



2013

**WESTERN AUSTRALIAN
DROWNING REPORT**



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



Royal Life Saving
THE ROYAL LIFE SAVING SOCIETY WESTERN AUSTRALIA INC.

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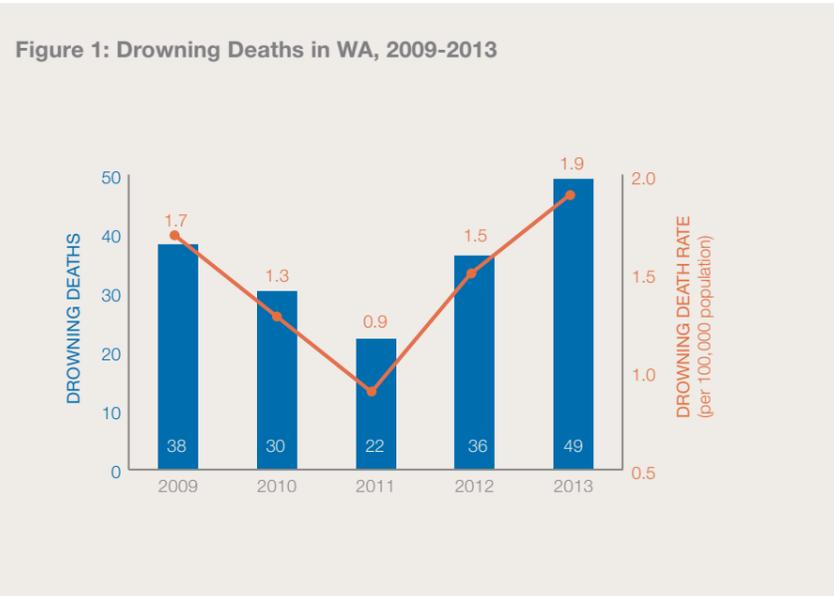
SNAPSHOT OF FINDINGS

- 49 people drowned in Western Australian waterways in 2013
- This is a 36% increase from 2012 and the largest number of deaths recorded in Western Australia over the past decade
- 84% of all drowning deaths were male
- 51% of all drowning deaths occurred in regional areas of Western Australia with the highest rate in the Great Southern, Mid-West and Goldfields regions
- Toddlers 0-4 years were most at risk of fatal and non-fatal drowning
- 53% of drowning deaths occurred at coastal locations
- 31% of people were fishing at the time of the incident
- 41% of people were from a culturally and linguistically diverse background
- 14% of people were new arrivals to Western Australia
- 118 people were hospitalised following a non-fatal drowning incident

DROWNING DEATHS IN 2013

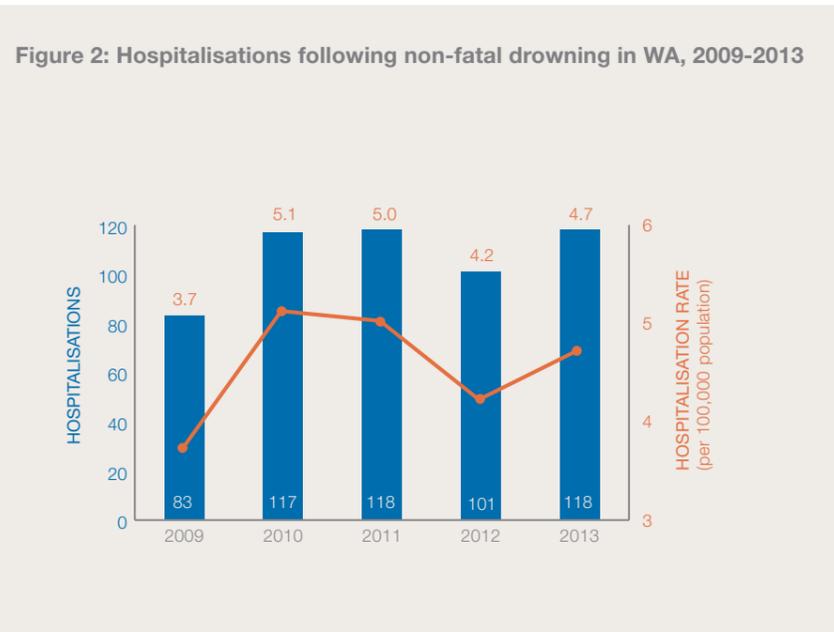
The number of people drowning in Western Australia has continued to rise with 49 unintentional drowning deaths recorded in Western Australian waterways between 1 January and 31 December 2013, the highest in almost a decade and a 36% increase from 2012. This figure is also significantly above the five year average of 35 deaths per year.

The crude drowning rate in 2013 for Western Australia is 1.94 per 100,000 population which is significantly higher than the 2012 rate (1.5 per 100,000 population).



HOSPITALISATIONS FOLLOWING NON-FATAL DROWNING IN 2013

The number of hospitalisations has also increased. 118 Western Australians were hospitalised following a non-fatal drowning incident in 2013 with a crude hospitalisation rate of 4.7 hospitalisations per 100,000 population. These figures are higher than the five year average of 107 hospitalisations per year (crude rate of 4.5 hospitalisations per 100,000 population).



WHO DROWNS?

In 2013, males were again over-represented in both fatal and non-fatal drowning statistics in WA. Males were five times more likely to be involved in a fatal drowning incident and almost three times more likely to be hospitalised following a non-fatal drowning incident than females. Overall, 84% (N=41) of fatal drowning and 73% (N=86) of hospitalisations involved males.

The age of those involved in a fatal drowning incident in 2013 ranged from 6 months to 84 years with an average age of 39.2 years which is slightly higher than the previous year. Toddlers aged 0-4 years again recorded the highest rate of fatal drowning and hospitalisation of any age group and has significantly increased from 2012. Children aged 5-14 years recorded the lowest rate of fatal drowning and young people aged 15-24 years recorded the lowest hospitalisation rate.

Overall, 6.1% (N=3) of fatal drowning incidents and 2.5% (N=3) of hospitalisations involved Aboriginal Australians. It should be noted that there are a number of limitations associated with the under-reporting and recording of Aboriginality in drowning data and it is likely that this figure is significantly higher.

People from culturally and linguistically diverse (CALD) backgrounds are at a higher risk of drowning as they may have low levels of water safety awareness and a lack of swimming and water safety skills. In 2013, a total of 41.8% (N=20) of fatal drowning incidents involved a person from a CALD background. The majority were from British or Asian backgrounds (30.0%; N=6) followed by European background (20.0%; N=4). Other cultural backgrounds included: New Zealander, African and Middle Eastern.

Tourists and visitors to Western Australia are also at a higher risk for drowning as they may not be aware of the hazards and risks that exist at WA water locations. In 2013, 32.7% (N=16) of fatal drowning deaths involved a tourist or visitor to the area. Of these, 62.5% (N=10) were within state or within region visitors, 31.3% (N=5) had newly arrived in Western Australia from overseas, 25.0% (N=4) were international tourists and 12.5% (N=2) were interstate tourists.

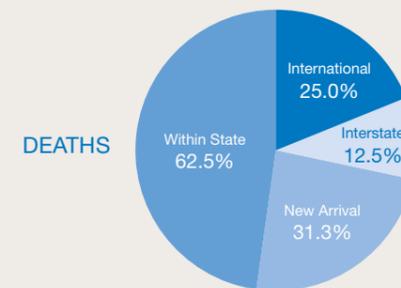
Figure 3: Drowning by Age, 2013



Figure 4: Drowning and Hospitalisation Rates by Age, 2013



Figure 5: Drowning by Tourist/Visitor Status, 2013



WHEN DO PEOPLE DROWN?

Fatal and non-fatal drowning occurs throughout the year; however the majority occur in summer months, when participation rates in activities in, on or around the water are highest. Overall, 30.6% (N=15) of fatal drowning incidents and 55.9% (N=66) of hospitalisations were recorded in summer months. There was a significant increase in the number of fatal drowning incidents occurring in the winter months, with 22.4% (N=11) of deaths recorded during these months which is a 12.4% increase from 2012.

The highest number of fatal drowning incidents occurred in April, May, June and December (N=6) and the lowest number was recorded in July (N=<5). The highest number of hospitalisations were recorded in January (N=30) and lowest number was recorded in April, June, July and August (N=<5).



Figure 6: Drowning by Season, 2013

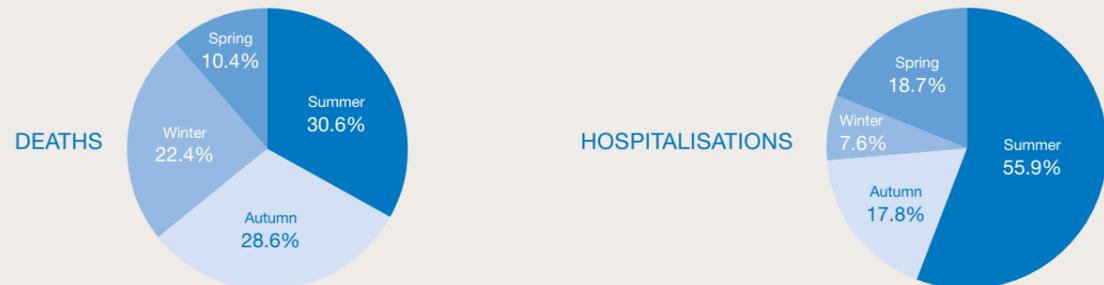
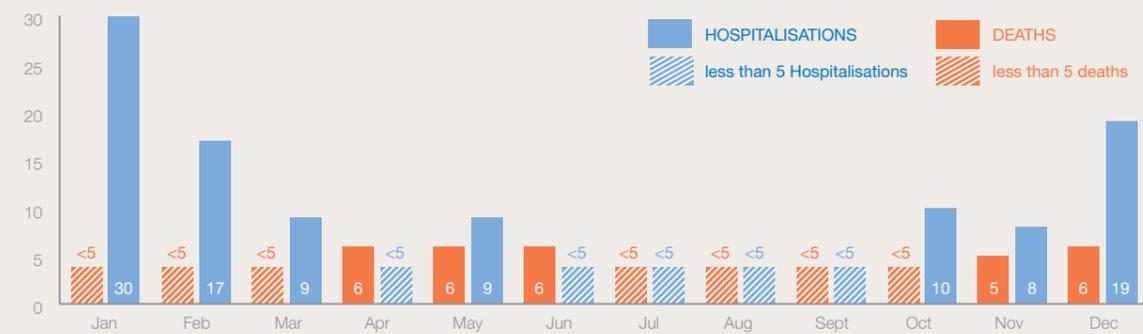


Figure 7: Drowning by Month, 2013



WHERE AND HOW DO PEOPLE DROWN?

People in regional and remote areas of WA are at a significantly higher risk of fatal drowning with the rate of drowning in these areas 3.5 times the rate recorded in the Perth metropolitan area. Overall, 51.0% (N=25) of fatal drowning occurred in regional WA (4.42 per 100,000 population) and the remaining 49.0% occurred in the Perth metropolitan area (1.27 per 100,000 population).

While two thirds of hospitalisations occurred in the Perth metropolitan area (77.1%; N=91), rates for non-fatal hospitalisations were similar for regional WA (4.97 per 100,000 population) and the Perth metropolitan area (4.60 per 100,000 population).

The North Metropolitan region recorded the highest number of fatal drowning incidents (N=14) followed by the Great Southern Region (N=10) and the South Metropolitan region (N=9). However, the rate of drowning was highest in the Great Southern region (16.88 per 100,000 population), Mid-West region (10.32 per 100,000 population) and the Goldfields region (3.23 per 100,000 population).

The highest number of hospitalisations in 2013 were recorded in the North Metropolitan (N=53), South Metropolitan (N=38) and South West (N=11) regions. However, over the past five years the highest rate of drowning-related hospitalisations were recorded in the Kimberley and Mid-West regions (8.0 per 100,000 population), followed by

the South West region (6.0 per 100,000 population). The lowest rate was recorded in the Great Southern region (2.8 per 100,000 population).

Figure 8: Metropolitan vs. Regional Drowning, 2013

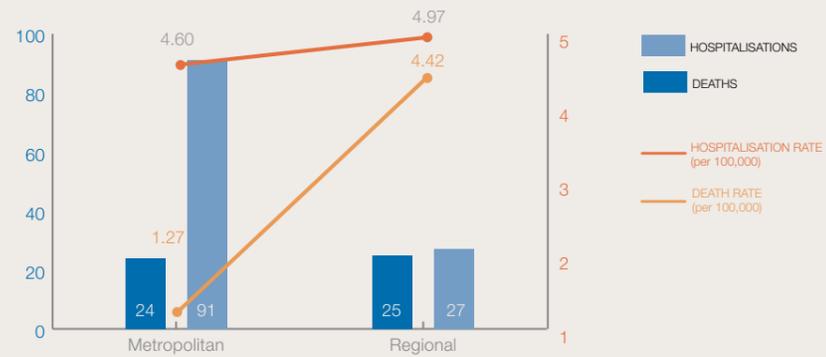


Figure 9: Fatal Drowning Rates by Region, 2013



In 2013, locations where people drowned remained similar to the previous year with the majority occurring at coastal locations (53.1%; N=26). Of these 53.8% (N=14) occurred off rocks or in the ocean and the remaining 46.2% (N=12) occurred at beach locations.

Overall, 26.5% (N=13) of fatal drowning incidents occurred at locations in and around the home with the majority occurring in home swimming pools (46.2%; N=6). Other locations included bathtubs, dams, spa baths and ponds. In addition, home swimming pools were the most common location for non-fatal drowning incidents with 31.4% occurring in home pools.

There was a slight decrease in the number of people who drowned at inland waterway locations with 16.3% of deaths occurring in rivers/creeks/streams.

Fishing emerged as the most at-risk aquatic activity for fatal drowning in 2013 with 30.6% (N=15) of deaths occurring while a person was fishing. Of these, the majority occurred while a person was diving (40.0%; N=6), followed by rock fishing and fishing from a boat (26.7%; N=4). Interestingly, the incidents coded as rescue all involved people performing a rescue for people that had entered the water while rock fishing. The WA Coroner stated:

'Abalone season continues to be a worry for safety organisations across WA. Surf Life Savers indicated that a vast majority of fishermen were of Asian appearance and continued in the activity under poor weather conditions. Education at the time people obtain their licence regarding suitable attire and safe weather conditions is needed.'

Incidents occurring while diving increased significantly from previous years with 18.2% of deaths occurring while a person was diving or snorkelling. This is almost three times that recorded in 2012.

Swimming, recreating around the water and watercraft (including boating and surfing) were also common activities being undertaken at the time of the incident (14.3%; N=7). (Figure 11.)

Figure 10: Fatal Drowning by Aquatic Location, 2013

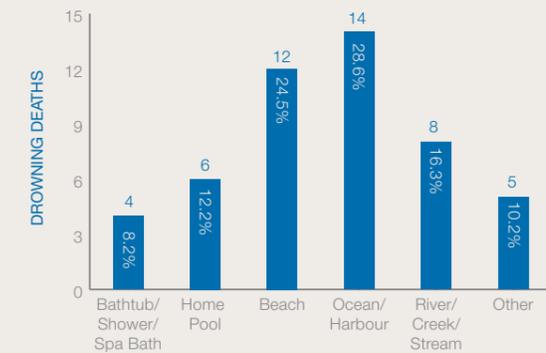
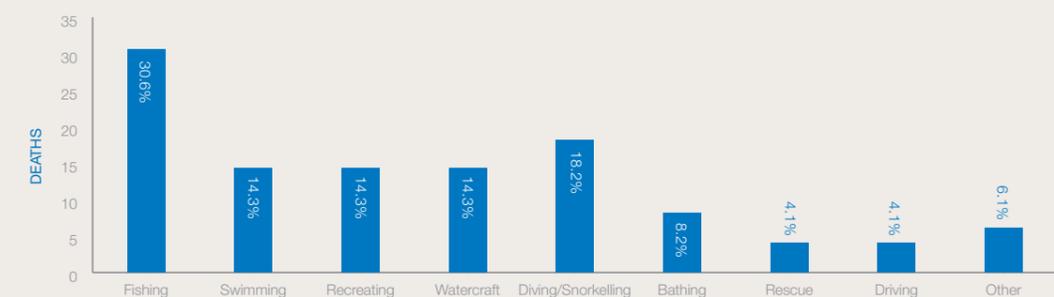


Figure 11: Fatal Drowning by Activity, 2013



DROWNING BY AGE GROUP



TODDLERS 0-4 YEARS

Toddlers under five years of age were again at the highest risk of fatal and non-fatal drowning of any age group in WA in 2013 with eight deaths (4.75 per 100,000 population) and 35 hospitalisations (20.8 per 100,000) recorded. This is the highest rate of fatal drowning recorded in the past decade for this and is double the five-year average for this age group in WA. In addition, on average over the past five years there were nine toddlers hospitalised for every child that drowned in WA.

The average age of those involved in a fatal drowning in this age group was 17 months with a range of 6 months to 3 years. There was an increase in the number of females involved in drowning deaths amongst this age group, with 50.0% (N=4) of deaths involving females in 2013, a 17% increase from 2012. All of the incidents occurred in the Perth metropolitan area with the highest rate recorded in the south metropolitan region (7.8 per 100,000 population) compared to the north metropolitan region (7.4 per 100,000 population).

The majority of incidents occurred in the summer months (50.0%; N=4) followed by winter (25.0%; n=2) and were most likely to occur in the morning (7:00 – 10:00) and the afternoon (13:00 – 17:00) when distractions such as meal preparation, bath time and tending to other children are more likely to occur.

In a continuing trend, all of the fatal drowning incidents recorded amongst this age group in 2013 occurred at locations in and around the home. The bathtub/shower was the most common location amongst infants under 12 months (average water depth of 20cm) and the home swimming pool was the most common location amongst toddlers 1-3 years.

Tragically all of these drowning deaths could have been prevented. The WA Coroner stated in one case recorded in 2013 *'...this is a tragic death that in my opinion could have been avoided...'*

In all cases, there was a lack of adult supervision at the time of the incident with supervision being absent for 5-10 minutes on average and ranged from 2 minutes

to 2 hours. Supervision was usually absent as the parent or caregiver was undertaking common household chores, sleeping, talking to friends and organising other children. It was also reported that in some cases parents and caregivers relied on older siblings for supervision or devices such as bath seats for safety.

Another contributing factor for deaths recorded in home swimming pools was an absent or faulty barrier. Common faults included having faulty self-closing mechanisms on doors, gate not self-latching, gaps larger than 100mm in fence and gate being propped open.

Figure 12: Fatal Drowning, Toddlers 0-4 years, 2009-2013

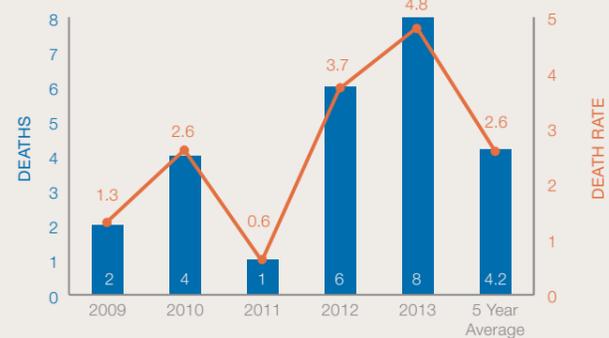
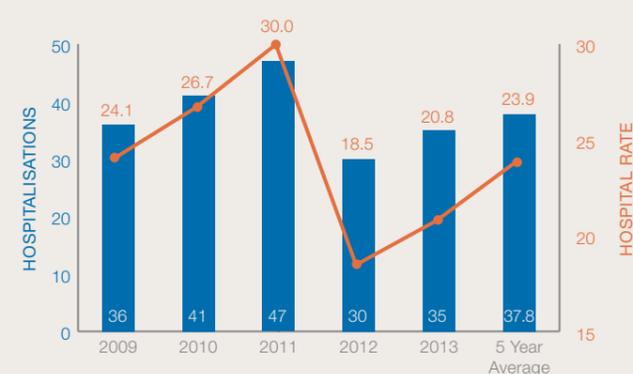


Figure 13: Hospitalisations, Toddlers 0-4 years, 2009-2013



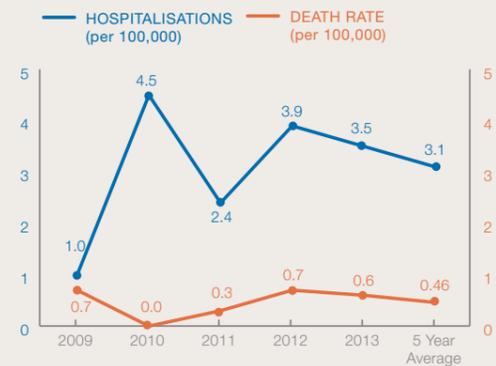
RECOMMENDATIONS:

1. Promote the importance of constant supervision to parents and caregivers of young children to increase awareness of how quickly drowning can occur and highlight 'high-risk' times for drowning
2. Improved education on home pool safety, in particular the importance of installing and properly maintaining pool barriers
3. Continue to promote, monitor and enforce pool barrier legislation for home pools and spas through regular barrier inspection programs
4. Work with local government and other groups responsible for pool barrier inspection programs to ensure that toddler drowning prevention education is incorporated into programs
5. Promote the importance of learning CPR and resuscitation amongst parents and caregivers of young children as they are often the first to respond in an emergency

CHILDREN 5-14 YEARS

Children aged 5-14 years again recorded the lowest rate of fatal drowning (N=2; 0.6 per 100,000 population) and the second lowest rate of hospitalisation (N=11; 3.5 per 100,000 population) of any age group in 2013. While numbers have remained steady over the past few years, the rate of drowning in 2013 is slightly higher than the five-year average. Both fatal incidents involved males, occurred in the Perth metropolitan area while the child was recreating in the water and were contributed to by inexperience and limited swimming ability.

Figure 14: Drowning of Children 5-14 years, 2009-2013



RECOMMENDATIONS:

1. Continue to promote the importance of every child learning to swim through ongoing participation in swimming and water safety programs
2. Continue strategies to educate children on important water safety and drowning prevention issues including risks and dangers of participating in different aquatic locations and what to do in an emergency
3. Promote the importance of parental supervision of young children when in, on or around the water to prevent drowning



YOUNG PEOPLE 15-24 YEARS

Young people recorded the second lowest rate of fatal drowning (N=4; 1.2 per 100,000 population) and the lowest rate of hospitalisation (N=9; 2.6 per 100,000 population) of any age group in 2013. Overall, the rate of fatal drowning decreased by 20.0% and the rate of hospitalisations decreased by 36.6% from 2012 and both remain below the five-year average for this age group. The average age of those involved in a fatal drowning in this age group was 18 years (4.5 years lower than 2012) with a range of 15 to 24 years. In a continuing trend all fatal drowning incidents involved males, 75.0% (N=3) occurred in regional and remote areas of WA and 75.0% (N=3) occurred at coastal locations.

Common activities being undertaken at the time of the incident included fishing, swimming and recreating around the water.

New arrivals to WA were involved in 50.0% (N=2) of fatal drowning incidents in this age group. Often people newly arriving to WA are unaware of the aquatic risks and hazards that exist at popular locations (particularly in regional and remote areas of WA) and lack strong swimming and water safety skills.

For the first time in over a decade, there were no alcohol-related drowning deaths amongst this age group in 2013.

Figure 15: Fatal Drowning, Young People 15-24 years, 2009-2013

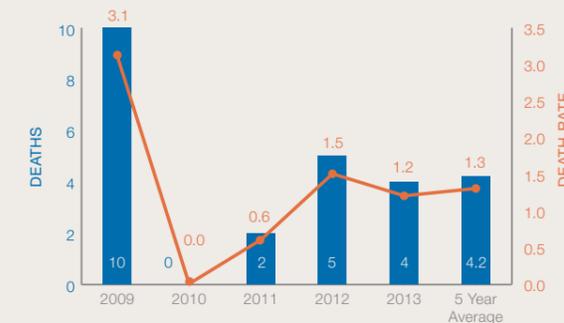
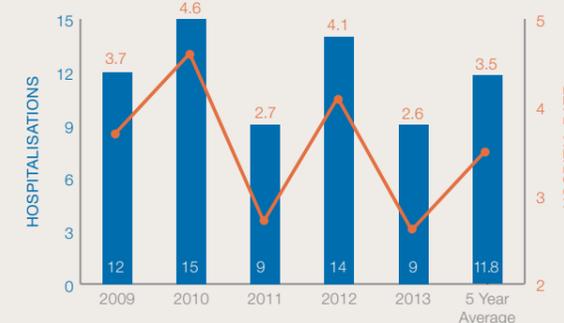


Figure 16: Hospitalisations, Young People 15-24 years, 2009-2013



RECOMMENDATIONS:

1. Education programs should be aimed at reducing risky behaviours (including alcohol consumption) around water and raising awareness of the risks and hazards that exist at different aquatic locations, particularly when in regional and remote areas of the state
2. Continue to work with relevant government and non-government agencies to promote fishing safety and improve swimming and survival skills amongst the fishing community
3. Improve water safety skills and knowledge through education and training

ADULTS 25-54 YEARS

There were significant increases in the rate of drowning amongst adults aged 25-54 years with 18 fatal drowning incidents (1.6 per 100,000 population) and 42 hospitalisations (3.8 per 100,000 population) recorded in 2013. These rates are the highest recorded for this age group over the past five years and are higher than the five year average rates. The average age of those involved in a fatal drowning in this age group was 40 years (4.1 years higher than 2012) with a range of 29 to 54 years. In a continuing trend the majority of fatal drowning incidents involved males (88.9%; N=16) with males eight times more likely to be involved in a fatal drowning than females in this age group.

The majority of fatal drowning incidents occurred in regional and remote areas of WA (72.2%; N=13) and were most likely to occur in the Mid-West and Great Southern regions.

The average age of those involved in a fatal drowning in this age group was 40 years (4.1 years higher than 2012) with a range of 29 to 54 years. In a continuing trend the majority of fatal drowning incidents involved males (88.9%; N=16) with males eight times more likely to be involved in a fatal drowning than females in this age group.

The majority of fatal drowning incidents occurred in regional and remote areas of WA (72.2%; N=13) and were most likely to occur in the Mid-West and Great Southern regions.

Fatal drowning deaths were most likely to occur at coastal locations with 38.9% (N=7) occurring in the ocean and 33.3% (N=6) occurring at beaches. An additional 22.2% (N=4) of incidents occurred at inland waterway locations. Fishing again was the most common activity being undertaken at the time of the incident along with swimming (33.3%; N=6). Other common activities being undertaken at the time of the incident include swimming, snorkelling/diving and performing a rescue.

Figure 17: Fatal Drowning, Adults 25-54 years, 2009-2013

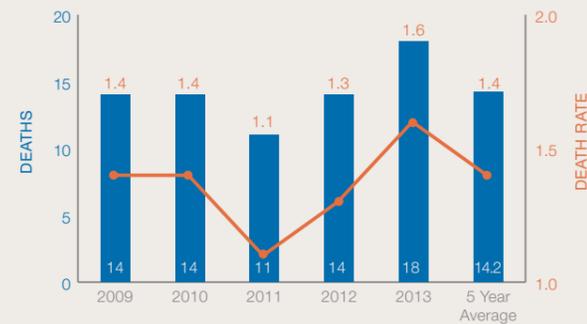
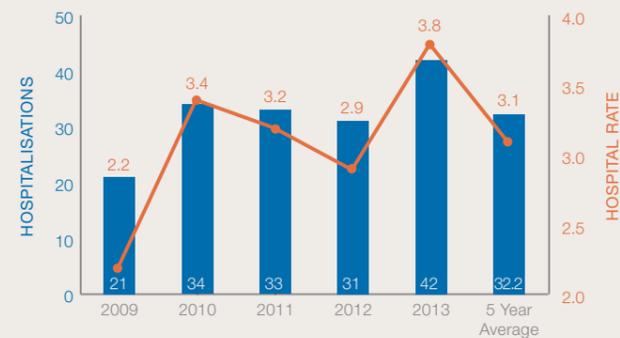


Figure 18: Hospitalisations, Adults 25-54 years, 2009-2013



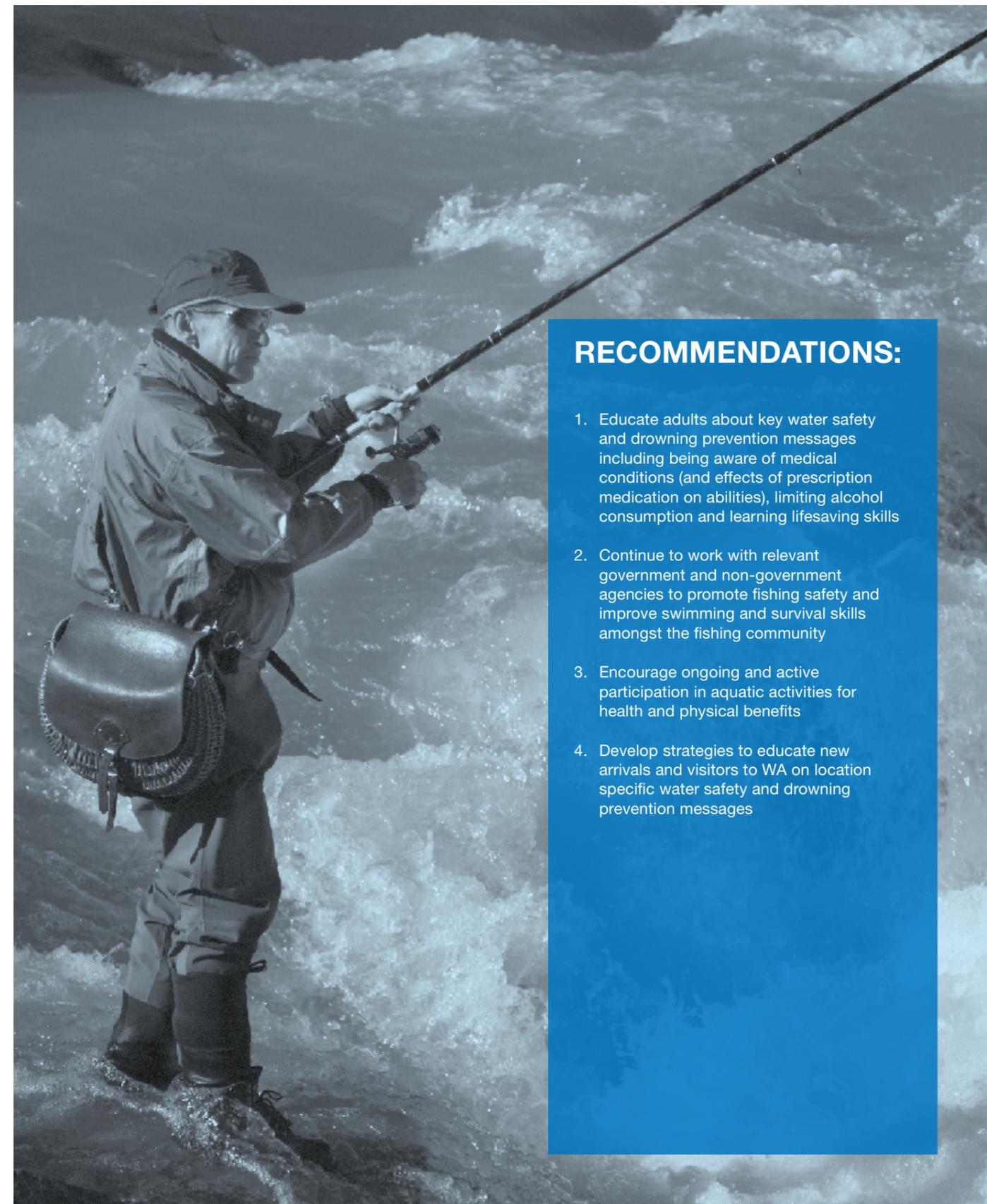
Overall, 38.9% (N=7) of fatal drowning incidents involved people from a CALD background with the majority being from Asian or British backgrounds. In addition, 38.9% (N=7) involved tourists or visitors to the area. Of these, 57.1% (N=4) were new arrivals to WA, 42.9% (N=3) were international tourists and 42.9% (N=3) were within state visitors.

In 2013, there was a significant increase in the number of fatal drowning incidents contributed to by pre-existing or underlying medical conditions.

Overall, 50.0% (N=9) of incidents in this age group were contributed to by medical conditions including heart conditions, depression and mental illness which is a 20.0% increase from 2012. In addition, 11.1% (N=2) of incidents were contributed to by alcohol consumption (average BAC

0.228%) and 44.4% (N=8) of people in this age group had drugs in their system at the time of the incident. Of these 62.5% (N=5) had prescription drugs in their system, many of which can impair thinking and reaction times, can increase the effects of alcohol and cause dizziness. An additional 62.5% (N=5) had illicit drugs such as cannabis and amphetamines in their system.

Other common factors contributing to drowning amongst this age group included poor swimming ability (16.7%; N=3), poor weather/aquatic conditions such as sudden changes in water depth, deteriorating weather, choppy swell, strong currents and reduced water visibility (38.9%; N=7) and lack of experience in the activity or unfamiliarity of the location (27.8%; N=5).



RECOMMENDATIONS:

1. Educate adults about key water safety and drowning prevention messages including being aware of medical conditions (and effects of prescription medication on abilities), limiting alcohol consumption and learning lifesaving skills
2. Continue to work with relevant government and non-government agencies to promote fishing safety and improve swimming and survival skills amongst the fishing community
3. Encourage ongoing and active participation in aquatic activities for health and physical benefits
4. Develop strategies to educate new arrivals and visitors to WA on location specific water safety and drowning prevention messages

OLDER ADULTS 55+ YEARS

There was a significant increase in the number of older adults 55+ years drowning in WA in 2013. This age group had the second highest drowning rate of any age group in WA in 2013, with 17 fatal drowning incidents recorded (2.9 per 100,000 population) and 21 hospitalisations (3.6 per 100,000 population). These are the highest rates of fatal drowning seen in WA over the past five years and both remain above the five year average for this age group.

The average age of those involved in a fatal drowning in this age group was 61 years (4.9 years lower than 2012) with a range of 55 to 84 years. The majority (70.6%; N=12) of people were retired or pensioners meaning that they have more time for recreation. In a continuing trend the majority of fatal drowning incidents involved males (88.2%; N=15) with males 7.5 times more likely to be involved in a fatal drowning than females in this age group. This is a significant (10.2%) increase from 2012.

People were four times more likely to drown in regional and remote areas of WA (6.99 per 100,000 population) compared to the Perth metropolitan area (1.73 per 100,000 population). The majority of fatal drowning incidents occurred in regional and remote areas of WA (52.9%; N=9) and were most likely to occur in the Great Southern and Mid-West region.

Fatal drowning deaths were most likely to occur at coastal locations with 35.3% (N=6) occurring in an ocean/harbour and 17.6% (N=3) occurring at beaches. This was a 32% decrease in coastal drowning amongst this age group from numbers recorded in 2012. There was an increase in the number of deaths occurring at inland waterway locations with 16.7% (N=3) of incidents occurring at these locations.

Fishing again was the most common activity being undertaken at the time of the incident along with swimming (41.2%; N=7), followed by watercraft including boating and surfing (29.4%; N=5). Other common activities being undertaken at the time of the incident include snorkelling/diving and swimming.

Overall, 58.8% (N=10) of fatal drowning incidents involved people from a CALD background with the majority being from European or British backgrounds. This was a 15% increase from 2012. In addition, 47.1% (N=8) involved tourists or visitors to the area. Of these, 87.5% (N=7) were people travelling within WA.

Pre-existing or underlying medical conditions including heart conditions, hypertension, diabetes, depression and

physical disabilities contributed to 52.9% (N=9) of incidents in this age group. In addition, 11.8% (N=2) of incidents were contributed to by alcohol consumption (average BAC 0.154%) and 52.9% (N=9) of people in this age group had prescription drugs in their system at the time of the incident. Many of these prescription medications can impair thinking and reaction times, can increase the effects of alcohol and cause dizziness.

Other common factors contributing to drowning amongst this age group included poor weather/aquatic conditions such as unpredictable and deteriorating weather, large swell, strong currents and reduced water visibility (29.4%; N=5), poor swimming ability (29.4%; N=5) and lack of experience in the activity or unfamiliarity of the location (23.5%; N=4).

Figure 19: Fatal Drowning, Older Adults 55+ years, 2009-2013

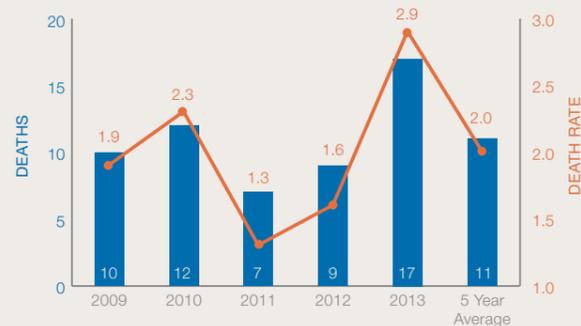
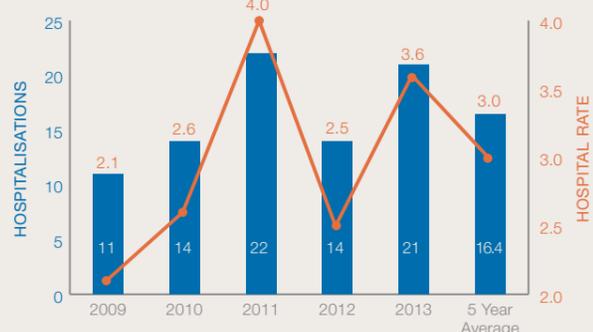


Figure 20: Hospitalisations, Older Adults 55+ years, 2009-2013



RECOMMENDATIONS:

1. Educate older adults about key water safety and drowning prevention messages including knowing their limitations, being aware of medical conditions (and effects of prescription medication on abilities), wearing a lifejacket, limiting alcohol consumption and learning lifesaving skills
2. Develop strategies to increase awareness of potential risks and hazards at aquatic locations particularly in regional and remote areas of WA
3. Continue to work with relevant government and non-government agencies to promote fishing safety and improve swimming and survival skills amongst the fishing community
4. Promote ongoing and active participation in aquatic activities for health and physical benefits and encourage older adults to seek medical advice before participating



METHODS

Drowning death data was collected from the WA Coroner's Office and collated by the Royal Life Saving Society WA Inc. Only case files closed by the Coroner at the time of the report have been included to ensure that data is as reliable and accurate as possible. Only unintentional drowning deaths have been included in this report. Exclusions from this report include: suicide, homicide, deaths from natural causes, aquatic related deaths (where drowning wasn't the cause of death), deaths where the cause of deaths was undetermined (open finding),

drowning deaths involving asylum seekers and shark attack deaths. The data has been analysed by age, gender, activity, location, region and contributing factors.

Hospitalisation data was collected and collated by the Department of Health WA Epidemiology Branch. The data has been analysed by age, gender, location, race and region.

Drowning and hospitalisation rates per 100,000 population have been based on the ABS publication Population by

Age, Sex, and Regions of Australia 2013. Percentages and averages are presented as whole numbers and have been rounded up or down accordingly.

While all care has been taken to ensure that the information presented in this report is as accurate as possible, data is subject to change following ongoing coronial investigations.

- 49 people drowned in Western Australian waterways between 1 January and 31 December 2013
- 84% male, 16% female
- Top 3 Drowning Locations: Ocean/Harbour, Beaches, Rivers/Creeks/Streams
- Top 3 Activities: 31.0% Fishing, 28.6% Swimming and Recreating, 14.3% Watercraft Incidents
- 118 people were hospitalised following a non-fatal drowning incident



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The Royal Life Saving Society WA would like to acknowledge and thank the WA Coroner's Office, Department of Health and the National Coronial Information System (NCIS) for their assistance in producing the 2013 WA Drowning Report.



Royal Life Saving

THE ROYAL LIFE SAVING SOCIETY WESTERN AUSTRALIA INC.