2020.[14] Individuals aged 45 to 64 accounted for 40% (n=871) of all alcohol-related falls hospitalisations in 2021 and experienced the highest average length of stay in hospital (8.2 days).

As outlined in Figure 11, differences existed among age groups in the average length of stay in hospital due to an alcohol-related fall in 2021.

Over one-fifth of individuals admitted to Royal Perth Hospital in 2021 due to a falls-related incident with an Injury Severity Score greater than 12 had consumed alcohol prior to their fall (n=74).[10] This highlights the potential severity of alcohol-related falls and the potential significant under-reporting of alcohol consumption within state-wide data collection.

The National Health and Medical Research Council (NHMRC) recommends that for healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of an alcohol-related injury arising from that occasion.[30] Harm from alcohol is preventable, the more alcohol a person drinks the more their motor skills and inhibitions decrease, while risk-taking behaviour increases. This risky behaviour leads to a greater risk of injury during, or immediately after that occasion.[3]

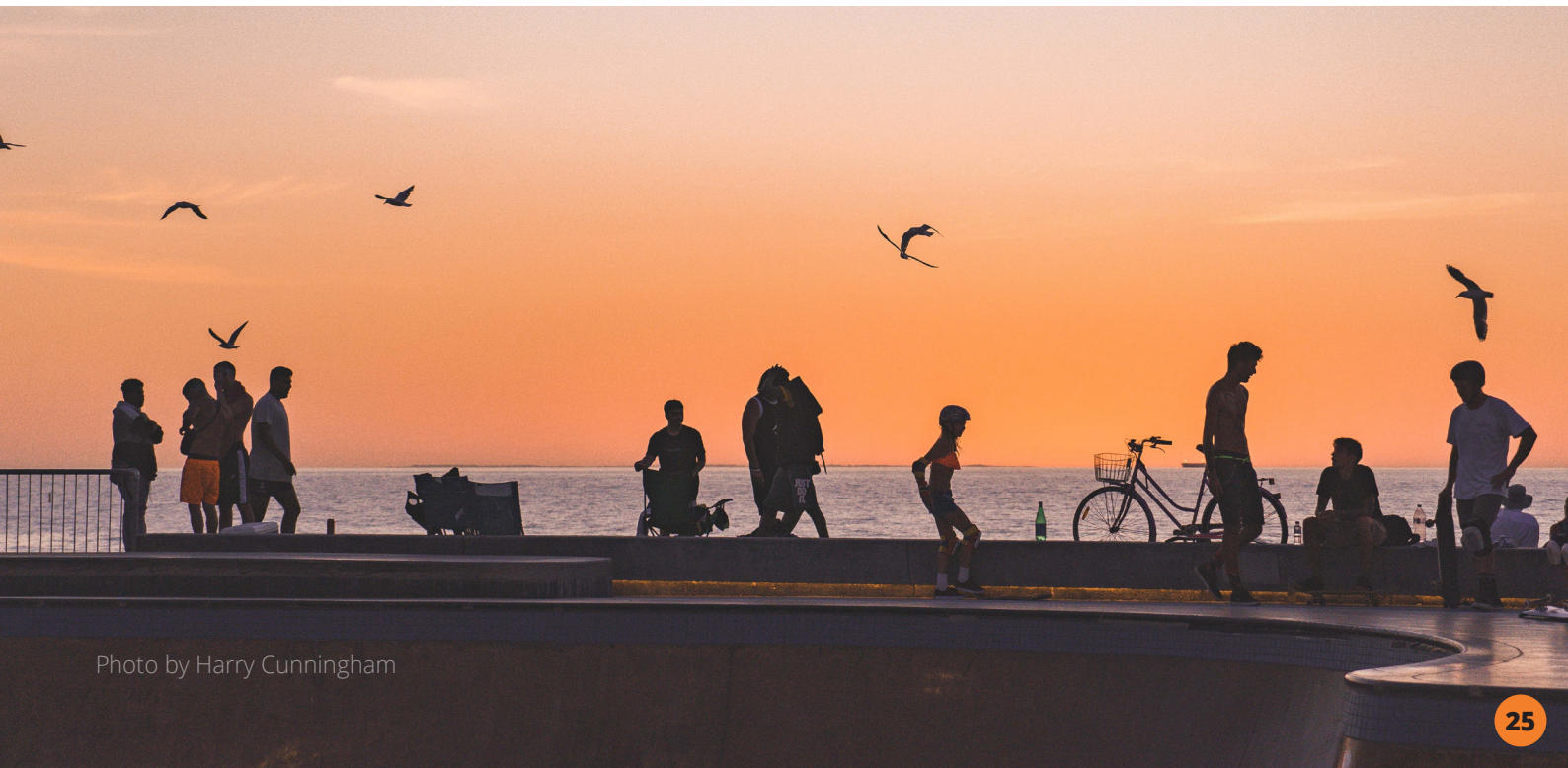


Photo by Harry Cunningham

INJURY DIAGNOSIS AND NATURE

Data included regarding injury diagnosis and the nature of the injury has a different total hospitalisation count than that of the rest of the Report, at 22,828 and 30,771 respectively. Additional information is available within the technical notes on page 2.

As outlined in Table 13, injuries to lower limbs (33%, n=7,593) was the main diagnosis attributed to falls-related hospitalisations in 2021, followed by injuries to upper limbs (26%, n=5,811) and injuries to the head and neck (25%, n=5,740).

Comparable to previous datasets, in 2021 50% of falls-related hospitalisations required treatment due to a fracture (n=15,277). Additional leading injuries included soft tissue injuries (13%, n=4,051) and intracranial injuries (9%, n=2,780), see Table 14.

In 2021 Royal Perth Hospital, a major trauma hospital in WA, admitted 2,643 individuals due to a falls-related incident.[10] Despite minor injuries making up the majority of admissions (n=2,291), major injuries also cause a significant burden on the healthcare system due to an average hospital stay almost triple that of minor injuries (15.1 versus 5.6 days).[10]

INJURY DIAGNOSIS	HOSPITALISATIONS		
	n	ASR	%
Injuries to lower limbs (hip, thigh, knee, lower leg, ankle and foot)	7,593	240.26	33.3%
Injuries to upper limbs (shoulder, upper arm, elbow, forearm, wrist, hand and fingers)	5,811	194.52	25.5%
Injuries to head and neck	5,740	186.37	25.1%
Injuries to thorax, abdomen, back, spine and pelvis (thorax, abdomen, lower back, lumbar spine, pelvis and external genitals)	3,409	106.02	14.9%
Other and unspecified effects of external causes	191	5.68	0.8%
Poisoning and toxic effects	58	1.98	0.3%
Burns and frostbite	20	0.67	0.1%
Injuries to multiple or unspecified region, foreign body effects	6	N/A	-
Total	**22,828**	**-**	**100%**

Table 13. Injury diagnosis due to falls-related hospitalisations, by number (n), age-standardised rate (ASR) and proportion (%), WA, 2021.[5]

NATURE	HOSPITALISATIONS	
	n	%
Fracture	15,277	49.7%
Soft tissue	4,051	13.2%
Intracranial	2,780	9.0%
Open wound	2,035	6.6%
Internal organ	1,294	4.2%
Other	998	3.2%
Dislocation	486	1.6%
Superficial	214	0.7%
Poisoning	85	0.3%
Thermal	37	0.1%
Non-specified	3,514	11.4%
Total	**30,771**	**100.0%**

Table 14. Type of injury obtained in relation to a falls-related hospitalisations, by number (n) and proportion (%), WA, 2021.[5]

ONE THIRD

OF FALLS-RELATED HOSPITALISATIONS WERE DUE TO AN INJURY TO THE LOWER LIMBS IN 2021.[5]

CONCLUSION

This annual publication continues to highlight the frequent and growing burden of falls on the WA community. Data included in this Report indicates that a Western Australian died every 19 hours in 2020, was hospitalised every 15 minutes in 2021 and presented to an emergency department every 11 minutes in 2021 due to a falls-related injury.

The 2022 WA Falls Report[14] was the first to demonstrate the impacts of the COVID-19 pandemic, which included some variance in falls-related hospitalisation data and a decrease in falls-related ED attendances compared to the previous year. The 2023 Report indicates that there has been a change in the incidence of falls recently, however it will take time to truly understand the impact of social isolation and other behaviour changes on the WA communities long term risk of falls.

Of particular note is that from 2019 to 2020, there was a 31% increase in the number of falls-related fatalities in WA. With 463 individuals losing their life due to a fall in 2020, this equates to at least one Western Australian dying due to a fall every day.

Additionally, there was an increase in the frequency of falls-related hospitalisations and ED attendances in WA in 2021, with a 5% increase in the number of hospitalisations and a 13% increase in the number of ED attendances, when compared to 2020.

The high impact of falls among our older adult population is again evident in this Report, with individuals aged 65 years and over accounting for 91% of the falls-related fatalities in 2020 and 65% of falls-related hospitalisations in 2021. It is concerning that over a five year period from 2017[11] to 2021, WA has experienced a 35% increase in the number of falls-related hospitalisations among individuals aged 65 years and over.

The impact of falls on other priority populations cannot be ignored. For example, children aged 5-14 experienced the highest number of falls-related ED attendances and Kimberley residents recorded the highest rate of falls-related hospitalisations for the fifth consecutive year.

The home remained the leading hazardous place in 2021, with over half of falls-related hospitalisations resulting from a fall that occurred within the home or an aged care facility. Hospitalisations also commonly resulted from falls within health services and on public footpaths, reinforcing that falls can happen anywhere.

Alcohol continued to be a leading risk factor for falls-related hospitalisations in 2021, as 7% of hospitalisations had alcohol recorded as a contributing factor to the hospitalisation. Individuals aged 45 to 64 accounted for over 40% of these incidents, further highlighting the varying falls-risk factors across the lifespan.

In 2021, individuals spent an average of 7.7 days in hospital due to a falls-related incident, totalling 255,371 hospital bed days and costing an estimated $310,987,115. These hospitalisations are contributing to the pressure on our healthcare system and impacting the lives of Western Australians.

falls are preventable

RECOMMENDATIONS

Biological, behavioural, environmental, cultural and social factors can all increase an individual's risk of experiencing a fall. However, targeted falls prevention interventions can reduce an individual's risk of falling.

APPLICATION OF EVIDENCE

Australia leads the way in falls prevention research; therefore, there is comprehensive local evidence regarding interventions that effectively reduce an individual's falls risk. Research supports the effectiveness of population-wide preventive health interventions, single non-exercise interventions targeting individuals with specific falls risk factors and multi-factorial interventions. This evidence needs to be translated via accessible activities in various settings.

As outlined in this Report, older adults, regional residents and individuals with mobility impairments are at high risk of falls-related hospitalisations and therefore co-designed, comprehensive and accessible interventions are urgently needed to reduce the falls risk in these high-risk populations.

AFFORDABLE AND ACCESSIBLE EXERCISE CLASSES

Remaining physically active and undertaking functional exercises to improve strength and balance are essential for reducing falls and maintaining independence. Older adults living in Western Australia have previously had access to subsidised local exercise classes to improve their strength, balance and cardiovascular health. However this support has ceased, and when coupled with cost-of-living pressures, it is now harder for older adults to participate in preventive activities.

Subsidised exercise classes focusing on strength and balance are needed to support older adults to improve their functional ability and reduce their falls risk, resulting in less pressure on the healthcare system and an increased quality of life.

Programs to support older Aboriginal people, such as the Ironbark falls prevention program, are vital. The WA Ironbark pilot project, a group-based yarning and exercise class centering on a holistic view of health, successfully demonstrated the impact of implementing a program developed specifically by and for Aboriginal people.

REDUCE ALCOHOL-RELATED HARM

Alcohol consumption is a key factor increasing an individual's risk of a fall. The latest National Drug Strategy Household Survey results indicate older adults are more likely to consume alcohol in quantities exceeding lifetime risk guidelines and drink daily than the general population.[35]

Given the implications this has on older adults falls risk and overall wellbeing, we can no longer accept the escalating harm that alcohol products cause to Western Australian individuals, families, communities, and the healthcare system.

Injury Matters supports the need for additional action to be taken to reduce alcohol-related harms in WA, including;

- the introduction of a minimum price for alcohol, set at a level informed by evidence (set at $1.50 per standard drink) and regularly adjusted for inflation, as part of a comprehensive approach to minimising harm from alcohol;
- tightened regulations on the marketing and sale (including online) of alcohol products;
- investment in workforce development activities to build the confidence of health professionals to identify and address harmful alcohol use among older adults.

IMPROVED REFERRAL PATHWAYS

The interaction of all elements of the health care system are crucial to the continuity of care and post-fall health outcomes, therefore the adoption of falls pathways within all Western Australian hospital emergency departments should be prioritised. A falls pathway provides a system to assess falls risk and manage access to specialist care for those presenting to the emergency department following a fall.

The emergency department is not the only location where individuals at high risk for falls can be identified. Therefore, all health professionals including GP's, Pharmacists, Paramedics, Community Nurses and Social Workers should be supported and upskilled to utilise the direct engagement they have with community members to identify and refer at-risk individuals to culturally appropriate falls prevention services and activities.

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GET INVOLVED IN FALLS PREVENTION

Falls prevention is the responsibility of all health and community workers across WA. Fortunately, no matter what your role is in reducing Western Australians risk of having a fall, Injury Matters offer a range of Stay On Your Feet® activities to support you in your falls prevention efforts.

LOOKING FOR AVENUES TO IMPROVE YOUR FALLS PREVENTION KNOWLEDGE?

Injury Matters regularly offer professional development opportunities in-person, by webinar and via online learning modules, to support you stay up to date with the latest evidence, current policy and best practice for preventing falls.

Additionally, the Stay On Your Feet® website provides access to up to date falls prevention information, tools and pathways. Visit www.stayonyourfeet.com.au today to find out more.

NEED SUPPORT TO INCREASE OLDER ADULTS FALLS PREVENTION AWARENESS?

There are a range of free Stay On Your Feet® resources available to guide you, including;

- Grants of up to $5,000 to support you implement a falls prevention project in your community.
- Falls prevention education sessions delivered by Injury Matters' Peer Educators to community groups.
- Print, online and multimedia resources to educate older adults about how they can prevent falls.
- Promotional displays to hire for your public spaces.

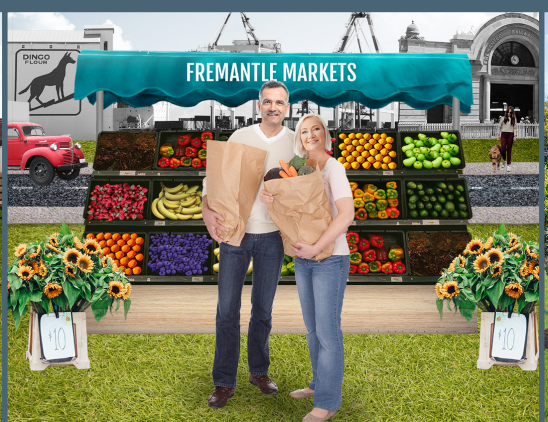
Campaign toolkits that align to the Stay On Your Feet® Move Improve Remove campaigns and contain a suite of materials for you to share on social media and guide you in facilitating activities for your local community.

SEEKING OPPORTUNITIES TO EXPAND YOUR PROFESSIONAL NETWORK?

Injury Matters' Community Falls Network breaks down the silos within the falls prevention sector by providing a forum to share solutions and connect with fellow professionals.

WANT TO PARTICIPATE IN FALLS-RELATED ADVOCACY ACTIVITIES?

Stay up to date with opportunities to get involved in Injury Matters falls prevention advocacy activities by subscribing to the monthly Falls Prevention eNews. For more information about any of these activities, please contact Injury Matters on (08) 6166 7688.



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