WESTERN AUSTRALIAN DROWNING REPORT 2017-18

Towards a nation free from drowning

ROYAL LIFE SAVING
WESTERN AUSTRALIA

Partner

Government of **Western Australia**
Department of **Health**

royallifesavingwa.com.au

SUMMARY REPORT

26
DROWNING DEATHS

112
HOSPITAL ADMISSIONS

95
EMERGENCY DEPARTMENT PRESENTATIONS

65% **35%**

TOP 3 LOCATIONS

27% BEACH

23% OCEAN/HARBOUR

19% HOME POOL

TOP 3 REGIONS

1. GREAT SOUTHERN
2. MID-WEST
3. KIMBERLEY

TOP 3 ACTIVITIES

27% RECREATING
23% SWIMMING
15% FISHING

TOP 3 FACTORS

25% BORN OVERSEAS
22% ALCOHOL
19% MEDICAL CONDITION

HELP MAKE YOUR COMMUNITY FREE FROM DROWNING

- WEAR A LIFEJACKET
- AVOID ALCOHOL AROUND WATER
- LEARN TO SWIM AND SURVIVE
- CHECK CONDITIONS BEFORE HEADING OUT ON THE WATER
- SUPERVISE CHILDREN
- LEARN HOW TO SAVE A LIFE

DROWNING TRENDS

Overall, there were 267 Western Australians (WA) affected by drowning (both fatal and non-fatal) between 1 July 2017 and 30 June 2018 at a rate of 9.8 incidents per 100,000 population.

This represents an 11.7% increase in the number of drowning incidents and a 10.1% increase in drowning rate from 2016-17. Of these 9.7% (n=26) were fatal and the remaining 90.3% were non-fatal incidents. Over the past five years, drowning rates in WA have increased by 1.1% (Figure 1).

It is important to note that this is likely an under estimation, as data relating to emergency department presentations are only available for those hospitals located within the Perth metropolitan area. Therefore, data included within this report doesn't include emergency presentations recorded in regional WA.

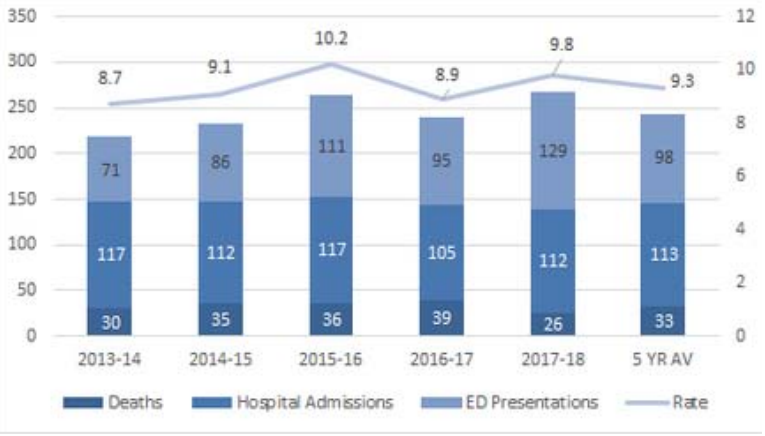


Figure 1: Total drowning burden, WA 2013-14 to 2017-18

FATAL DROWNING

There were 26 fatal drowning incidents recorded in WA waterways between 1 July 2017 and 30 June 2018, at a rate of 1.0 incidents per 100,000 population, the lowest since 2011-12 and a 33.3% reduction from 2016-17.

Drowning trends over time have remained consistent, with the average number and rate of fatal drowning in WA remaining unchanged over the past five years (Figure 2).

Nationally, WA accounted for 10.4% of all fatal drowning incidents and recorded the equal third highest rate of drowning behind the NT, Tasmania and QLD.

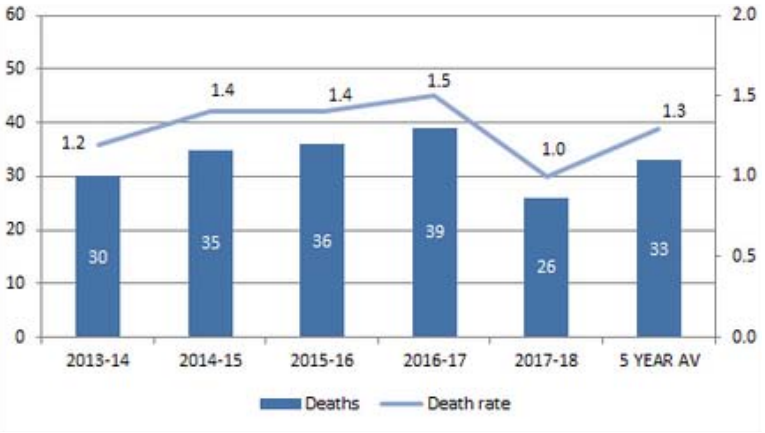


Figure 2: Fatal drowning burden, WA 2013-14 to 2017-18

NON-FATAL DROWNING

For every fatal drowning deaths recorded in 2017-18, there were 9.2 non-fatal drowning incidents. Overall, 241 non-fatal drowning incidents were recorded in WA during 2018-19, a 20.5% increase from 2016-17 (Figure 3).

Of these, 112 people were admitted to hospital at a rate of 7.1 admissions per 100,000 population. This was an increase in both number and rate of admission from 2016-17 (3.7% and 7.7% respectively). Over time, there has been an average annual decrease of 1.0% and an overall 26.2% decrease in the rate of admissions over the past decade.

In addition, 129 people presented at a hospital emergency department in the Perth metropolitan area at a rate of 6.0 presentations per 100,000 population. This was an increase in both number and rate of presentations from 2016-17 (35.8% and 33.3% respectively). Trends show an average annual increase of 3.0% and an overall 17.5% increase in the rate of admissions over the past decade.

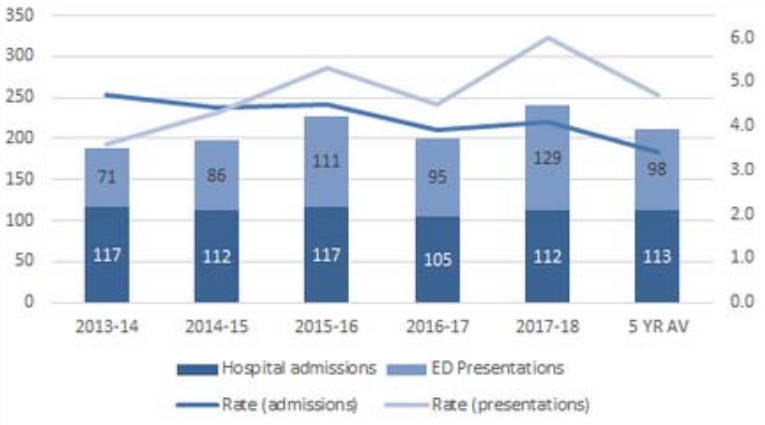


Figure 3: Non-fatal drowning burden, WA 2013-14 to 2017-18

11.6%

Overall, 11.6% (n=13) of hospitalisations following a non-fatal drowning incident resulted in brain injury, at a rate of 0.5 per 100,000. This was a 66.7% increase from 2016-17

WHO DROWNS?

GENDER

65%

Males were 1.8 times more likely to drown than females. Overall, 64.8% of drowning incidents (both fatal and non-fatal) in 2017-18 involved males, with a crude drowning rate of 12.5 incidents per 100,000. This was similar to trends in 2016-17. For every fatal drowning incident involving a male, there were 8.6 non-fatal drowning incidents.

35%

Females accounted for 35.2% of drowning incidents (both fatal and non-fatal) in 2017-18 and had a crude drowning rate of 6.9 incidents per 100,000. For every fatal drowning incident involving a female, there were 10.8 non-fatal drowning incidents.

AGE

In a continuing trend, toddlers aged 0-4 years were at the greatest risk of drowning (both fatal and non-fatal), accounting for almost half of all drowning incidents recorded in WA in 2017-18 (n=124, 46.4%).

Young adults were also at high-risk of drowning in 2017-18, recording the second highest rate of drowning (9.5 incidents per 100,000).

The lowest rate of drowning in 2017-18 was recorded amongst adults aged 25-64 years (3.8 incidents per 100,000 population).

TOP 3 AGE GROUPS (RATE PER 100,000)

FATAL DROWNING		HOSPITAL ADMISSIONS		EMERGENCY DEPT. PRESENTATIONS	
2.7	TODDLERS	23.9	TODDLERS	50.8	TODDLERS
1.6	65+ YEARS	4.3	65+ YEARS	7.5	CHILDREN
0.9	YOUNG ADULTS	4.0	YOUNG ADULTS	5.8	YOUNG ADULTS

SOCIO-ECONOMIC STATUS

Socio-economic status (SES) was determined using the socio-economic index for areas (SEIFA) which ranks the area of residence according to relative advantage or disadvantage. Data relating to SES was only available for fatal drowning incidents. Low SES was defined as people residing in the lowest two quintiles of socio-economic advantage (classification of 1-4).

19%

The majority of people involved in fatal drowning incidents in 2017-18 were from high socio-economic areas, with 38.5% (n=10) residing in the highest quintile for socio-economic advantage. Overall, 19.2% (n=5) of people were from low socio-economic areas, a 6.4% decrease from 2016-17. The average SEIFA score was 3.8

COUNTRY OF BIRTH

Overall, 25.1% (n=67) of drowning incidents (fatal and non-fatal) recorded in 2017-18 involved people that were born overseas, a 3.3% increase from 2016-17. Of these, 14.9% (n=10) were fatal and 86.4% (n=55) were non-fatal.

The remaining 75.3% (n=201) of drowning incidents involved people born in Australia.

FATAL DROWNING

Overall, 34.6% (n=9) of fatal drowning incidents involved a person who was born overseas, a slight increase from 2016-17 (1.3%). Of those who were born overseas, the majority (88.9%) were born in a non-English speaking country and over half (55.5%) were born in Asia.

Two thirds (66.7%) of people born overseas that were involved in a drowning incident were short-term visitors including international students, overseas tourists and those on working visas that had been in WA for less than two years (average length of time in WA was seven months).

The remaining 33.3% were long term residents, having lived in WA for 10 or more years. Average length of time in WA for this cohort was 13 years.

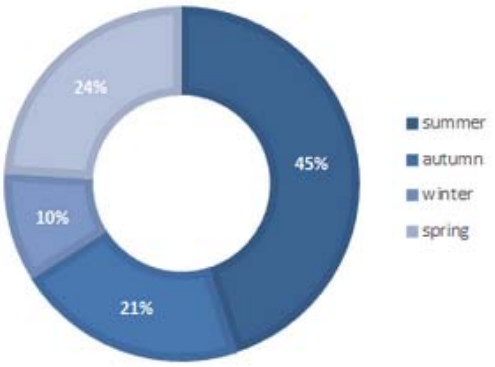
NON-FATAL DROWNING

For every fatal drowning incident recorded amongst people born overseas, there were 8.6 non-fatal incidents in 2017-18, compared to 10.8 amongst Australian born people.

Overall, 29.5% (n=33) of hospital admissions and 18.6% (n=24) of emergency department presentations involved people that were born overseas. While the proportion of hospital admissions involving people born overseas increased by 7.6% from 2016-17 in 2017-18, emergency department presentations decreased by 2.7%.

Data relating to specific country of birth and length of time in Australia wasn't available for non-fatal drowning data.

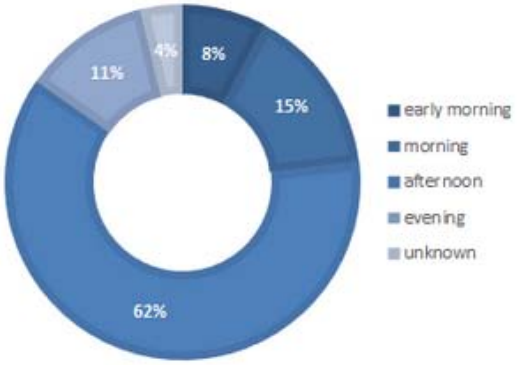
WHEN DO THEY DROWN?



Drowning happens throughout the year, however was most common during summer months with 44.9% occurring during this time in 2017-18. This is likely contributed to by warmer weather, greater exposure to aquatic locations and activities, school holidays and the festive period occurring during this time of year.

As in previous years, drowning was least common during winter months (10.1%) when the weather is cooler and there is often reduced activity in, on and around the water, resulting in reduced risk.

These trends were consistent for both fatal and non-fatal drowning incidents.



Data relating to month, day of the week and time the incident occurred was only available for fatal drowning incidents. Overall, 34.6 (n=9) of drowning incidents occurred on the weekend, with the remaining 65.4% (n=17) occurring during the week. The most common days for drowning were Wednesday, Friday and Saturday.

In addition, 19.2% (n=5) of incidents occurred during the Christmas and Easter public holiday periods, a 6.4% increase from 2016-17.

Similar to trends observed in previous years, drowning most commonly occurred in the afternoon (n=16, 61.5%), with more than half of these occuring between 12.00 and 2.00pm (n=9, 56.3%).

HIGH-RISK TIMES FOR DROWNING

SUMMER MONTHS - DECEMBER, JANUARY AND FEBRUARY

AFTERNOON BETWEEN 12.00 AND 2.00PM

WEDNESDAY, FRIDAY, SATURDAY AND KEY HOLIDAY PERIODS

WHERE AND HOW DO THEY DROWN

REGION

The rate of drowning in regional and remote areas of WA continued to be higher than the Perth metropolitan area. Overall, 71.7% (n=99) of drowning incidents occurred in the Perth metropolitan area (fatal and hospital admissions only), a 5.7% increase from 2016-17. However when taking into account population distribution, drowning incidents were 1.5 times more likely to occur in regional and remote areas of the state (6.8 incidents per 100,000) compared to the Perth metropolitan area (4.6 incidents per 100,000). The highest overall drowning rates were recorded in the Great Southern, Mid-West and Kimberley regions (Figure 4). The Great Southern was the only region to record a higher drowning rate than the overall state rate in 2017-18.

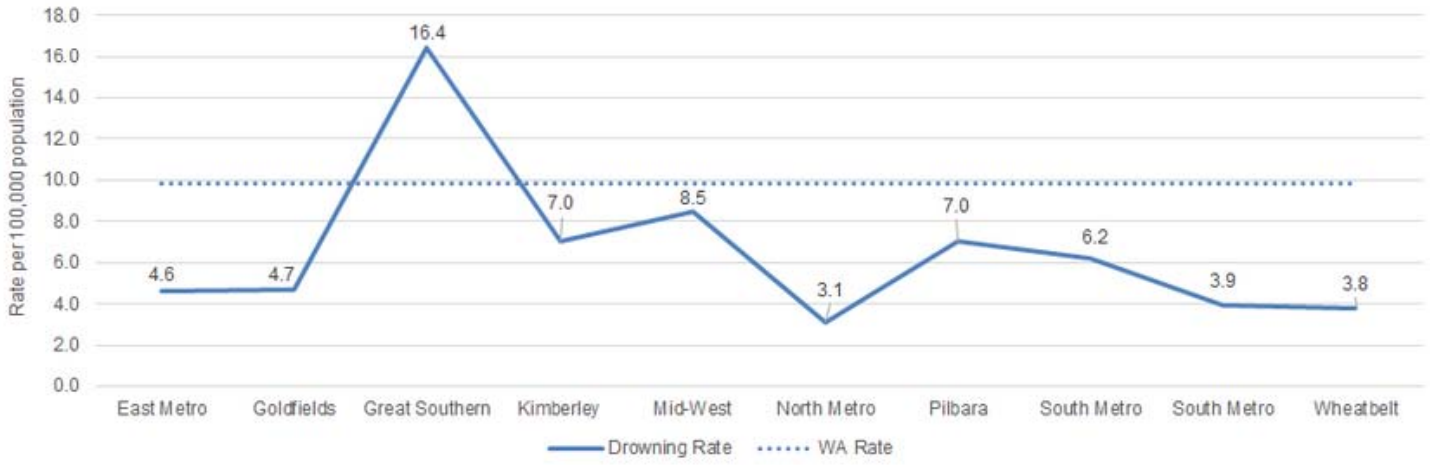


Figure 4: Total drowning by Region, WA 2013-14 to 2017-18

FATAL DROWNING

Overall, half (n=13, 50.0%) of fatal drowning incidents occurred in the Perth metropolitan area and half in regional WA in 2017-18. When taking population distribution into account, people were 3.8 times more likely to drown in regional WA (2.3 per 100,000) than in the Perth Metropolitan area (0.6 per 100,000). These trends were similar to those reported in 2016-17.

Data relating to remoteness of the location where the drowning incident occurred was only available for fatal drowning cases. While majority of drowning incidents occurred in major cities (n=10, 38.5%), a large proportion occurred in remote and very remote locations (n=6, 23.0%). These areas often have limited mobile phone reception, and limited access impacting response times and rescue efforts.

TOP 3 REGIONS - FATAL DROWNING (RATE)

5.7 MID-WEST REGION

3.3 GREAT SOUTHERN REGION

2.3 KIMBERLEY REGION

NON - FATAL DROWNING

Overall, 76.8% (n=89) of hospital admissions following a non-fatal drowning incident occurred in the Perth metropolitan area. Despite only 23.2% of hospital admissions occurring in regional WA, people were 1.2 times more likely to be hospitalised in these areas (4.6 per 100,000) than in the Perth Metropolitan area (4.0 per 100,000).

Like fatal drowning, these trends were similar to those reported in 2016-17.

TOP 3 REGIONS - HOSPITAL ADMISSIONS (RATE)

13.1	GREAT SOUTHERN REGION
6.9	PILBARA REGION
4.7	KIMBERLEY REGION

Emergency department presentations were only recorded in the Perth metropolitan area, therefore comparisons with regional WA weren't possible. Similar to previous years, the South metropolitan region recorded the highest proportion (31.3%) and rate of emergency department presentations following a non-fatal drowning incident (5.2 presentations per 100,000).

Presentation rates for the East (4.0 presentations per 100,000) and North metropolitan (2.9 presentations per 100,000) areas decreased from 2016-17 by 23.1% and 9.4% respectively.

TOP 3 REGIONS - HOSPITAL ADMISSIONS (RATE)

5.2	SOUTH METROPOLITAN
4.0	EAST METROPOLITAN
2.9	NORTH METROPOLITAN

AQUATIC LOCATION

Data relating to the aquatic location where the drowning incident occurred was only available for fatal drowning incidents and hospital admissions following a non-fatal drowning incident.

FATAL DROWNING

Overall, half of fatal drowning incidents occurred at coastal locations with beaches (n=7, 26.9%) and ocean/harbour (n=6, 23.1%) locations recorded the highest proportion of fatal drowning incidents in 2017-18.

COASTAL LOCATIONS

Half of all fatal drowning incidents occurred at coastal locations in 2017-18, with 53.8% occurring at beaches and the remaining 46.2%) occurring at ocean/harbour locations. Males aged 25-44 years and 55-74 years were at the greatest risk of drowning at coastal locations with medical conditions (38.5%) and alcohol consumption (30.8%) key contributing factors. Of the incidents occurring at coastal locations, 61.5% were recorded in regional WA and 30.8% involved a person born overseas.

LOCATIONS IN AND AROUND THE HOME

There was an increased proportion of fatal drowning deaths that occurred at locations in and around the home, with 30.8% of incidents occurring at these locations in 2017-18. Of these, the majority occurred in home swimming pools (n=5, 62.5%). Toddlers aged 0-4 years were at greatest risk of drowning at home locations after falling into water. The majority of incidents (75%) occurred in the Perth metropolitan area during spring and summer months.

INLAND WATERWAYS

Overall, 19.2% of fatal drowning incidents occurred at inland waterways, an 11.6% decrease from 2016-17. Of these, 60.0% occurred in rivers/creeks/streams and the remaining 40% occurred in lakes/dams./lagoons. Males in regional and remote areas were at greatest risk of drowning at inland waterway locations. In addition, 60.0% of incidents at inland waterway locations involved a person born overseas.

NON-FATAL DROWNING

Aquatic location was recorded for 89.3% of hospital admissions following a non-fatal drowning, however is limited to hospital coding systems which often don't provide specific information relating to incident location. Where the aquatic location was specified, one third (n=33, 33.0%) occurred at home, with almost all of these (91.0%) involving toddlers aged 0-4 years. This was a 6.1% increase from 2016-17. Other common locations included large areas of water such as an ocean or lake (n=23, 23.0%) and beaches (n=16, 16%).

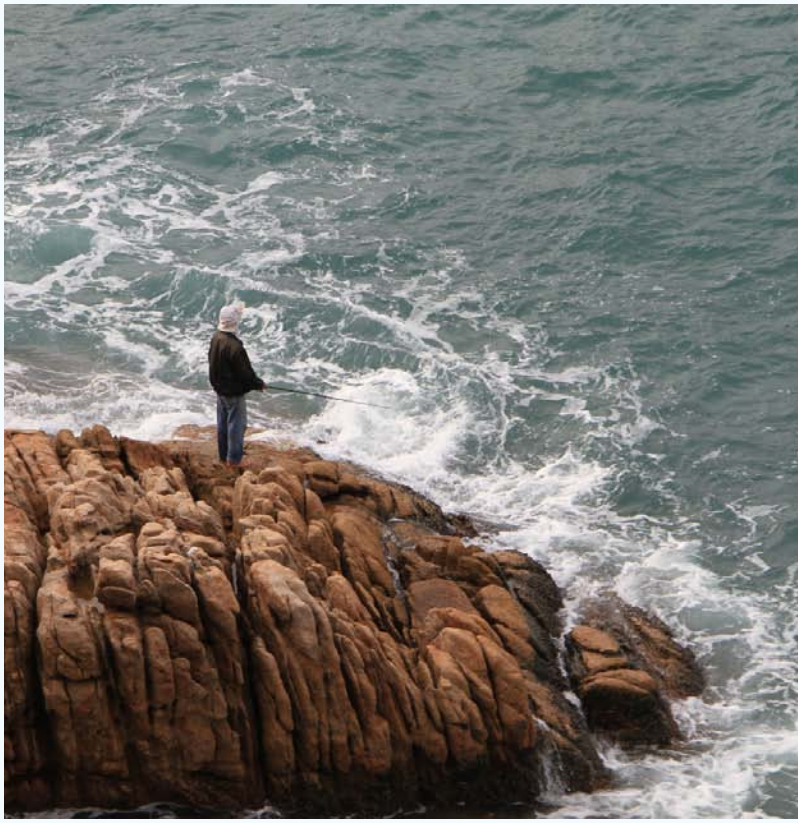
AQUATIC ACTIVITY

Data relating to the aquatic activity being undertaken at the time of the drowning incident was only available for fatal drowning incidents and hospital admissions following a non-fatal drowning incident.

FATAL DROWNING

Recreating around water was the most common activity being undertaken at the time of a fatal drowning incident (n=7, 26.9%), followed by swimming (n=6, 23.1%) and fishing (n=4, 15.4%). Other activities included boating, diving, bathing and watercraft.

In half of fatal drowning incidents (n=13, 50.0%), entry into the water was unintentional with the person either falling into the water, swept in by a wave or entering as a result of a collision or capsized boat. 46.2% (n=12) entered the water intentionally either through participation in an aquatic activity or jumping into the water. Entry into the water was unknown for 3.8% of incidents.

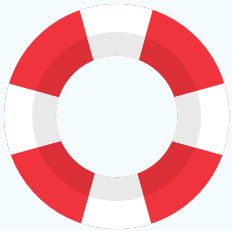


NON-FATAL DROWNING

Similar to previous years, the most common activity being undertaken at the time of an incident resulting in the person being hospitalised was resting, sleeping, eating or other vital activity such as bathing (n=72, 64.3%) followed by water sport (n=23, 20.5%) and leisure activities (n=17, 15.2%).

RESCUE AND RESPONSE

Data relating to rescue and response to the drowning incident was only available for fatal drowning.



A rescue was attempted in 73.1% (n=19) of fatal drowning incidents in 2017-18, a 11.6% increase from 2016-17. The rescue was most likely to be performed by a family member (n=6, 31.6%), member of the public or professional such as a lifeguard or sea rescue (n=5, 23.3%). Overall, 63.2% (n=14) of rescues were performed by someone unknown to the person. Where a rescue wasn't performed (n=7, 26.9%) this was due to person participating alone at the time of the incident or that other participants were also involved in the drowning incident.

Cardiopulmonary resuscitation (CPR) was performed in 68.4% (n=13) fatal drowning incidents where a rescue was attempted. Of these, the person performing CPR was unknown to the person in 53.8% of cases. Where CPR wasn't performed, this was due to the person being clearly deceased when retrieved from the water.

DROWNING RISK FACTORS

Data relating to drowning risk factors was only available for fatal drowning incidents. The top four drowning risk factors have been included within this report. Other factors included environmental factors (swell, strong currents etc.), factors relating to equipment (not wearing a lifejacket) and injury sustained during the incident.

46.2% VISITOR STATUS

- 15.5% increase from 2016-17
- **Males, in regional WA, 15-34 years at greatest risk**
- 23.8% were overseas tourists
- **19.2% were people travelling within WA**
- Common activities - swimming, recreating, fishing
- **70% occurred at coastal locations**

38.5% POOR SWIMMING ABILITY

- 11.6% decrease from 2016-17
- **80% were non-swimmers and 20% were poor swimmers**
- Half (50%) involved toddlers aged 0-4 years
- **88.9% occurred in the Perth metropolitan area**
- 40% occurred in a home swimming pool
- **Half (50%) were born overseas**

23.1% PRE-EXISTING MEDICAL CONDITION

- 7.7% decrease from 2016-17
- **65-74 years of age at greatest risk**
- 80% were male
- **80% had a cardiac condition**
- All were taking medication at the time
- **Swimming and fishing most common activities**

22.2% ALCOHOL CONSUMPTION

- 3.4% decrease from 2016-17
- **males, born in Australia, 25-40 years at greatest risk**
- 50% had BAC greater than 0.05% (average 0.104%)
- **Fishing most common activity being undertaken**
- 75% occurred in regional WA
- **Half were with friends and 50% were alone**

LIFE STAGE IN FOCUS - TODDLERS 0-4 YEARS

Overall, toddlers aged 0-4 years were at the greatest risk of drowning (both fatal and non-fatal) of any age group in WA in 2017-18.

In 2017-18, there were 124 toddler drowning incidents recorded within WA, accounting for 46.4% of the total recorded. The crude drowning rate for toddlers was 67.7 incidents per 100,000 toddlers, the highest of any age group. Despite reductions in toddler drowning over the past few years, this was a 24.2% and 28.5% increase in the number and rate of drowning from 2016-17 respectively.

Trends over the past five years also show increases in the average number (16.8%) and rate (13.1%) of toddler drowning (Figure 5).

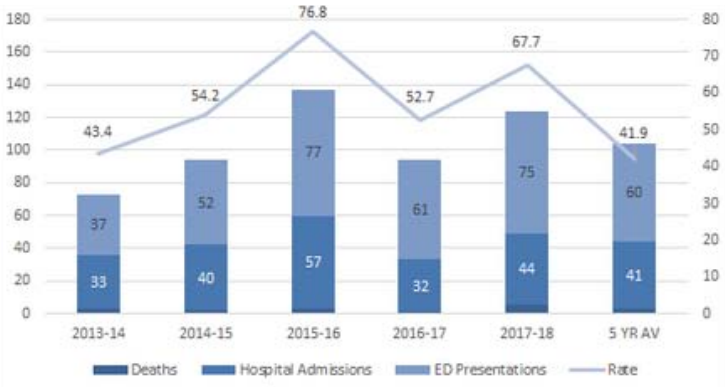


Figure 5: Total drowning burden - Toddlers, WA 2013-14 to 2017-18

5 Fatal drowning deaths recorded at a rate of 2.7 deaths per 100,000

44 Hospital admissions recorded at a rate of 23.9 admissions per 100,000

75 ED presentations rate of 50.8 presentations per 100,000

65% **35%**

Boys were 1.7 times more likely to drown than girls

#1 **Highest drowning rate (both fatal and non-fatal) of any other age group in WA**

FATAL DROWNING

- 26.3% reduction in the number of toddler drowning deaths since 2008-09
- 34.4% reduction in rate of toddler drowning deaths since 2008-09
- Different to previous years, 60.0% of fatal drowning incidents involved girls (3.3 per 100,000) who were 1.6 times more likely to drown than boys (2.1 per 100,000)
- All fatal drowning incidents in 2017-18 were aged under 2.5 years, with an average age of 20 months
- Fatal drowning incidents amongst toddlers were most likely to occur in the Perth metropolitan area, during autumn or spring, in the afternoon between 1.00pm and 2.00pm

- All fatal drowning incidents occurred at locations in and around the home
- 60.0% occurred in home swimming pools after children fell into the water after gaining access through an open gate,a gap in the pool fence or climbing the gate to open

- Lack of adult supervision was a factor in all fatal drowning incidents
- Supervision was reported to have been absent for between five minutes and two hours
- On average, supervision was absent for 5-10 minutes
- Supervision was absent due to parents sleeping, preparing meals and doing household chores

NON-FATAL DROWNING

HOSPITAL ADMISSIONS

- 8.4% increase in the number of hospital admissions since 2008-09
- 6.6% reduction in the rate of hospital admissions since 2008-09
- Average annual decrease 0.8% since 2008-09
- Highest rate of brain injury following hospital admission (3.3 per 100,000)
- 68.2% occurred at home, specifically in the outdoor area (43.2%) or bathroom (18.2%)

EMERGENCY DEPARTMENT PRESENTATIONS

- 58.1% increase in the number of emergency department presentations since 2008-09
- 31.4% increase in the rate of emergency department presentations since 2008-09
- Average annual increase of 5.0% since 2008-09

LIFE STAGE IN FOCUS - CHILDREN 5-14 YEARS

Overall, children aged 5-14 years recorded the third highest rate of drowning (fatal and non-fatal) of any age group in WA

In 2017-18, there were 29 child drowning incidents recorded within WA, accounting for 10.9% of the total recorded. The crude drowning rate for children was 8.4 incidents per 100,000 children, the third highest of any age group. This was similar to data reported in 2016-17.

Childhood drowning has remained low over the past five years and continues to be a drowning prevention success story in WA. Trends over the past five years also show decreases in the average number (2.2%) and rate (6.8%) of childhood drowning (Figure 6).

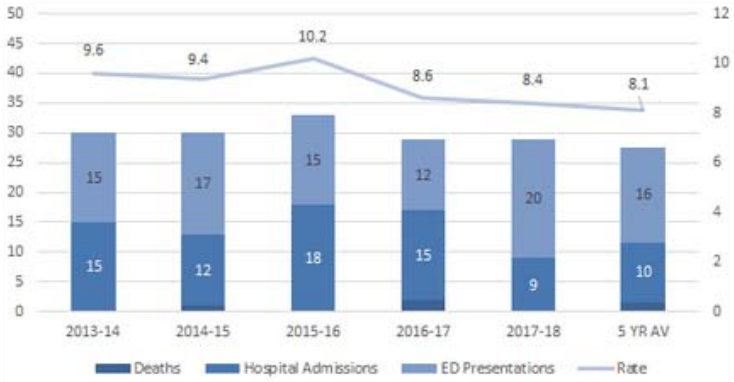


Figure 6: Total drowning burden - Children, WA 2013-14 to 2017-18

0 Fatal drowning deaths recorded

9 Hospital admissions recorded at a rate of 2.6 admissions per 100,000

20 ED presentations rate of 7.6 presentations per 100,000

52% **48%**

Rates were similar for boys (8.5) and girls (8.3)

#3 **Third highest drowning rate (both fatal and non-fatal) in WA**

FATAL DROWNING

- Due to no fatal drowning incidents being recorded in 2017-18, data trends over the past ten years have been included in this report
- 62.5% reduction in the number of child drowning deaths since 2008-09
- 67.9% reduction in rate of child drowning deaths since 2008-09
- 72.7% of drowning deaths involved boys (0.5 per 100,000) who were 2.5 times more likely to drown than girls (0.2 per 100,000)
- 54.5% occured in regional and remote WA

TOP 3 LOCATIONS

- 27% RIVER/CREEK/STREAM
- 27% HOME POOL/SPA
- 18% LAKE/DAM/LAGOON

TOP 3 ACTIVITIES

- 36% SWIMMING
- 27% RECREATING
- 27% BATHING

TOP 3 FACTORS

- 45% LOW SOCIO-ECONOMIC
- 36% POOR SWIMMING ABILITY
- 36% MEDICAL CONDITION

CULTURE/ETHNICITY

- 27% ABORIGINAL
- 18% BORN OVERSEAS

NON-FATAL DROWNING

HOSPITAL ADMISSIONS

- 43.8% increase in the number of hospital admissions since 2008-09
- 29.9% reduction in the rate of hospital admissions since 2008-09
- Average annual increase 2.3% since 2008-09, the largest of any age group in WA in 2017-18
- average length of hospital stay = 1.2 days (lowest of any age group)

EMERGENCY DEPARTMENT PRESENTATIONS

- Highest number and rate of emergency department presentations recorded in 2017-18 amongst children over the past decade
- 75.6% increase in the number of emergency department presentations since 2008-09
- 57.0% increase in the rate of emergency department presentations since 2008-09
- Average annual increase of 6.0% since 2008-09

LIFE STAGE IN FOCUS - YOUNG ADULTS 15-24 YEARS

Overall, young adults aged 15-24 years recorded the second highest rate of drowning (fatal and non-fatal) of any age group in WA

In 2017-18, there were 33 drowning incidents recorded involving young people 15-24 years in WA, at a rate of 9.5 incidents per 100,000 and accounting for 12.6% of the total recorded. This was the highest number and rate of drowning in this age group recorded in WA since 2009-10 and represented a 43.5% and 41.8% increase in the number and rate of drowning from 2016-17 respectively.

Trends over the past five years show increases in the average number (23.7%) and rate (22.8%) of drowning amongst young adults (Figure 7).

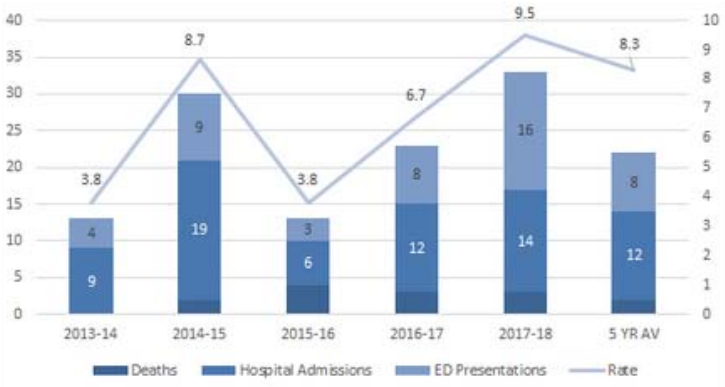


Figure 7: Total drowning burden - Young Adults, WA 2013-14 to 2017-18

3 Fatal drowning deaths recorded at a rate of 0.9 deaths per 100,000

14 Hospital admissions recorded at a rate of 4.0 admissions per 100,000

16 ED presentations rate of 5.8 presentations per 100,000

70% **30%**

Males (12.9 per 100,000) were 2.2 times more likely to drown than females (5.9 per 100,000)

#2 **Second highest drowning rate (both fatal and non-fatal) in WA**

FATAL DROWNING

- Due to the low number of fatal drowning incidents being recorded in 2017-18, data trends over the past ten years have been included in this report
- 47.8% reduction in the number of fatal drowning incidents involving young adults since 2008-09
- 49.3% reduction in rate of fatal drowning incidents involving young adults since 2008-09
- 91.4% of fatal drowning incidents involved males (1.8 per 100,000) who were 9 times more likely to drown than females (0.2 per 100,000)
- Drowning risk increased with age with young adults aged 22-24 years at greatest risk
- Young adults were 9.8 times more likely to drown in regional WA (71.4%, 35.1 per 100,000) than in the Perth metropolitan area (28.6%, 3.6 per 100,000)

TOP 3 LOCATIONS

- 34% OCEAN/HARBOUR
- 23% BEACH
- 17% LAKE/DAM/LAGOON

TOP 3 ACTIVITIES

- 34% SWIMMING
- 20% FISHING
- 17% RECREATING

TOP 3 FACTORS

- 50% TOURIST/VISITOR
- 37% ALCOHOL
- 19% LOW SOCIO-ECONOMIC

CULTURE/ETHNICITY

- 34% BORN OVERSEAS
- 83% NON-ENGLISH SPEAKING
- 25% NEW ARRIVAL

NON-FATAL DROWNING

HOSPITAL ADMISSIONS

- 6.3% increase in the number of hospital admissions since 2008-09
- 10.8% reduction in the rate of hospital admissions since 2008-09
- Average annual decrease 2.6%, the equal largest of any age group in WA in 2017-18
- Average length of hospital stay = 4.9 days (longest of any age group)

EMERGENCY DEPARTMENT PRESENTATIONS

- Highest number and rate of emergency department presentations recorded in 2017-18 amongst young adults since 2009-10
- 18.4% increase in the number of emergency department presentations since 2008-09
- 22.6% increase in the rate of emergency department presentations since 2008-09
- Average annual decrease of 3.0%

LIFE STAGE IN FOCUS - ADULTS 25-64 YEARS

Overall, adults aged 25-64 years recorded the lowest rate of drowning (fatal and non-fatal) of any age group in WA

In 2017-18, there were 56 drowning incidents recorded involving adults aged 25-64 years in WA, at a rate of 3.8 incidents per 100,000 and accounting for 21.0% of the total recorded. This was the lowest number and rate of drowning in this age group recorded in WA since 2009-10 and represented a 15.2% and 18.4% decrease in the number and rate of drowning from 2016-17 respectively.

While trends over the past five years show an increase in the average number (3.4%) of drowning incidents, the average drowning rate amongst adults has decreased by 7.8% (Figure 8).

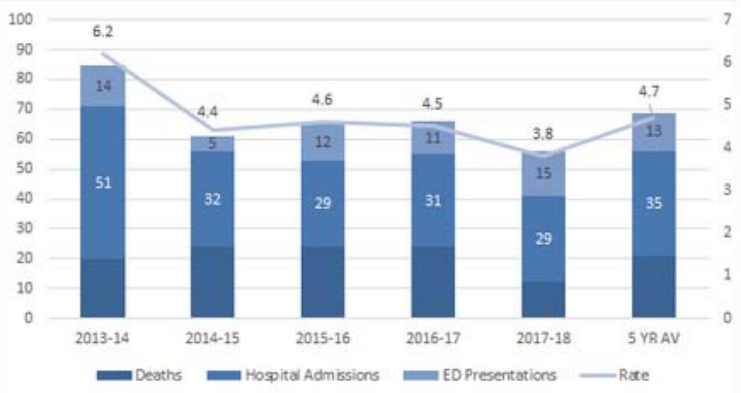


Figure 8: Total drowning burden - Adults, WA 2013-14 to 2017-18

12 Fatal drowning deaths recorded at a rate of 0.8 deaths per 100,000

29 Hospital admissions recorded at a rate of 1.9 admissions per 100,000

15 ED presentations rate of 1.3 presentations per 100,000

76% **24%**

Males (4.1 per 100,000) were 2.9 times more likely to drown than females (1.4 per 100,000)

#5 **Lowest drowning rate (both fatal and non-fatal) in WA**

FATAL DROWNING

In 2017-18:

- 50.0% reduction in the number and rate of fatal drowning incidents involving adults aged 25-64 years from 2016-17
- 83.3% of fatal drowning incidents involved males (1.3 per 100,000) who were 4.3 times more likely to drown than females (0.3 per 100,000)
- Drowning risk decreased with age with adults aged 25-34 years at greatest risk (41.7%), followed by those aged 35-44 years (33.3%)
- Adults were 6 times more likely to drown in regional WA (67.7%, 2.5 per 100,000) than in the Perth metropolitan area (33.3%, 0.4 per 100,000)

TOP 3 LOCATIONS

- 33% BEACH
- 25% OCEAN/HARBOUR
- 17% LAKE/DAM/LAGOON

TOP 3 ACTIVITIES

- 33% SWIMMING
- 25% ROCK FISHING
- 8% BOATING

TOP 3 FACTORS

- 58% TOURIST/VISITOR
- 25% ALCOHOL
- 17% LOW SOCIO-ECONOMIC

CULTURE/ETHNICITY

- 42% BORN OVERSEAS
- 80% NON-ENGLISH SPEAKING
- 5.8 AV. YEARS IN AUST

NON-FATAL DROWNING

HOSPITAL ADMISSIONS

- 2.3% decrease in the number of hospital admissions since 2008-09
- 13.6% reduction in the rate of hospital admissions since 2008-09
- Average annual decrease 2.6%, the equal largest of any age group in WA in 2017-18
- Average length of hospital stay = 1.9 days

EMERGENCY DEPARTMENT PRESENTATIONS

- Highest number and rate of emergency department presentations recorded in 2017-18 amongst adults since 2008-09
- 28.8% decrease in the number of emergency department presentations since 2008-09
- 26.1% increase in the rate of emergency department presentations since 2008-09
- Average annual decrease of 3.0%

LIFE STAGE IN FOCUS - OLDER ADULTS 65+ YEARS

Overall, older adults aged over 65 years recorded the second lowest rate of drowning (fatal and non-fatal) of any age group in WA

In 2017-18, there were 22 drowning incidents recorded involving older adults over 65 years of age in WA, at a rate of 5.9 incidents per 100,000 and accounting for 8.2% of the total recorded. This represented an 8.3% and 13.2% decrease in the number and rate of drowning from 2016-17 respectively.

Trends over the past five years show an increase in the average number (35.0%) and rate (22.7%) of drowning incidents, amongst older adults (Figure 8).

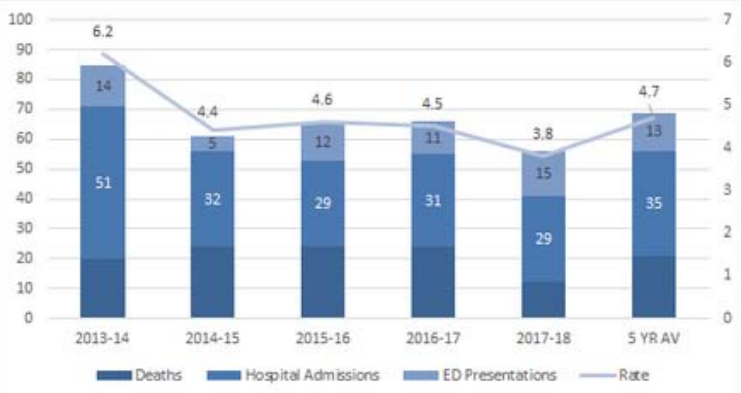


Figure 8: Total drowning burden - Older Adults, WA 2013-14 to 2017-18

6 Fatal drowning deaths recorded at a rate of 1.6 deaths per 100,000

16 Hospital admissions recorded at a rate of 4.3 admissions per 100,000

3 ED presentations rate of 1.0 presentations per 100,000

59% **41%**

Males (7.5 per 100,000) were 1.7 times more likely to drown than females (4.5 per 100,000)

#4 **Second lowest drowning rate (both fatal and non-fatal) in WA**

FATAL DROWNING

- Due to the low number of fatal drowning incidents being recorded in 2017-18, data trends over the past ten years have been included in this report
- 33.3% reduction in the number of fatal drowning incidents involving older adults from 2016-17
- 36.0% decrease in rate of drowning involving involving older adults from 2016-17
- 84.5% of fatal drowning incidents involved males (3.4 per 100,000) who were 4.6 times more likely to drown than females (0.5 per 100,000)
- Fatal drowning incidents amongst older adults were most likely to involve a retirees aged 65-74 years, on a weekend or public holiday, between 12.00pm and 2.00pm while participating in an aquatic activity alone
- 55.2% of fatal drowning incidents occurred in regional WA

TOP 3 LOCATIONS

- 33% BEACH
- 26% OCEAN/HARBOUR
- 19% HOME POOL

TOP 3 ACTIVITIES

- 29% SWIMMING
- 21% RECREATING
- 19% BOATING

TOP 3 FACTORS

- 78% MEDICAL CONDITION
- 17% ALCOHOL
- 17% POOR SWIMMING ABILITY

CULTURE/ETHNICITY

- 50% BORN OVERSEAS
- 45% NON-ENGLISH SPEAKING
- 55% 10+ YEARS IN AUSTRALIA

NON-FATAL DROWNING

HOSPITAL ADMISSIONS

- Highest number of hospital admissions since 2008-09
- 14.3% increase in the number of hospital admissions since 2008-09
- 6.9% reduction in the rate of hospital admissions since 2008-09
- Average annual increase 2.2%, the second largest of any age group in WA in 2017-18
- Average length of hospital stay = 4.4 days

EMERGENCY DEPARTMENT PRESENTATIONS

- 14.8% decrease in the number of emergency department presentations since 2008-09
- 19.4% reduction in the rate of emergency department presentations since 2008-09

METHODS

This report includes information on unintentional fatal and non-fatal drowning incidents that occurred in Western Australian waterways between 1 July 2005 and 30 June 2015 were included.

Fatal drowning data was sourced from multiple sources including the National Coronial Information System (NCIS), media reports and through an online media monitoring system. All data was matched with the Royal Life Saving Society Australia's National Drowning Database to ensure completeness. Coronial finding, police reports, toxicology and autopsy report documents were reviewed for each individual incident.

Only unintentional drowning deaths have been included in this report. Intentional deaths as a result of suicide or homicide were excluded from the study. Other exclusions included deaths due to natural causes, shark attacks, other injuries, deaths where the cause of death or intent was unascertainable and deaths involving asylum seekers.

While all care is taken to ensure that the information included within this report is as accurate as possible, data may be subject to change following ongoing coronial enquiries and investigations. At the time of publishing this report 80.8% of cases had been closed and were no longer under coronial investigation.

Non-fatal drowning data was collected through the Department of Health WA Epidemiology Branch and included state-wide hospital admissions and emergency department presentations within the Perth metropolitan area. This is due to most regional emergency departments not currently using the ICD-10 coding system. Therefore, non-fatal numbers included within this report may be under-represented. It is also important to note that non-fatal drowning data is not as comprehensive as for fatal drowning data due to small numbers and limited data collection codes.

ICD codes were used to identify cases and included ICD-10 coding for near-drowning (T75.1, W65, W66, W67, W68, W69, W70, W73, W74, V90, V92) and brain injury (striking the head S06.xx, anoxic brain damage G93.1, and cerebral brain complications G93.x).

Drowning rates were calculated per 100,000 population where possible using ABS data provided by the Department of Health WA Epidemiology Branch.

ACKNOWLEDGEMENTS

Royal Life Saving WA would like to acknowledge and thank the following organisations for their assistance with compiling this report:

- Department of Health WA, Epidemiology Branch
- National Coronial Information System (NCIS)
- Royal Life Saving Australia

The production of this report is supported by the Government of Western Australia - Department of Health

SUGGESTED CITATION

Royal Life Saving Society WA (2019). WA Drowning Report 2018, Perth, Australia

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