

249

**PEOPLE DROWNED
IN AUSTRALIAN WATERWAYS**

ROYAL LIFE SAVING NATIONAL DROWNING REPORT 2018

RESEARCH AND
POLICY HIGHLIGHTS



ROYAL LIFE SAVING
AUSTRALIA

SUPPORTED BY



Australian Government

249

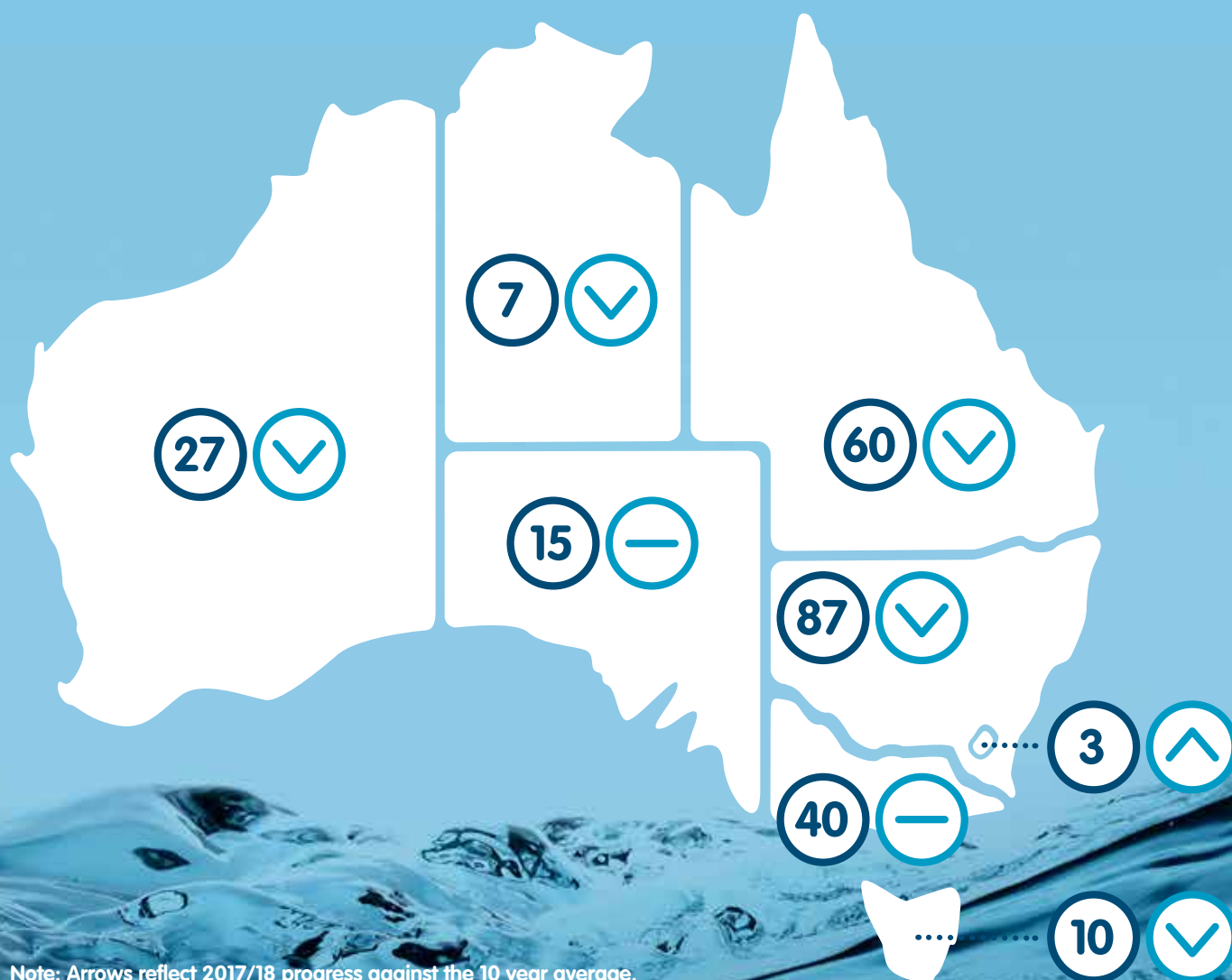
PEOPLE DROWNED IN
AUSTRALIAN WATERWAYS



72%



28%



Note: Arrows reflect 2017/18 progress against the 10 year average.

TOP 3 LOCATIONS



25%
RIVER/CREEK/STREAM



19% BEACH



16% OCEAN/HARBOUR

TOP 3 ACTIVITIES



**26% SWIMMING
& RECREATING**



15% BOATING



14% FALLS

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**THIS REPORT SERVES AS
AN IMPORTANT REMINDER
TO ALL AUSTRALIANS OF
THE RISKS ASSOCIATED
WITH EXPOSURE TO OUR
BEAUTIFUL WATERWAYS”**



We are pleased to present the Royal Life Saving National Drowning Report 2018. We urge you to study this report and to take action to reduce drowning.”

People, and Families not Cases or Data

We must always be mindful that this is a report filled with the stories of real people impacted in a most tragic way by drowning. It includes people who lost their lives to drowning, the families they left behind, the rescuers who made valiant efforts to save their life, and the communities that are reminded as they pass the causeway, swimming pool, rock platform, beach or river swimming holes.

Non-fatal Drowning

We continue to grow our understandings of the impacts of both fatal and non-fatal drowning. Those who survive a drowning incident, often do so while suffering from an array of lifelong health impacts. In some cases these impacts lead to premature death.

Young lives saved

The most pleasing item to report this year relates to the reduction in drowning of children under the age of five. A 38% reduction when compared to last year, and 36% against the 10 year average is very positive. Parents must continually be reminded to Keep Watch, and ensure that their pool fence and gate are in good working order.

Australians take note and Respect the River

Drowning in inland waterways have reduced for the third year running. A reduction of 16% when compared to the ten year average builds upon the progress in this area. We are pleased to be implementing campaigns including Respect the River, and Don't Let Your Mates Drink and Drown. We are grateful that Federal Government funding for these programs has been extended.

Australian Water Safety Strategy

Royal Life Saving analysis of the Australian Water Safety Strategy targets shows that progress is being made in reducing drowning in children 0-4 years (47%) when measured as a rate per 100,000 population. Advances in swimming fencing legislation and enforcement, and the promotion of the messages of supervision, pool fencing, water familiarisation and resuscitation, are clearly having some long term impact.

Swimming and Water Safety Skills

We are absolutely committed to the notion that all Australian children have the right to a comprehensive swimming and water safety education. The skills of swimming, survival swimming, and basic rescue are all lifesavers, yet we know that there are many barriers; including cost, distance, awareness, and access in communities most at risk of drowning. In May 2018, we convened the second National Swimming and Water Safety Symposium, bringing together policy makers, water safety organisations and academics from across Australia. Our focus continues to be on relaunching the National Swimming and Water Safety Framework.

Strengthening Partnerships

This year's Royal Life Saving National Drowning Report is the 24th iteration. It is our most rigorous and comprehensive analysis to date. The Royal Life Saving National Fatal Drowning Database now stretches back 16 years, and almost 5,000 cases. Partnerships with others are critical to its value in prevention terms. Coroners, Federal, State and Local Governments, Institutions and other industry bodies have used the dataset to inform the development of drowning prevention policy.

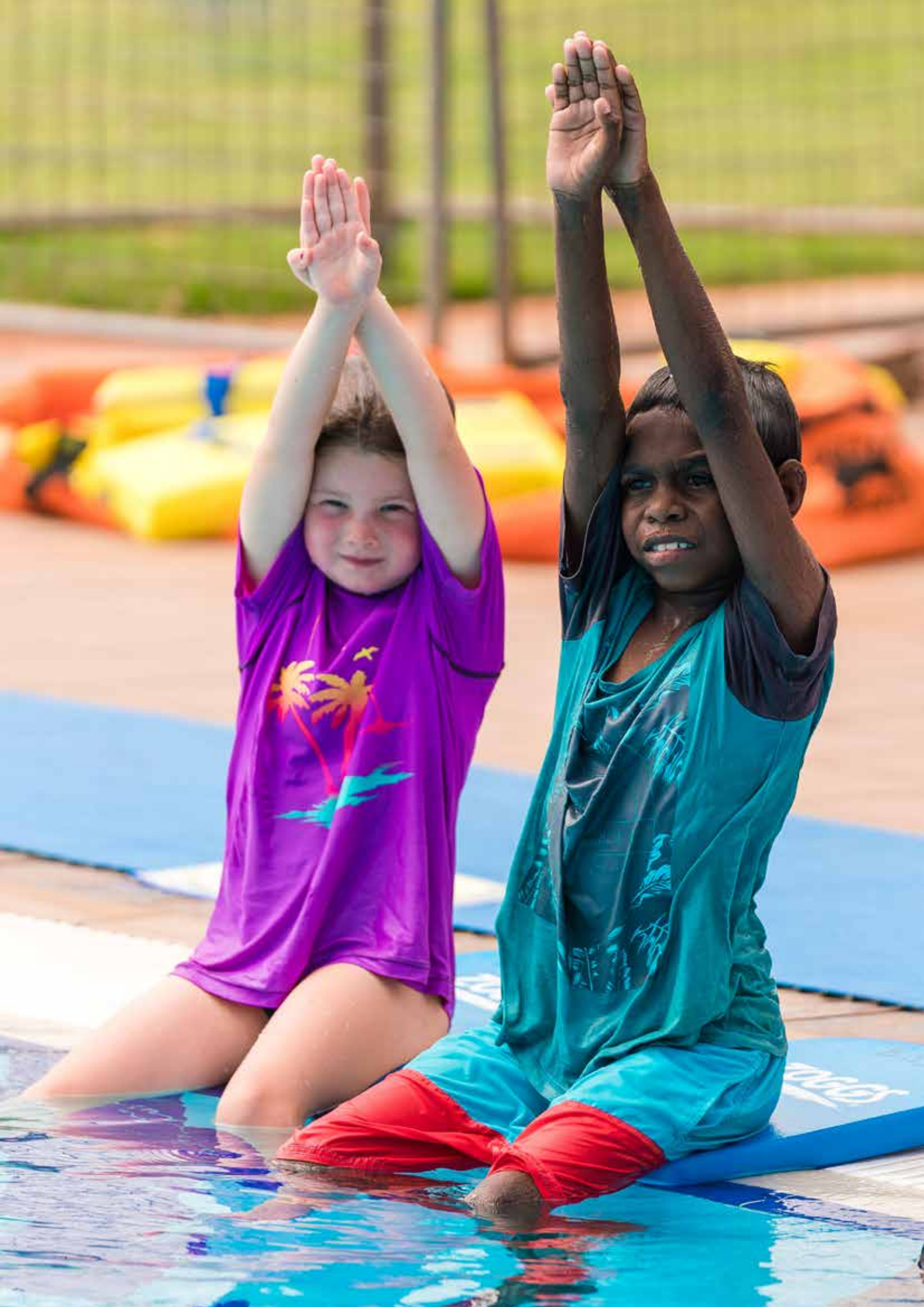
Water Safety Funding

We are pleased to continue our partnership with the Australian Government that is aimed at reducing drowning and promoting water safety to the Australian community. This supports our leadership and collaboration, our research and campaigns, and the many programs that we deliver to communities across Australia.

This Report serves as an important reminder to all Australians of the risks associated with exposure to our beautiful waterways, rivers, beaches, and community and backyard swimming pools. I urge you to share the messages of the Report, the infographics, prevention tips and other supporting resources provided by Royal Life Saving, to help us reduce drowning in Australia.

Justin Scarr

Chief Executive Officer,
Royal Life Saving Society - Australia



FATAL AND NON-FATAL DROWNING IN AUSTRALIA

There were 249 drowning deaths in aquatic locations across Australia between 1 July 2017 and 30 June 2018.

This is a 14% reduction on 2016/17 and an 11% reduction on the ten year average.

The crude drowning rate is 1.01 drowning deaths per 100,000 population, compared to a 10 year average rate of 1.22.

Based on statistical modelling of the relationship between numbers of fatal and non-fatal incidents for each age group between 2002/03 and 2014/15, we estimate there were 551 non-fatal drowning incidents requiring hospitalisation in 2017/18, assuming the historical ratios between the number of fatal and non-fatal incidents held constant.

When fatal and non-fatal incidents are combined, there were a total of 800 drowning incidents in Australia in 2017/18, representing a crude rate of 3.23 drowning incidents per 100,000 population.

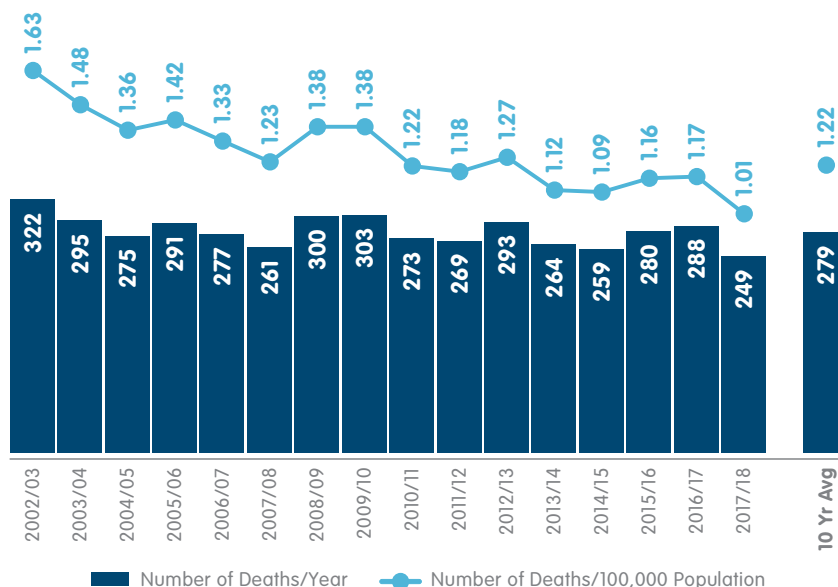


Figure 1: Unintentional Drowning Deaths and Death Rates, Australia 2002/03 to 2017/18, 10 Year Average

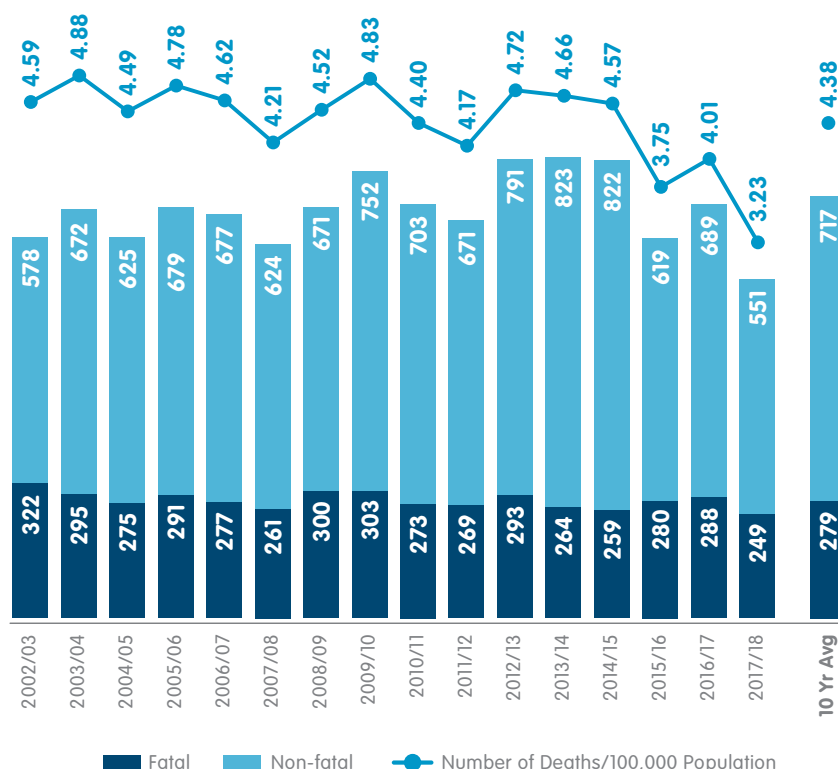
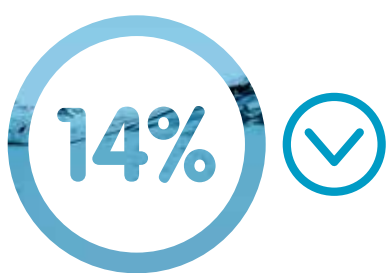


Figure 2: Comparison of fatal and non-fatal incidents, based on historical data (2002/03-2014/15) and projected figures (2015/16-2017/18) and crude rate of drowning incidents, Australia, 10 Year Average



REDUCTION IN DROWNING DEATHS ON 2016/17



DROWNING INCIDENTS IN AUSTRALIA IN 2017/18

CASE STUDY

HOW ARE WE TRACKING AGAINST THE GOAL OF A 50% REDUCTION IN DROWNING BY THE YEAR 2020?

In 2008, the Australian Water Safety Council set an ambitious goal of reducing drowning by 50% by 2020. This target has served as a focus for drowning prevention efforts and driver for collaboration between different drowning prevention organisations across Australia.

With 2020 only two years away, we have begun to track our progress against the goal of reducing drowning by 50%, to identify areas where interventions have been successful and those where additional effort is urgently required. A range of factors have impacted the achievability of the 50% reduction target. These include changes in the size and make-up of the Australian population, which is increasingly older and features larger numbers of tourists and overseas born residents (see Factors impacting achievement).

In order to partially adjust for the changes in our target population, the graphics below show progress in the rate of drowning per 100,000 people. To avoid overstating the effects of one year peaks and troughs, these figures compare 3 year averages from the start (2002/03–2004/05) to our most recent data (2015/16–2017/18) for the four key life stages outlined in the Australian Water Safety Strategy 2016–2020.

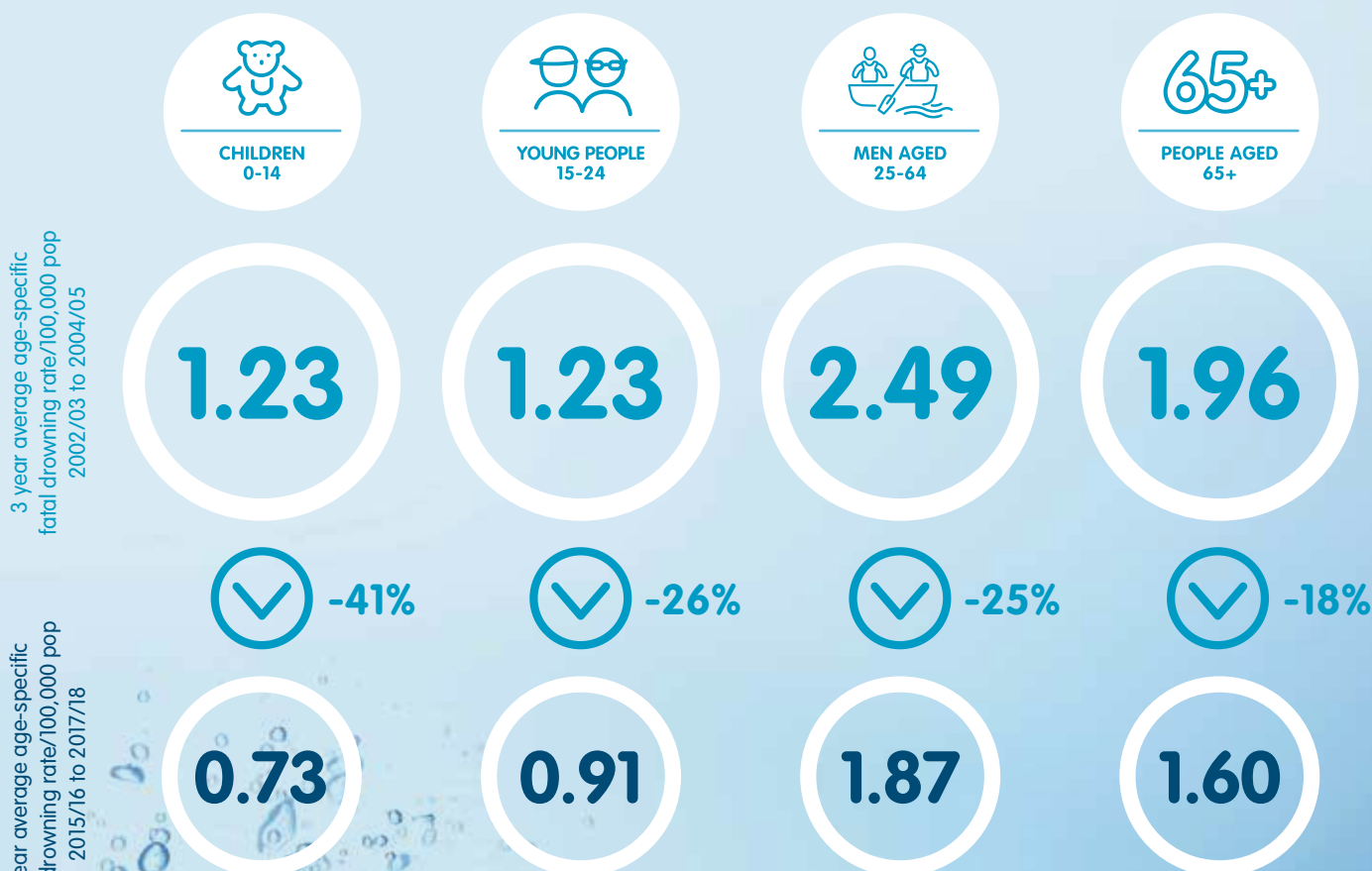
The reduction in drowning rates achieved so far is shown in each graphic as a percentage. This interim analysis shows an overall 26% reduction in fatal drowning since 2002/03. This reduction equates to approximately 102 fatal drownings averted per year.

This population-based approach takes into account changes in the size of the population being protected, and is consistent with how we monitor most other public health outcomes.

Factors impacting achievement

Since 2002/03 there has been a:

- 28% population increase
- 55% population increase in people aged 65+
- 71% increase in people born overseas
- 71% increase in overseas inbound tourism
- 100% increase in international students



WHO DROWNS?

Of the 249 drowning deaths in Australia in 2017/18, 72% were male.

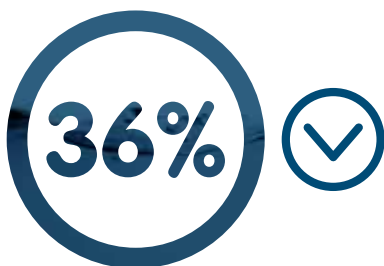
New South Wales recorded the largest number of drowning deaths with 87, followed by Queensland with 60 drowning deaths.

As a rate per 100,000 population, Tasmania recorded the highest drowning rate, with 1.91 drowning deaths per 100,000 head of population. Victoria recorded the lowest fatal drowning rate with 0.63 drowning deaths per 100,000 population.

The largest number of drowning deaths last year occurred in the 35-44 years age group. The 18 drowning deaths this year of young children under five years of age, represents a 36% reduction on the 10 year average of 28 drowning deaths.



**NEW SOUTH WALES
RECORDED THE LARGEST
NUMBER OF DROWNING
DEATHS WITH 87**



**DROWNING DEATHS
AMONG CHILDREN UNDER
FIVE DOWN BY 36% ON
THE 10 YEAR AVERAGE**

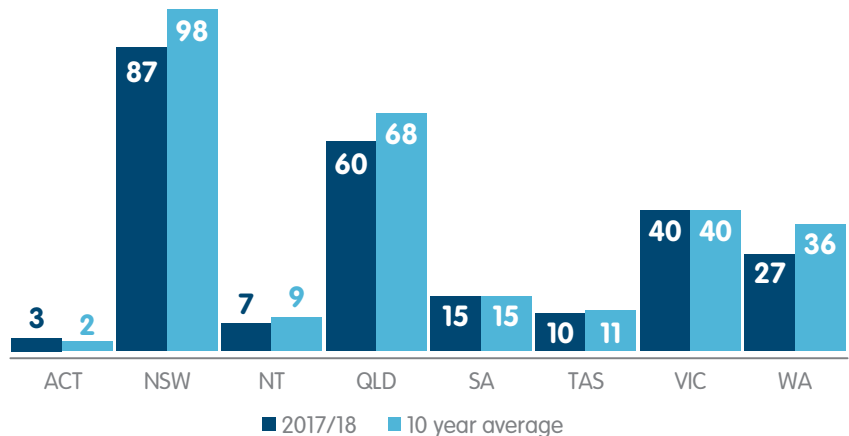


Figure 3: Drowning Deaths by State and Territory, 2017/18, 10 Year Average

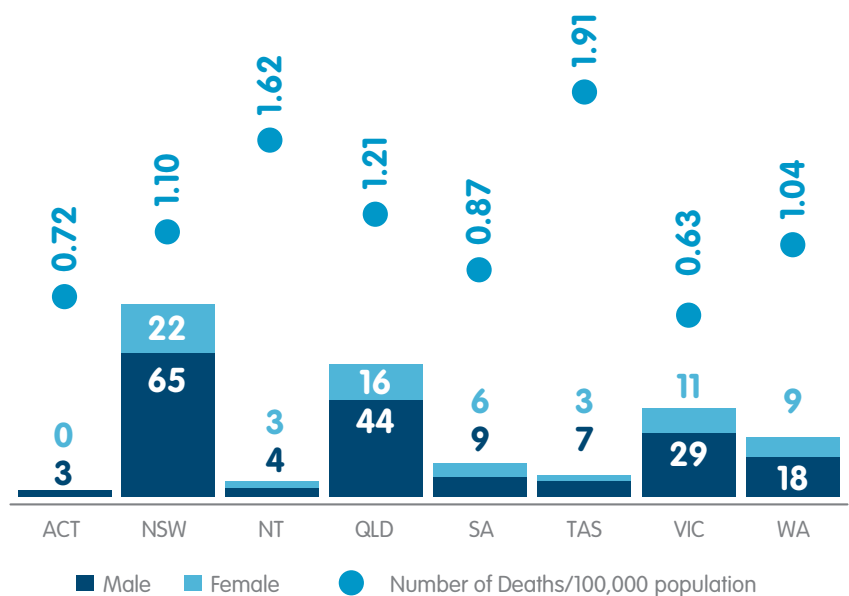


Figure 4: Drowning Deaths by Sex and State and Territory, Drowning Death Rates

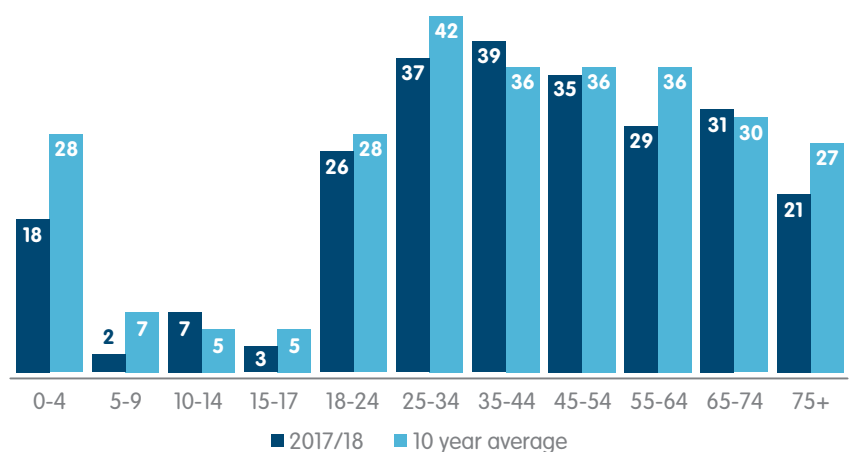


Figure 5: Drowning Deaths by Age Group, 2017/18, 10 Year Average

Please note: There was one drowning death in Queensland where age was unknown.

CASE STUDY

COSTS OF DROWNING IN 2017/18

Research conducted by Royal Life Saving estimates that the combined effects of fatal and non-fatal drowning in 2017/18 cost Australia \$1.47 billion. These costs combine the health system, emergency services, coronial and productivity effects of an average of the 249 fatal and 551 non-fatal incidents outlined in this report.

On average, each fatal drowning cost Australian society \$4.56 million, while each non-fatal drowning cost us \$610 thousand. Most of the costs of non-fatal drowning come from the 7.4% of victims who go on to experience long term complications as a result of their experience.

The largest share of costs from drowning, for both fatal and non-fatal incidents, come from the value of years of life lost to death and disability. We calculate that, in 2017/18, fatal drowning led to the loss of 10,335 years of life over a 15 year period, while last year's non-fatal drowning will ultimately lead to complications and disability equivalent to 1,326 years of life lost.

\$1.47
BILLION

DROWNING COST TO AUSTRALIA LAST YEAR

\$1.13
BILLION

FOR FATAL INCIDENTS

\$4.56
MILLION

AVERAGE FATAL DROWNING COST TO AUSTRALIAN SOCIETY

\$339
MILLION

AVERAGE NON-FATAL DROWNING COST TO AUSTRALIAN SOCIETY

10,335

YEARS OF LIFE LOST DUE TO FATAL DROWNING

What these numbers mean

Fatal drowning

Information on the number and age at death of those who die from drowning has been sourced from the Royal Life Saving National Fatal Drowning Database as part of the preparation of this report.

The cost associated with each fatal drowning is calculated based on an updated Value of a Statistical Life Year provided by the Commonwealth Office of Best Practice Regulation and the victim's projected remaining life years. Estimates from literature were used to determine the costs of emergency services and search and rescue response, hospitalisation in cases of delayed mortality, foregone economic productivity and coronial enquiry costs.

Non-fatal drowning

Since hospital data showing non-fatal drowning admissions is not currently available, the number of non-fatal incidents in 2017/18 was estimated based on the past ratio of non-fatal to fatal incidents in each age group and on the number of fatal incidents each age group experienced in 2017/18. An adjustment was made to capture non-fatal drowning which is not captured in standard hospital admissions data.

The cost associated with each non-fatal incident is calculated based on rates of complications in survivors, the degree of disability associated with each level of injury, and the costs from hospitalisation, loss of productivity and emergency response. These figures update the cost estimates provided in earlier Royal Life Saving publications based on additional research into rates and consequences of brain injury among victims.

Why these numbers matter

We calculate that drowning costs Australian society nearly \$1.5 billion last financial year, and that each fatal drowning we could have prevented would have been worth, on average, \$4.56 million. These figures help to put the costs of potential drowning prevention strategies into perspective and help to quantify the gains from reductions in Australia's drowning toll. Every time a quick response helps to turn a fatal drowning into a non-fatal one, Australian society benefits to the tune of nearly \$4 million.

Obviously, dollars and cents aren't the only way, or even the most useful way to talk about how much drowning costs us as a society. But sometimes policy decisions do come down to dollar and cents, and at those times it's important to be able to talk about what a costly tragedy every drowning, fatal or non-fatal, really is.

WHEN DO THESE DROWNING DEATHS OCCUR?

Drowning deaths occur throughout the year with the largest proportion taking place in Summer (42%).

Fatal drowning peaked in December with 40 deaths, followed by January with 38 deaths.

Sunday was the most common day for fatal drowning, accounting for 23% of all deaths.

51% of all drowning deaths in 2017/18 occurred in the afternoon hours.

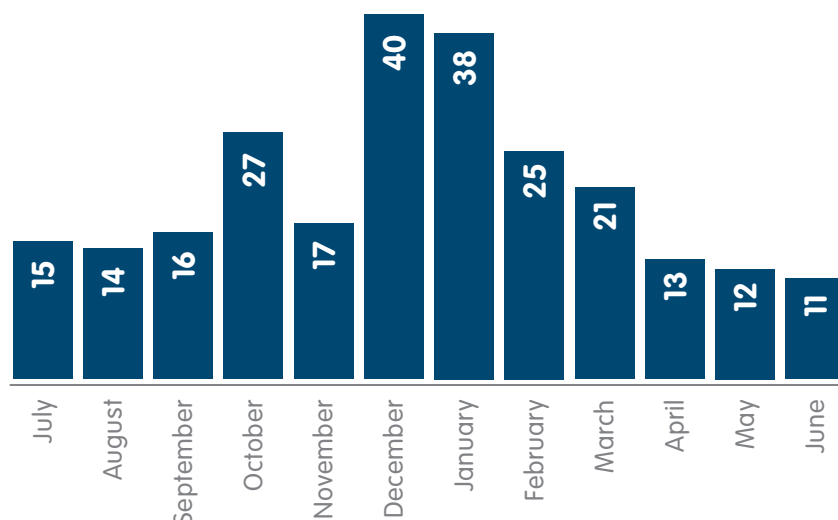


Figure 6: Drowning Deaths by Month of Drowning Incident, 2017/18

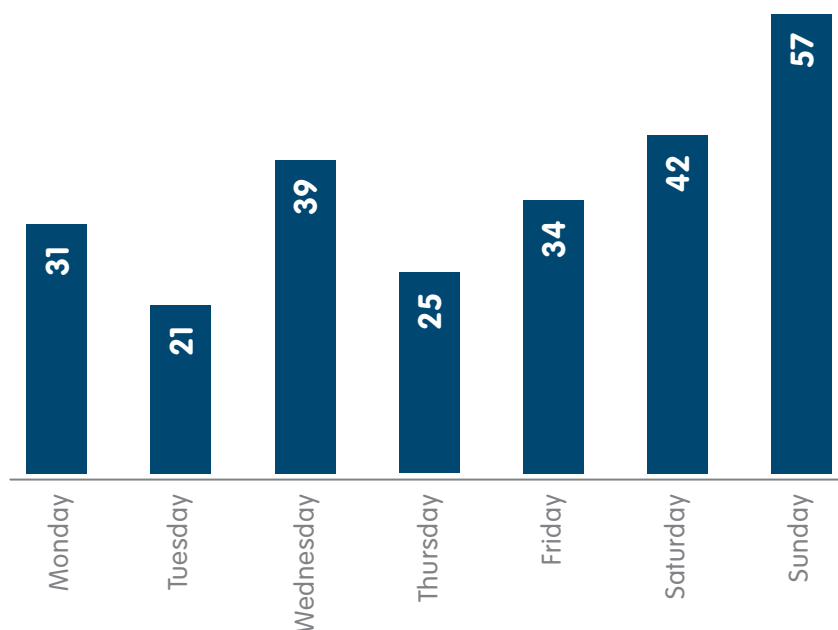
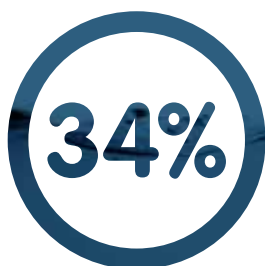


Figure 7: Drowning Deaths by Day of Week of Incident, 2017/18



TWO IN FIVE DROWNING DEATHS OCCUR IN SUMMER



DROWNING DEATHS OCCUR DURING WINTER & AUTUMN

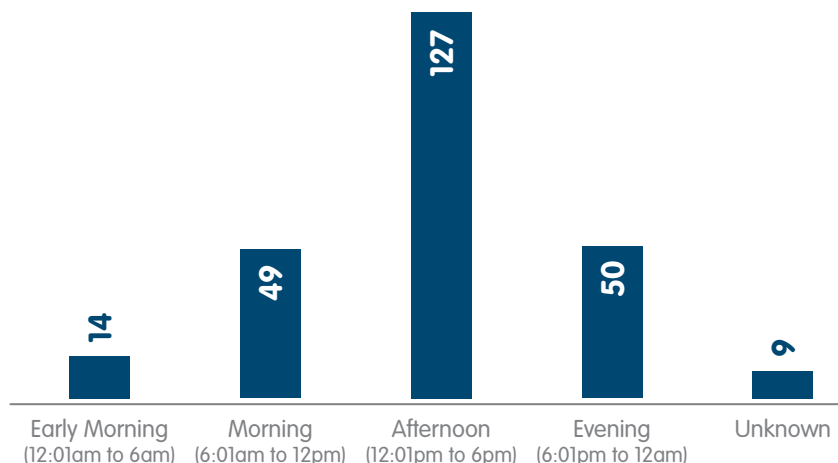


Figure 8: Drowning Deaths by Time of Incident, 2017/18

CASE STUDY

A 10 YEAR ANALYSIS OF DROWNING IN AQUATIC FACILITIES: COMMUNAL, PUBLIC AND COMMERCIAL SWIMMING POOLS

Between 1 July 2005 and 30 June 2015, 78 people drowned in Communal, and Public and Commercial swimming pools. Of these, 42 drowning deaths occurred in Communal pools and 36 occurred in Public and Commercial pools.

Communal swimming pools

(e.g. hotel/motel pools, apartment complex pools and retirement village pools)

Fatal drowning

- Males accounted for 79% of deaths, with adults 25-34 years the leading age group (19%)
- Among deaths involving children 0-14 years, there was no parental or carer supervision in 75% of cases
- Those who drowned were most commonly first observed by a resident or guest (24%), or a family member or friend (24%) but often retrieved from the pool by hospitality staff (29%)
- In almost all cases emergency services were contacted (95%), most commonly by hospitality staff (33%) and treatment was administered in almost three quarters of drowning cases (74%)
- People of all skill levels drowned, including poor (12%), competent (12%) and strong swimmers (7%)
- Coronial recommendations were not made in any drowning cases

Non-fatal drowning

- There were 105 cases of non-fatal drowning in Communal swimming pools
- The leading age group for non-fatal drowning was children aged 0-4 years (45%), followed by children aged 5-9 years (25%)

Public and commercial swimming pools

(e.g. public pools, aquatic centres, school pools and fitness centre pools)

Fatal Drowning

- Males accounted for 81% of drowning deaths, with children aged 5-9 years the leading age group (19%)
- Among deaths involving children 0-14 years, there was no parental or carer supervision in 78% of cases
- Those who drowned were most commonly first observed by an adult bystander or witness (39%) but often retrieved from the pool by staff (44%), including lifeguards
- In two thirds of drowning cases at least one lifeguard was present (67%), while other pools were either not required to have one or did not have one due to the prevailing operating conditions
- In the majority of cases emergency services were contacted (89%), either by pool staff (8%) or a bystander (8%) and treatment was administered in the majority of drowning cases (86%)
- People of all skill levels drowned, including non (14%), poor (8%), competent (22%) and strong swimmers (22%)
- Coronial recommendations were made in 17% of cases, referencing swimming ability, safety standards and features, supervision and education

Non-Fatal Drowning

- There were 257 cases of non-fatal drowning in Public and Commercial swimming pools
- The leading age group for non-fatal drowning was children aged 0-4 years (45%), followed by children aged 5-9 years (21%)

Source: Mahony, A, Peden, AE, Roberts, C, Barnsley, P (2018) A 10 year analysis of drowning in Aquatic Facilities: Exploring risk at Communal, Public and Commercial swimming pools, Royal Life Saving Society – Australia. Sydney.



WHERE AND HOW DO THESE DROWNING DEATHS OCCUR?

Rivers, creeks and streams were the location with the largest number of drowning deaths, accounting for 25% of all drowning deaths in 2017/18.

The location categories of lakes/dams/lagoons and swimming pools both recorded a 20% reduction on the 10 year average.

Swimming and recreating was the leading activity being undertaken immediately prior to drowning (25%), followed by boating-related incidents (15%).

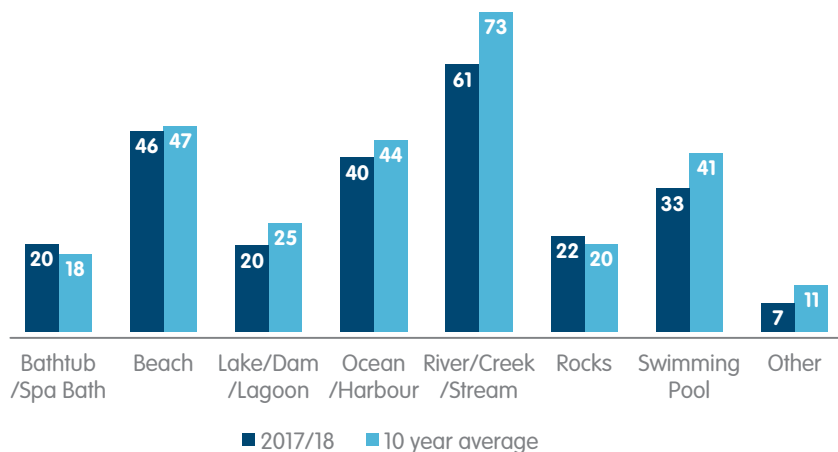


Figure 9: Drowning Deaths by Location, 2017/18, 10 Year Average



RIVERS, CREEKS AND STREAMS REMAIN THE LEADING LOCATION FOR DROWNING IN AUSTRALIA

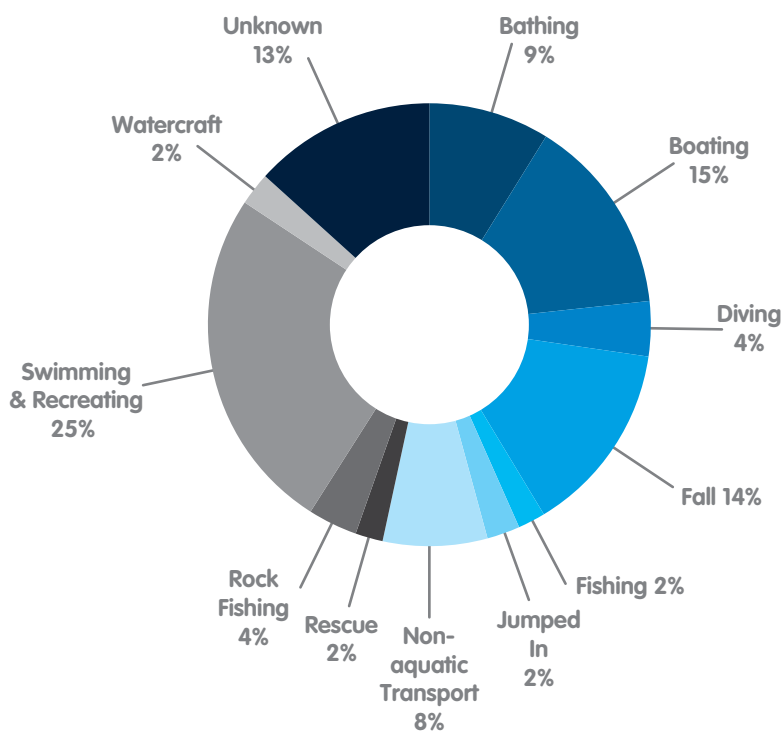


Figure 10: Drowning Deaths by Activity Immediately Prior, 2017/18, 10 Year Average



SWIMMING AND RECREATING ACCOUNTED FOR ONE QUARTER OF ALL DROWNING DEATHS IN 2017/18

DROWNING DEATHS BY LOCATION



61

RIVER/CREEK/STREAM

46

BEACHES

40

OCEAN/HARBOUR

33

SWIMMING POOLS

LOCATION IN FOCUS: RIVERS/CREEKS/STREAMS

There were 61 drowning deaths in rivers, creeks and streams across Australia in 2017/18. This represents a 10% reduction on 2016/17 and a 16% reduction when compared to the 10 year average.

The 25-34 years age group recorded for the largest number of drowning deaths, with 12 fatalities. This year, there were no drowning deaths in the 5-9 years and the 15-17 years age groups in rivers.

In 28% of cases the activity prior to drowning in a river was unknown, indicating the person was alone when they drowned and the activity prior to drowning was not witnessed.

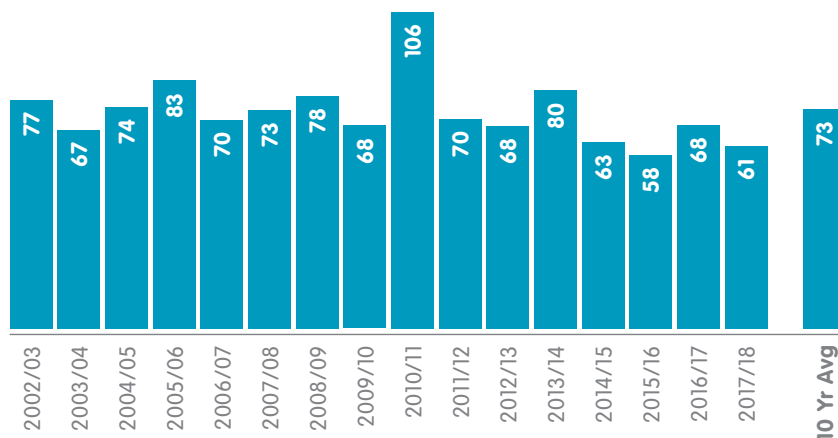
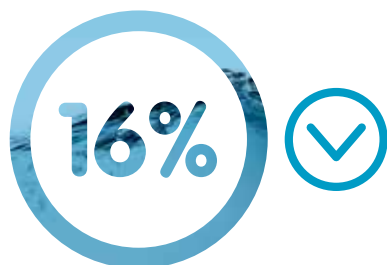


Figure 11: Drowning Deaths in River/Creek/Stream Locations 2002/03 to 2017/18, 10 Year Average



Figure 12: River/Creek/Stream Drowning Deaths by Age Group, 2017/18, 10 Year Average



RIVER DROWNING DEATHS HAVE DECREASED BY 16% IN 2017/18 WHEN COMPARED TO THE 10 YEAR AVERAGE



UNKNOWN ACTIVITIES ACCOUNTED FOR 28% OF DROWNING DEATHS IN RIVERS IN 2017/18

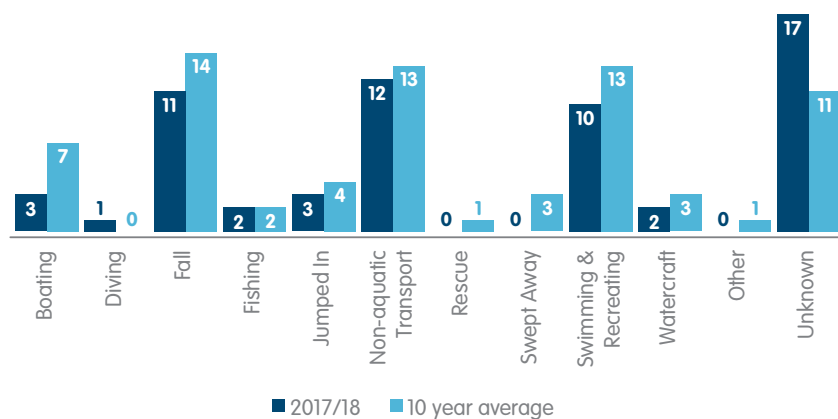


Figure 13: River/Creek/Stream Drowning Deaths by Activity Immediately Prior to Drowning, 2017/18, 10 Year Average

A man in a blue t-shirt and grey shorts is fishing in a river. He is standing on a grassy bank, holding a fishing rod. The river is calm, and there are trees and rocks in the background.

CASE STUDY

RESEARCH USES MIXED METHODS TO REVISE FATAL RIVER DROWNING RATES

Royal Life Saving and James Cook University researchers have published a study in the Injury Prevention journal examining river visitation and its impact on drowning risk. Using fatal river drowning data from the Royal Life Saving National Fatal Drowning Database and nationally representative survey data on river visitation, river drowning risk based on exposure for adults was estimated. The study also examined differences in traditional river drowning rates per 100,000 population when exposure was considered.

After adjusting for exposure, the study found males were 8 times more likely than females to drown in rivers in Australia. Males aged 75 years and over and females aged 55-74 years were at highest risk of river drowning. Males were nine times more likely to drown with alcohol present and 26 times more likely to drown in a boating or watercraft-related incident than females.

The research addresses a gap in the published literature, around exposure to drowning at rivers, the leading location for drowning in Australia, and a common drowning location globally. While challenging to calculate, the findings of this research will guide the targeting of future river drowning prevention strategies to those most at risk.

For more information on the study please visit injuryprevention.bmj.com



**MALES WERE 8 TIMES
MORE LIKELY TO
DROWN IN RIVERS**

LOCATION IN FOCUS: **BEACHES**

There were 46 drowning deaths at Australian beaches in 2017/18. This represents a 6% reduction on 2016/17 and a 2% reduction when compared to the ten year average.

Drowning deaths at beaches in the 35-44 years age group doubled in 2017/18 when compared to the 10 year average. There were no drowning deaths at beaches of children under 10 years.

70% of all beach drowning deaths in 2017/18, occurred as a result of swimming and recreating.

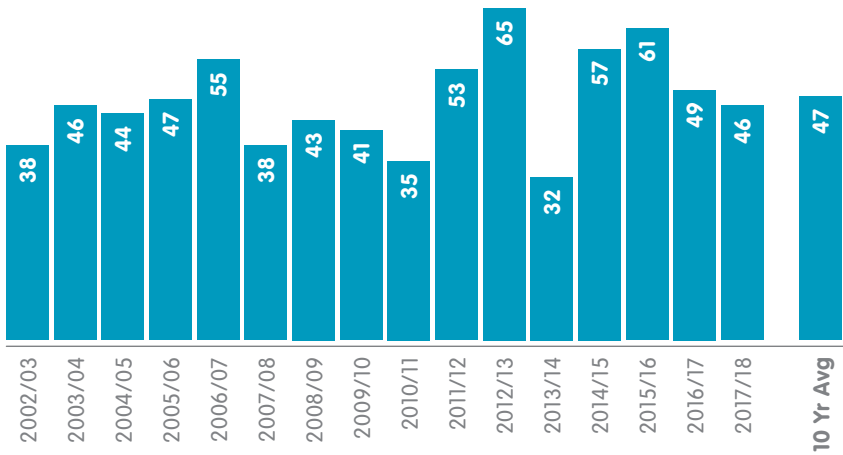


Figure 14: Beach Drowning Deaths 2002/03 to 2017/18, 10 Year Average

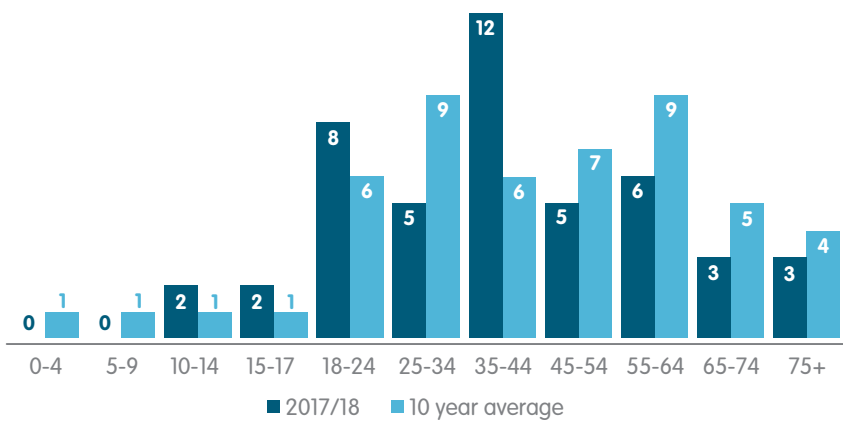
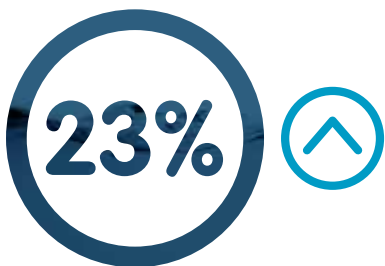


Figure 15: Beach Drowning Deaths by Age Group, 201/18, 10 Year Average



**BEACH DROWNINGS
DOWN 2% AGAINST
THE 10 YEAR AVERAGE**



**23% INCREASE ON BEACH
DROWNING DEATHS AS A
RESULT OF SWIMMING AND
RECREATING, COMPARED
TO 10 YEAR AVERAGE**

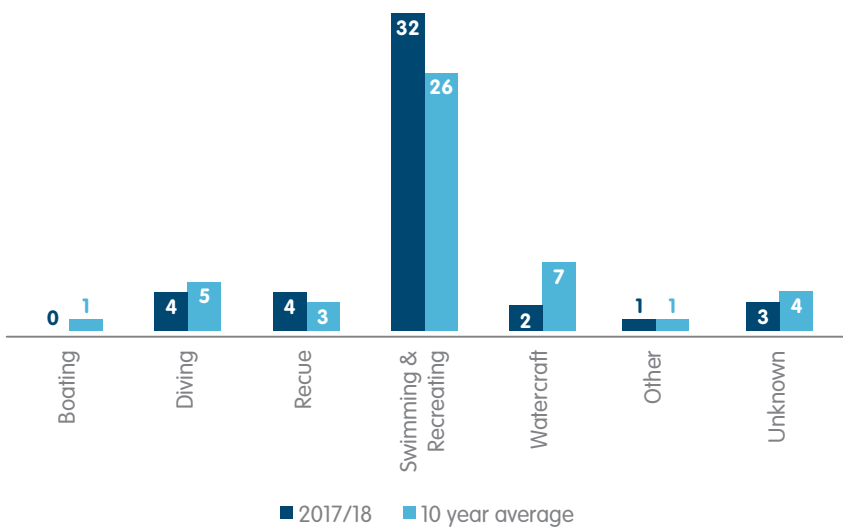
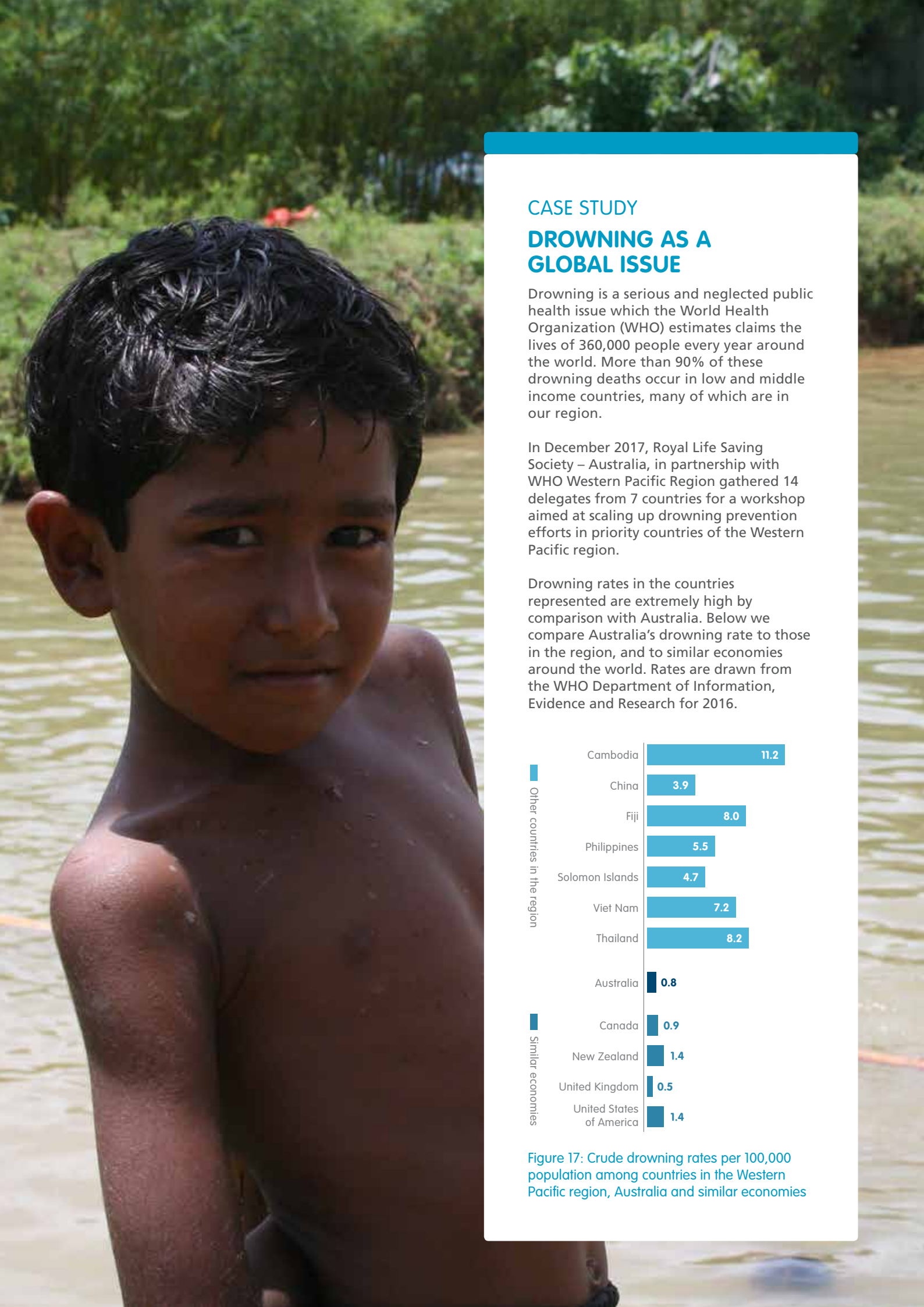


Figure 16: Beach Drowning Deaths by Activity Immediately Prior to Drowning, 2017/18, 10 Year Average



CASE STUDY

DROWNING AS A GLOBAL ISSUE

Drowning is a serious and neglected public health issue which the World Health Organization (WHO) estimates claims the lives of 360,000 people every year around the world. More than 90% of these drowning deaths occur in low and middle income countries, many of which are in our region.

In December 2017, Royal Life Saving Society – Australia, in partnership with WHO Western Pacific Region gathered 14 delegates from 7 countries for a workshop aimed at scaling up drowning prevention efforts in priority countries of the Western Pacific region.

Drowning rates in the countries represented are extremely high by comparison with Australia. Below we compare Australia's drowning rate to those in the region, and to similar economies around the world. Rates are drawn from the WHO Department of Information, Evidence and Research for 2016.

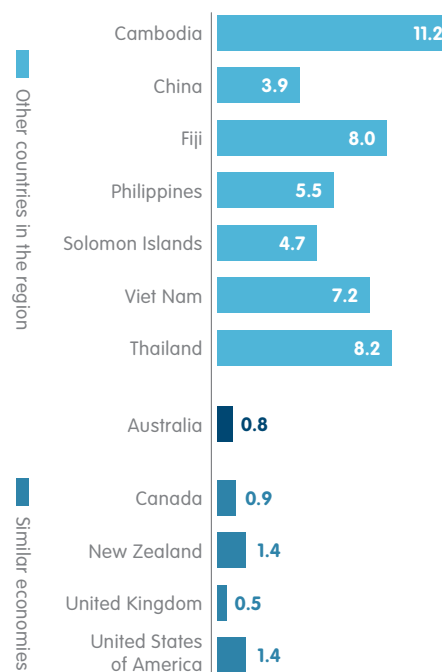


Figure 17: Crude drowning rates per 100,000 population among countries in the Western Pacific region, Australia and similar economies

LOCATION IN FOCUS: OCEAN/HARBOUR

There were 40 drowning deaths at ocean/harbour locations in 2017/18, representing an 11% reduction on 2016/17 and a 9% reduction on the ten year average.

The 65-74 years age group recorded the highest number of drowning deaths at ocean/harbour locations, an increase of 50% on the 10 year average. There were no drowning deaths among children under 10 years of age or adolescents aged 15 to 17 years in ocean/harbour locations in 2017/18.

Boating-related incidents accounted for 70% of drowning deaths at ocean/harbour locations in 2017/18, a 22% increase when compared to the ten year average.

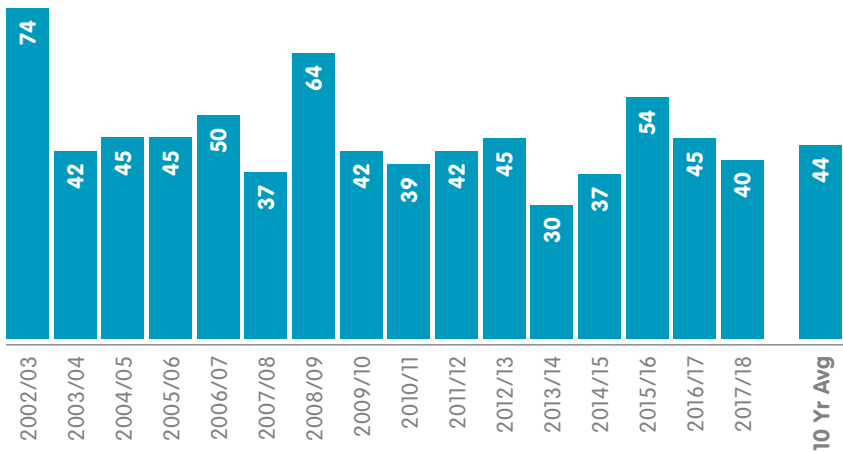


Figure 18: Ocean/Harbour Drowning Deaths 2002/03 to 2017/18, 10 Year Average

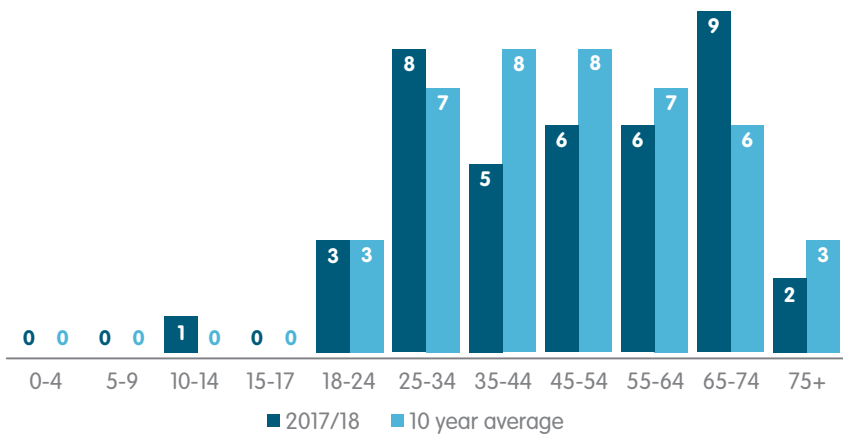


Figure 19: Ocean/Harbour Drowning Deaths by Age Group, 2017/18, 10 Year Average

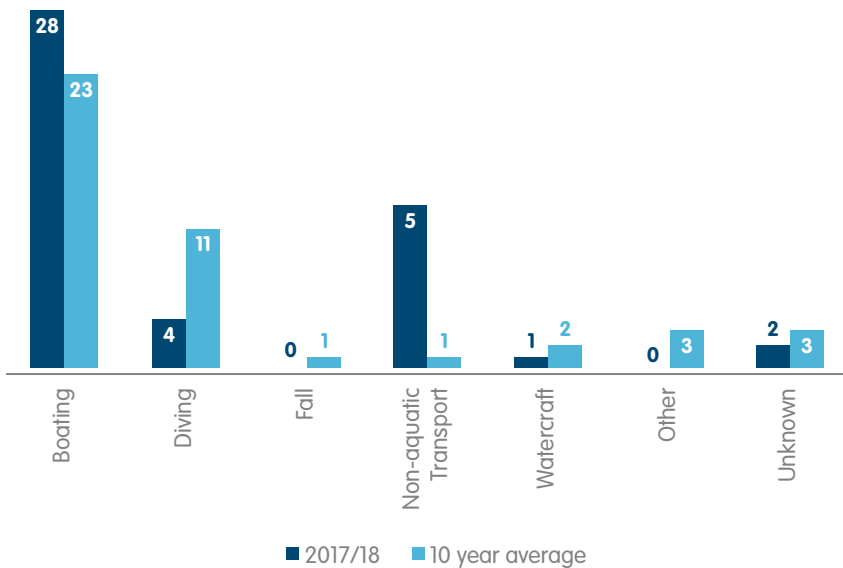
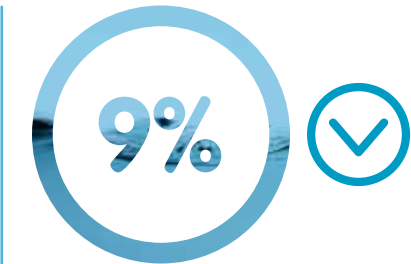


Figure 20: Ocean/Harbour Drowning Deaths by Activity Immediately Prior to Drowning, 2017/18, 10 Year Average



OCEAN/HARBOUR DROWNING DEATHS REDUCE BY 9% COMPARED TO THE 10 YEAR AVERAGE



BOATING-RELATED INCIDENTS ACCOUNT FOR 70% OF OCEAN/HARBOUR DROWNING DEATHS



CASE STUDY

MULTIPLE FATALITY EVENTS

There were 8 multiple fatality events (MFEs) in 2017/18 that claimed the lives of 21 people.

A detailed analysis of these events found:

- Males accounted for 76% of all drowning deaths
- The largest number of drowning deaths occurred in the 65-74 years age group, accounting for 24% of all deaths as a result of an MFE
- Queensland recorded 14 deaths as a result of MFEs, while New South Wales recorded four deaths
- Two thirds (67%) of all drowning deaths as a result of MFEs occurred in ocean/harbour locations, followed by rivers, creeks and streams (14%)
- The leading activity related to deaths as a result of MFEs was boating, accounting for 57% of all deaths, followed by non-aquatic transport incidents (24%)

Multiple fatality events are tragic with far-reaching effects on the victims' families, communities and rescue personnel. In order to reduce the number of MFEs every year, as well as reduce the number of lives lost, a number of drowning prevention strategies can be undertaken.

These include ensuring lifejackets are worn when boating or rock fishing, ensuring boats are seaworthy and fitted with appropriate safety equipment, monitoring weather reports and water conditions before and during activity, and avoiding driving, walking or wading through floodwaters.

08

**MULTIPLE FATALITY EVENTS
IN 2017/18 THAT CLAIMED
THE LIVES OF 21 PEOPLE**

LOCATION IN FOCUS: **SWIMMING POOLS**

There were 33 drowning deaths in swimming pools in Australia in 2017/18. This represents a 25% decrease compared to 2016/17 and a 20% decrease against the 10 year average.

Public swimming pools accounted for just 9% of all drowning deaths in swimming pools in Australia in 2017/18.

Children under five recorded the largest number of drowning deaths in swimming pools, accounting for 36% of all swimming pool drowning deaths in 2017/18. There were no swimming pool drowning fatalities among those aged 5-24 years.

Falls into swimming pools were the leading activity immediately prior to drowning, accounting for 55% of all swimming pool drowning deaths. Drowning deaths as a result of swimming and recreating have declined in 2017/18 by 20% when compared to the ten year average.

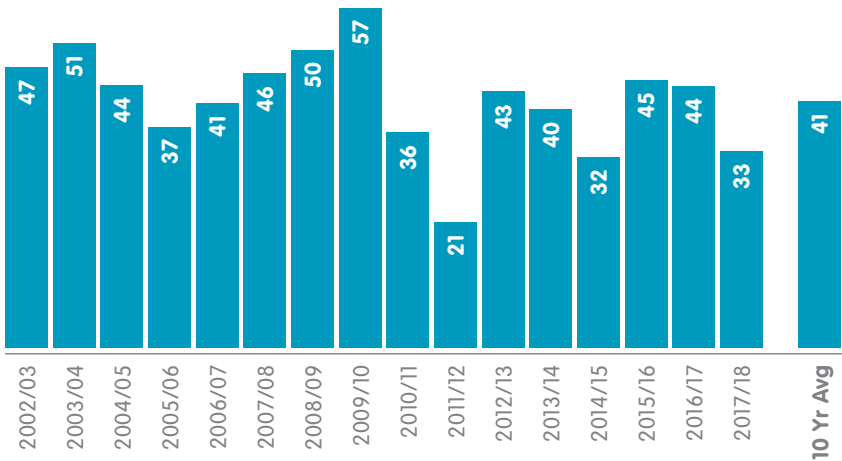


Figure 21: Swimming Pool Drowning Deaths 2002/02 to 2017/18, 10 Year Average

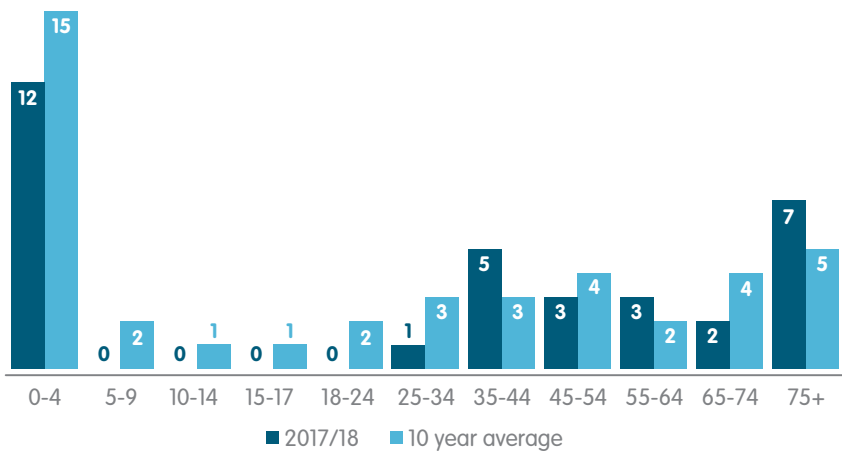


Figure 22: Swimming Pool Drowning Deaths by Age Group, 2017/18, 10 Year Average

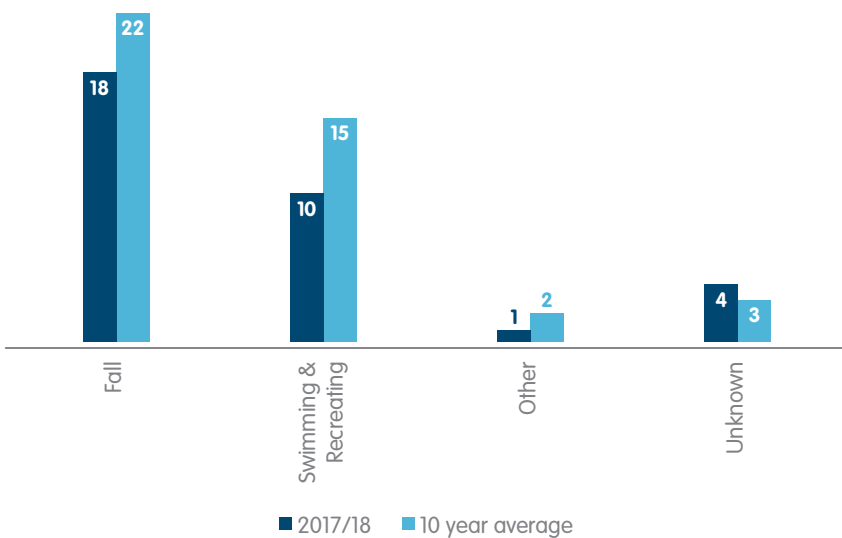


Figure 23: Swimming Pool Drowning Deaths by Activity Immediately Prior to Drowning, 2017/18, 10 Year Average

20%

✓

SWIMMING POOL DROWNING DEATHS DECREASE BY 20% AGAINST THE 10 YEAR AVERAGE

FALLS INTO SWIMMING POOLS WERE THE LEADING ACTIVITY IMMEDIATELY PRIOR TO DROWNING



CASE STUDY

NATIONAL AQUATIC INDUSTRY SAFETY AWARDS

Six representatives from Australia's Aquatic Industry have been recognised in the National Aquatic Industry Safety Awards. Presented by Royal Life Saving Society – Australia, the group of individuals and organisations have been recognised for their significant contribution to aquatic safety within their community.

The 2018 award winners were:

- Excellence in Public Education – YMCA Casey RACE
- Excellence in Supervision – Ian Thorpe Aquatic Centre (pictured)
- Excellence in Customer Service – Christine Mitchell
- Excellence in Incident Management – YMCA Victoria
- Excellence in Staff Development – City of Greater Geelong
- Excellence in Facility Management – Cockburn Aquatic and Recreation Centre

The awards are an initiative of the National Aquatic Industry Safety Committee to acknowledge the achievements of aquatic facilities and individuals towards improving health and safety outcomes.

Between 1 July 2005 and 30 June 2015, there were 293 drowning incidents in public and commercial pools across Australia. Thirty-six of these were fatal (12%).

A series of videos have been produced of each winner, showcasing their work and contribution to their community through their aquatic health and safety initiatives.

To view the winner's videos please visit:
[youtube.com/RoyalLifeSavingAust](https://www.youtube.com/RoyalLifeSavingAust)



DROWNING DEATHS BY LIFE STAGES



18

CHILDREN AGED 0-4 YEARS

9

CHILDREN AGED 5-14 YEARS

29

YOUNG PEOPLE AGED 15-24 YEARS

103

MALES AGED 25-64 YEARS

52

PEOPLE AGED 65 YEARS AND OVER

LIFE STAGE IN FOCUS: CHILDREN AGED 0-4 YEARS

There were 18 children aged 0-4 years who drowned in Australia in 2017/18. This is a 38% reduction on 2016/17 and a 36% reduction when compared to the 10 year average.

Swimming pools were the leading location for drowning among this age group, accounting for 67% of all drowning deaths. Swimming pool drowning deaths in children under five have reduced by 20% when compared to the 10 year average.

Accidental falls into water remain the leading activity prior to drowning among children under five, with 14 drowning deaths or 78% of all drowning deaths.

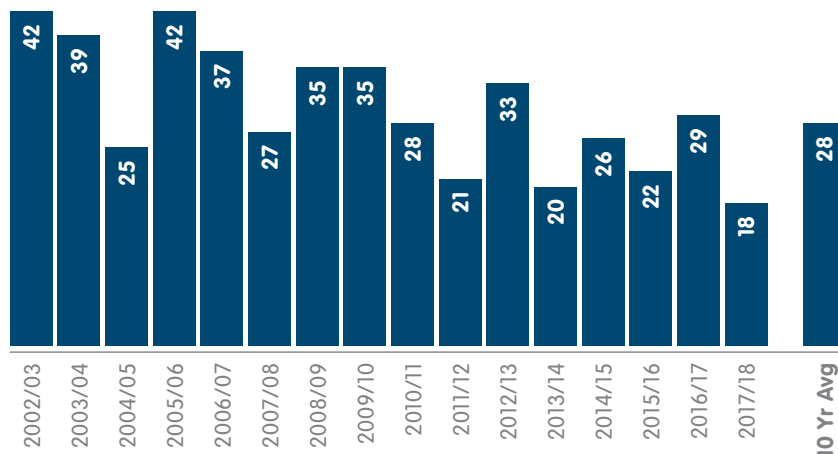


Figure 24: Drowning Deaths of Children 0-4 Years, 2002/03 to 2017/18, 10 Year Average

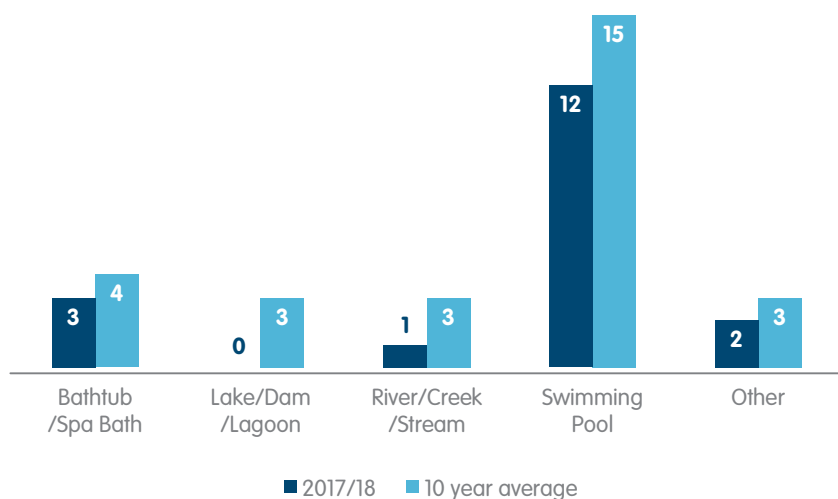


Figure 25: Drowning Deaths of Children 0-4 Years by Location, 2017/18, 10 Year Average

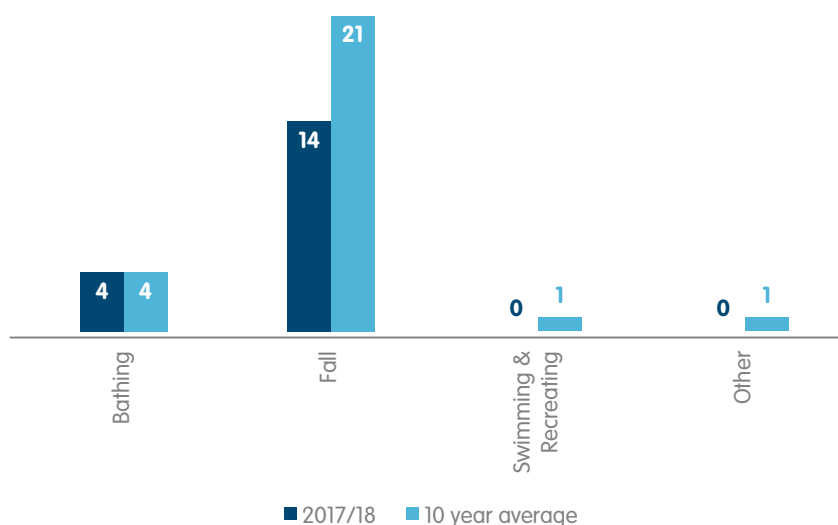
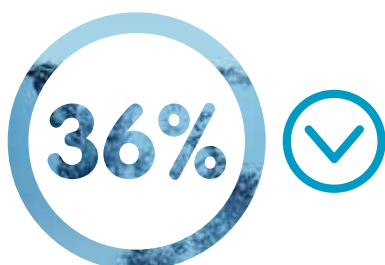


Figure 26: Drowning Deaths of Children 0-4 Years by Activity Immediately Prior to Drowning, 2017/18, 10 Year Average



**DROWNING DEATHS
AMONG CHILDREN UNDER
FIVE DOWN BY 36% ON
THE 10 YEAR AVERAGE**



**SWIMMING POOLS
ACCOUNT FOR 67% OF
ALL DROWNING DEATHS
AMONG CHILDREN UNDER
FIVE YEARS OF AGE**



CASE STUDY

ANALYSIS OF CAUSAL FACTORS FOR DROWNING OF CHILDREN UNDER FIVE IN NSW PRIVATE SWIMMING POOLS

Children under the age of five are at the highest risk of drowning, with home swimming pools the leading location for fatalities. Strategies for the prevention of child drowning include active adult supervision, restricting a child's access to water, water awareness and resuscitation.

Between 1 July 2002 and 30 June 2017, 91 children aged 0-4 years drowned in NSW private swimming pools.

- Peak drowning times
 - 41% in summer
 - 42% on weekends
 - 45% during the afternoon
- Supervision was completely absent in 64% of cases
- A further 6% of children were left to be supervised by siblings or other children
- Supervision was absent for 5-10 minutes in 35% of cases and 3-5 minutes in 24% of cases
- In 71% of cases the child drowned in the pool located at their primary residence
- The most common means of access were:
 - 38% faulty fence or gate
 - 26% lack of fence
 - 24% gate propped open
- In 67% of cases the parents of the child were the ones to commence CPR

Source: Mahony, A, Peden, AE (2017) NSW Child Drowning Report: A 15 year analysis of causal factors for drowning of children under 5 years in private swimming pools 2002/03-2016/17, Royal Life Saving Society – Australia. Sydney

LIFE STAGE IN FOCUS: CHILDREN AGED 5-14 YEARS

There were 9 children aged 5-14 years who drowned in Australia in 2017/18. This is a 25% reduction on 2016/17 and when compared to the 10 year average.

Bathtub/Spa Baths, Beaches and Lakes/Dam/Lagoons each recorded two drowning deaths each. River/Creek/Stream locations saw a 75% reduction against the 10 year average in 2017/18.

Swimming and recreating was the leading activity immediately prior to drowning, accounting for 56% of all deaths in this age group. There were no drowning deaths as a result of accidental falls into water or watercraft-related incidents in this age group in 2017/18.

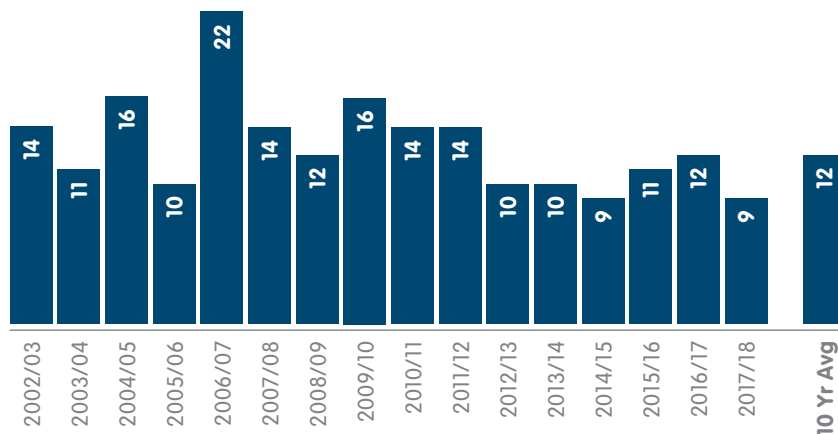


Figure 27: Drowning Deaths of Children 5-14 Years, 2002/03 to 2017/18, 10 Year Average

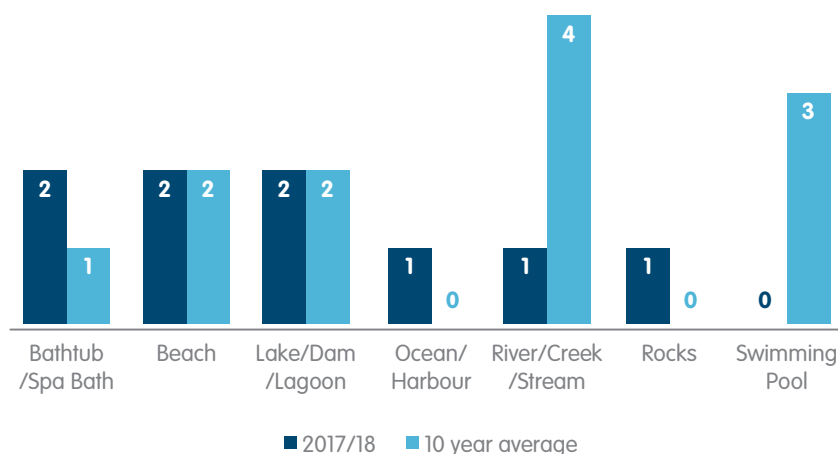
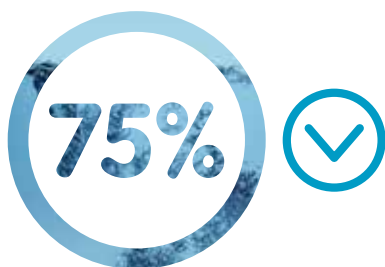


Figure 28: Drowning Deaths of Children 5-14 Years by Location, 2017/18, 10 Year Average



CHILD DROWNINGS AT RIVERS, CREEKS AND STREAMS DOWN BY 75% IN 2017/18 COMPARED TO THE 10 YEAR AVERAGE



SWIMMING AND RECREATING THE LEADING ACTIVITY PRIOR TO DROWNING IN CHILDREN 5-14 YEARS

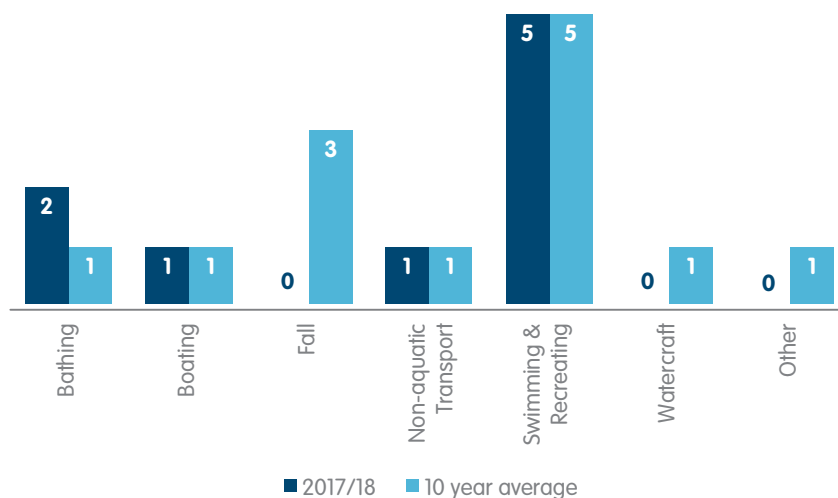


Figure 29: Drowning Deaths of Children 5-14 Years by Activity Immediately Prior to Drowning, 2017/18, 10 Year Average



CASE STUDY

SECONDARY SCHOOL CHILDREN AGED 13-15 YEARS ATTENDING PRIVATE SWIM SCHOOLS

This research follows on from the report 'Benchmarking Australian children's swimming and water safety skills: swim school data part one', which presented the swimming and water safety skills of primary school children aged 5-12 years attending private swim school lessons. This report analyses the skills of secondary school children aged 13-15 years (teenagers) attending private lessons.

A total of 2860 secondary school aged children (13-15 years) (N = 2,844) attending private swimming lessons in Victoria, South Australia and New South Wales. Lesson cost ranged from \$15.00 to \$21.83, with 70.4% being charged \$15.50 per lesson. Teenagers were most commonly in lessons for the duration of one swim school level, or the equivalent of 25 lessons over a period of 5.8 months

Very few teenagers enrolled in lessons are achieving the minimum competencies outlined in the National Swimming and Water Safety Framework. Approximately 40% were being taught skills that were described as 'basic' or 'introduction', 'beginner' or 'water familiarisation' skills. Overall, 30% were able to swim 50m or more of any stroke and 76% could swim a distance between 10 and 25m. Only 7% could swim over 200m. Of those competent in treading/sculling water, 31% could stay afloat for at least 2 minutes and an additional 19% could tread/scull water for at least 2 minutes wearing clothes.

These results suggest that many teenagers attending private lessons are achieving well below the expected benchmark standard for their age, and that they may have had little, if any, swimming and water safety education previously.

Source: Pidgeon, S., Larsen, P., Barnsley, P., Scarr, J., Peden, A. (2018) Benchmarking Australian childrens' swimming and water safety skills: swim school data part 2 beyond primary school. Royal Life Saving Society – Australia. Sydney.

LIFE STAGE IN FOCUS: YOUNG PEOPLE AGED 15-24 YEARS

There were 29 young people aged 15-24 years who drowned in Australia in 2017/18. This is a 7% reduction on 2016/17 and a 12% reduction on the 10 year average.

Beaches were the leading location for drowning among 15-24 year olds, accounting for 34%. This was followed by river/creek/stream locations which accounted for 31%. There were no swimming pool drowning deaths among this age group in 2017/18.

Swimming and recreating was the leading activity immediately prior to drowning in 2017/18, accounting for 48% of all drowning deaths in this age group. There were no drowning deaths associated with boating-related incidents in this age group in 2017/18.

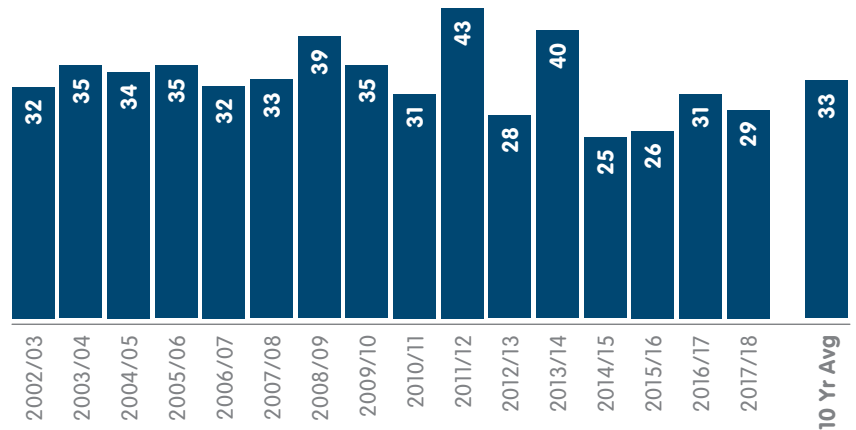


Figure 30: Drowning Deaths of Young People 15-24 Years, 2002/03 to 2017/18, 10 Year Average

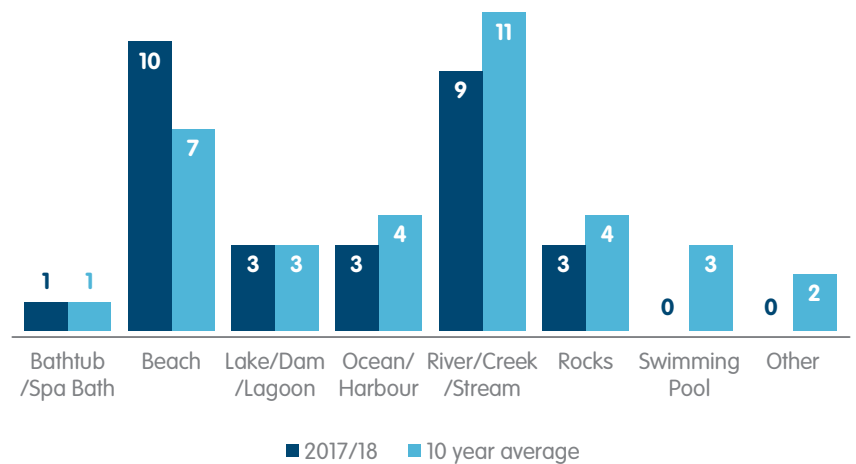


Figure 31: Drowning Deaths of Young People 15-24 Years by Location, 2017/18, 10 Year Average



DROWNING DEATHS IN THIS AGE GROUP DECLINED BY 12% AGAINST THE 10 YEAR AVERAGE



BEACH DROWNING DEATHS INCREASED BY 43% ON THE 10 YEAR AVERAGE

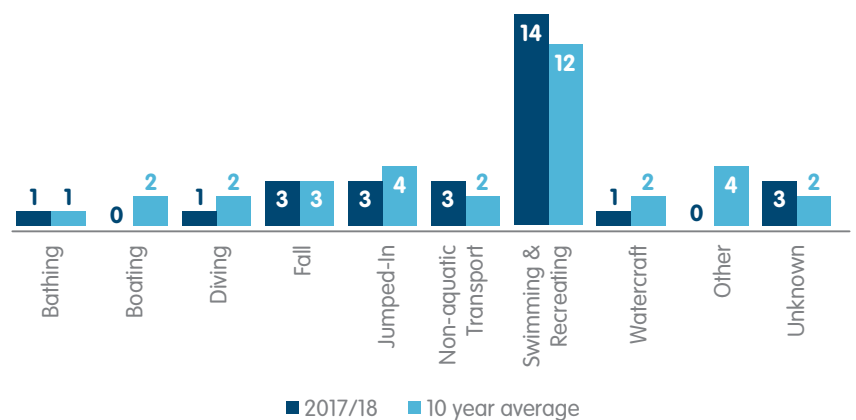


Figure 32: Drowning Deaths of Young People 15-24 Years by Activity Immediately Prior to Drowning, 2017/18, 10 Year Average



CASE STUDY

FATAL DROWNINGS UNDERREPORTED USING ICD-10 CODING

Royal Life Saving researchers have published a study in the journal *BMJ Open* (Dec 2017). The study examined fatal drowning counts via International Classification of Diseases (ICD)-10 classifications using single and multiple underlying causes of death, and compared this to multi-source data collected by Royal Life Saving.

The ICD-10 classification is the most frequently used coding framework internationally to describe deaths. Global estimates, such as those reported by the World Health Organization and the Global Burden of Disease studies, rely on ICD-10 coding, and commonly only report a single underlying cause of death.

The study used three different reporting methodologies to describe unintentional fatal drowning compared with the total number of cases. It provides a greater depth of understanding on how the grouping of ICD-10 codes and the number of included underlying causes of death can impact the fatal drowning count.

The study found drowning deaths due to boating and watercraft-related incidents and non-aquatic transport incidents, which largely occur in natural waterways, were not well captured. This resulted in a 40% underreport of fatal unintentional drowning in Australia between 2001-2011 when comparing ICD-10 based estimates with those of Royal Life Saving Society – Australia. In contrast, child drowning deaths and those which occurred in swimming pools and bathtubs, were well captured.

This study has highlighted the need for more inclusive methodologies when calculating the burden of fatal drownings in Australia. The authors encourage similar studies in other countries and discuss the impact of ICD-10 coding methodologies on the estimates of non-fatal drowning.

More information and to access a free copy of the study please visit:
bmjopen.bmj.com

LIFE STAGE IN FOCUS: MALES AGED 25-64 YEARS

There were 103 drowning deaths of males aged 25-64 years in Australia in 2017/18. This is a 10% reduction on 2016/17 and a 16% reduction on the 10 year average.

River/creek/stream locations were the leading location for drowning among males aged 25-64 years in 2017/18, accounting for 26% of all drowning deaths in this age group. River drowning deaths among this cohort in 2017/18 have reduced by 18% when compared to the 10 year average.

Boating-related incidents accounted for 20% of all drowning deaths of males 25-64 years in 2017/18, followed by swimming and recreating, which accounted for 19% of all drowning deaths in this cohort.

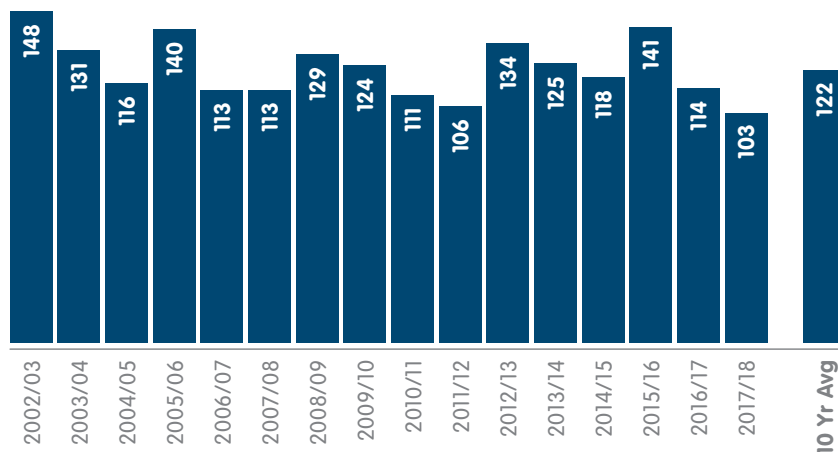


Figure 33: Drowning Deaths of Males Aged 25-64 Years, 2002/03 to 2017/18, 10 Year Average

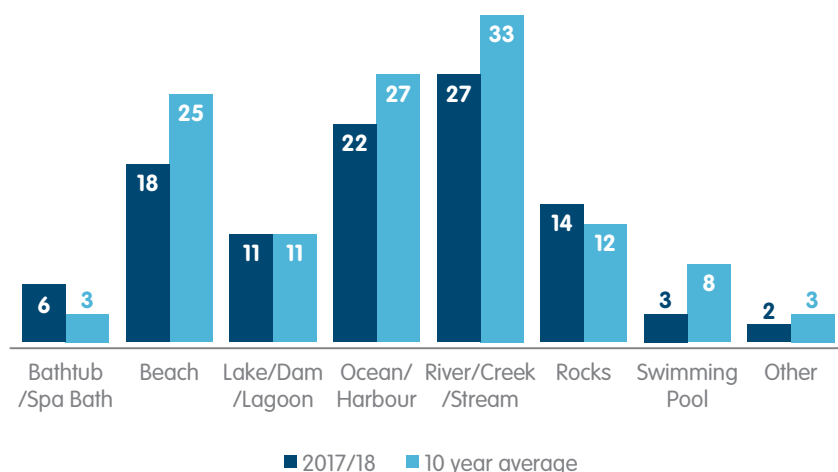
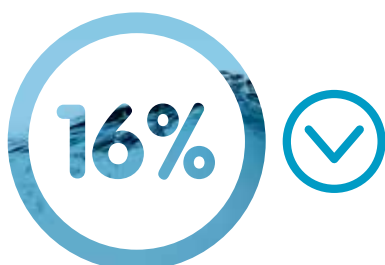


Figure 34: Drowning Deaths of Males Aged 25-64 Years by Location, 2017/18, 10 Year Average



A 16% REDUCTION IN DROWNING DEATHS OF MALES 25-64 YEARS RECORDED AGAINST THE 10 YEAR AVERAGE



RIVERS, CREEKS AND STREAMS THE LEADING LOCATION FOR DROWNING AMONG MALES 25-64 YEARS

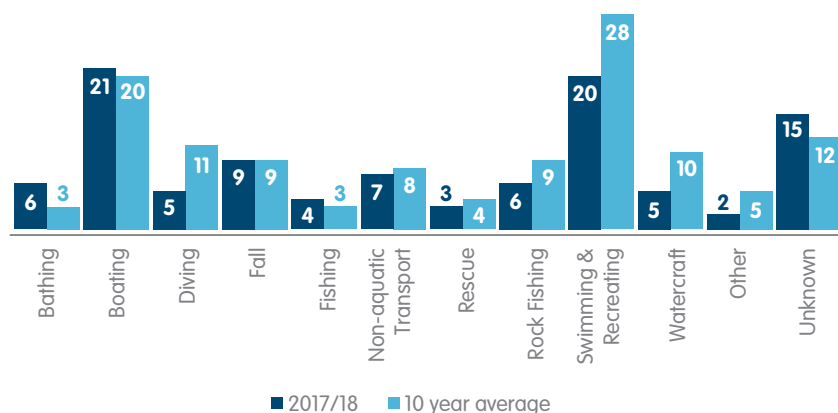


Figure 35: Drowning Deaths of Males Aged 25-64 Years by Activity Immediately Prior to Drowning, 2017/18, 10 Year Average



CASE STUDY

DON'T LET YOUR MATES DRINK AND DROWN

In the past decade, 1,995 men have drowned in preventable tragedies. Two in five men had drugs and/or alcohol in their system. Men are four times more likely to drown than women, with males accounting for 80% of all drowning deaths.

Royal Life Saving Society - Australia, with support of the Australian Government, launched a new drowning prevention campaign in time for summer 2017. The campaign is urging men to look out for their mates and stand up to the sorts of risk-taking behaviour that can lead to accidents and drowning. A culture of risk-taking behaviour among men can be dangerous around water, and when combined with alcohol and/or drugs it is often fatal.

Almost a quarter (24%) of male drowning deaths involved alcohol alone. Of the men who had been drinking and subsequently drowned, 67% would have failed a random breath test with a recorded a blood alcohol content above 0.05.

Dave is the face of the 'Don't Let Your Mates Drink and Drown' campaign. He's an all-round top bloke who looks out for his mates by not letting them make stupid decisions.

Be like Dave. Look out for your mates.

For more information on the program please visit:

royallifesaving.com.au/programs



MALES ACCOUNT FOR 80% OF ALL DROWNING DEATHS



24% OF MALE DROWNING DEATHS INVOLVED ALCOHOL

LIFE STAGE IN FOCUS: PEOPLE AGED 65 YEARS AND OVER

There were 52 drowning deaths of people aged 65 years and over in Australia in 2017/18. This is a 26% reduction on 2016/17 and a 9% reduction on the 10 year average.

Rivers, creeks and streams were the leading location for drowning among this age group in 2017/18, accounting for 29% of all deaths. Beach drowning deaths among this age group declined by 33% in 2017/18, compared to the 10 year average.

Boating-related incidents accounted for the largest proportion of drowning deaths in this age group, at 23%, an increase of 50% on the 10 year average. There were no watercraft-related drowning deaths in this age group in 2017/18.

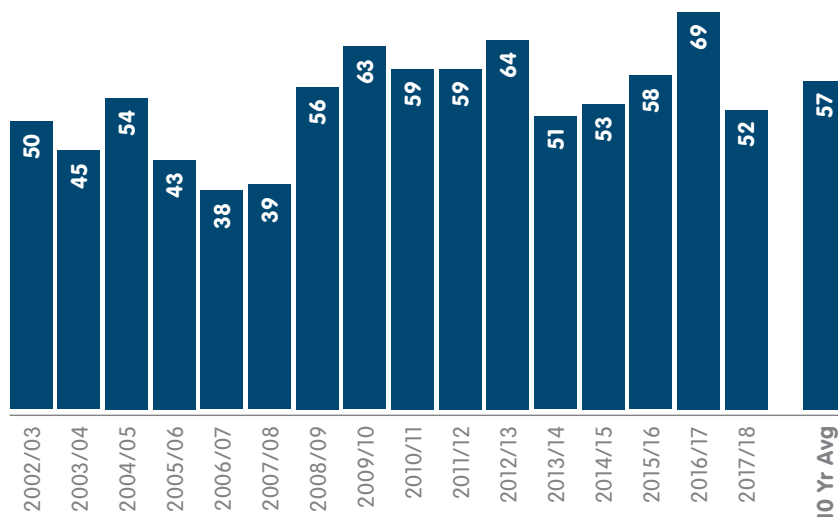


Figure 36: Drowning Deaths of People Aged 65 Years and Over, 2002/03 to 2017/18, 10 Year Average

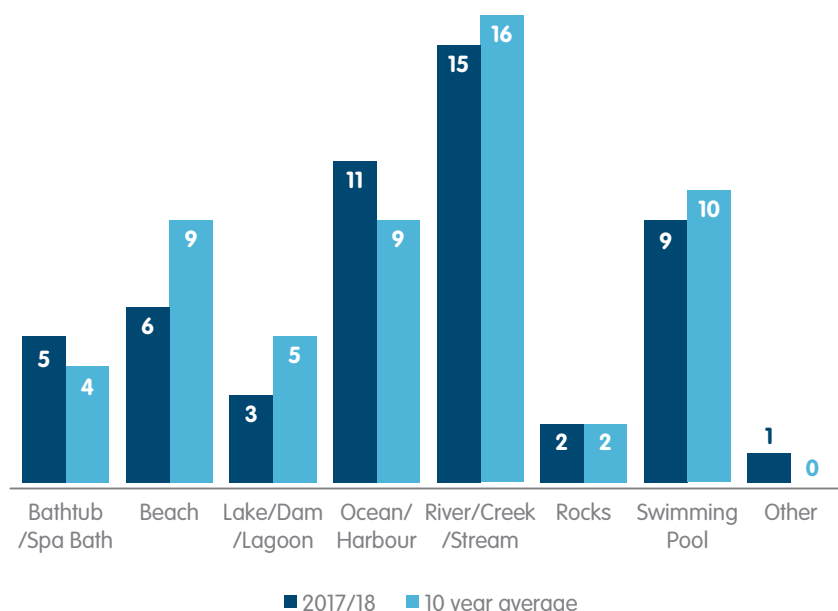
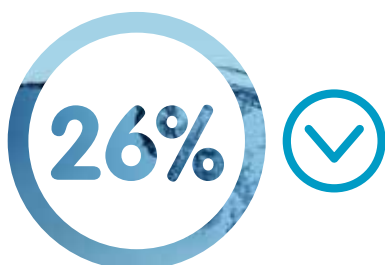


Figure 37: Drowning Deaths of People Aged 65 Years and Over by Location, 2017/18, 10 Year Average



DROWNING DEATHS AMONG PEOPLE AGED 65 YEARS AND OVER REDUCE BY 26% AGAINST THE 10 YEAR AVERAGE



BOATING-RELATED INCIDENTS THE LEADING CAUSE OF DROWNING DEATHS AMONG PEOPLE 65 YEARS AND OVER

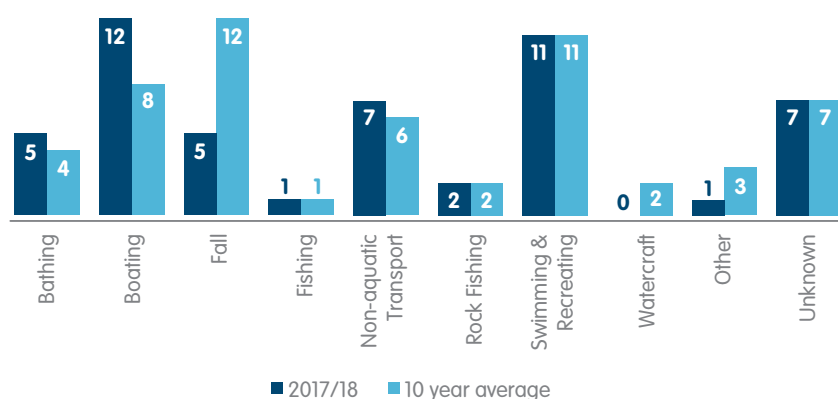


Figure 38: Drowning Deaths of People Aged 65 Years and Over by Activity Immediately Prior to Drowning, 2017/18, 10 Year Average



CASE STUDY

DROWNING DEATHS BY REMOTENESS

By collecting data on the postcode of the drowning incident location, it is possible to determine the remoteness classification of the location of the drowning incident.

Drowning deaths in major cities commonly occurred in rivers, creeks and streams (23%), followed by beaches (21%) and swimming pools (19%).

Swimming and recreating was the activity being undertaken immediately prior to drowning in 29% of drowning deaths in inner regional areas, followed by falls (16%).

Ocean/Harbour locations accounted for the highest proportion of drowning deaths in outer regional areas with 36%, followed by rivers, creeks and streams (20%).

Boating, diving and falls into water were the leading activities being undertaken immediately prior to drowning in rural and remote areas, accounting for 20% each.

An increased awareness of the risks of undertaking aquatic recreation alone in remote locations, and the importance of first aid and CPR skills for first responders is vital to reducing drowning deaths.

38%

MAJOR CITIES

30%

INNER REGIONAL

24%

OUTER REGIONAL

8%

**REMOTE/
VERY REMOTE**

CASE STUDY: ECONOMIC BENEFITS OF AUSTRALIA'S PUBLIC AQUATIC FACILITIES

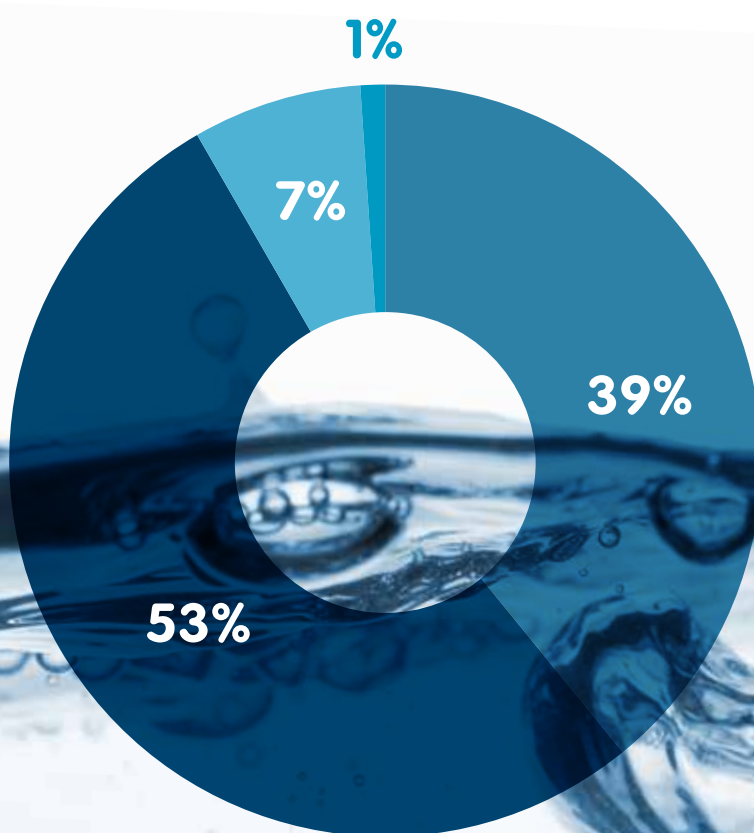
Many Australians are physically inactive, putting them at risk of death and disability and leading to burdens on Australia's health care system. Aquatic facilities provide Australians with opportunities for safe, low impact physical activity, and can generate significant health benefits for Australian society.

Key findings

- The average aquatic facility creates \$2.72 million a year in value to the community
- The average Australian visits a public aquatic facility 4.4 times a year
- Every year in Australia physical inactivity costs the health system \$3.7 billion and leads to death and disability costing \$48 billion
- Insufficient physical activity is responsible for 5% of all death and disability in Australia
- Nearly 40% of the Australian population is classified as "physically inactive" according to the World Health Organization's physical activity scale
- A weekly visit to a pool is enough to take most people out of the "physically inactive" category
- Increased risk of disease is heavily concentrated among the "physically inactive" category
- As a result of these health benefits, every aquatic facility visit creates economic benefits worth an average of \$26.39, in addition to the leisure value gained by users

Figure 39: How much exercise do Australians do?

- Low activity
- Inactive
- High activity
- Moderate activity



Estimating the dollar value of health gains

Royal Life Saving used the Australian government's Value of a Statistical Life Year to estimate the dollar value of the costs of physical inactivity - \$48 billion a year – as well as the health care costs and reduced productivity stemming from physical inactivity. Overall, we estimate that the additional ill health someone who falls in the "physically inactive" bracket can expect costs society an additional \$4,576 each year, compared to \$1,185 for people in the low activity group. This means that additional exercise which moves someone from inactive to low activity leads to health gains worth \$3,391 in that year alone.

Based on a data-set provided by the Australian Institute of Health and Welfare showing exactly how much Australians currently exercise, we simulated the effect of an average pool visit's worth of exercise to a randomly selected person. Calculating the average impact on health burden over millions of simulations, we found that, on average, a swimming pool visit leads to health benefits worth \$26.39. The graph below shows how those gains break down in the case of a single person moving from inactive to low activity.

Results

Based on the dollar value of these improved health outcomes, the report shows that an extra swimming pool visit by a randomly selected Australian is worth, on average, \$26.39, meaning that Australia's aquatic facilities produce \$2.8 billion in health benefits each year, over and above their value as sources of recreation, community and aquatic education.

Source: Barnsley, P. Peden, A. Scarr, J. (2017) Economic Benefits of Public Aquatic Facilities, Royal Life Saving Society – Australia, Sydney.

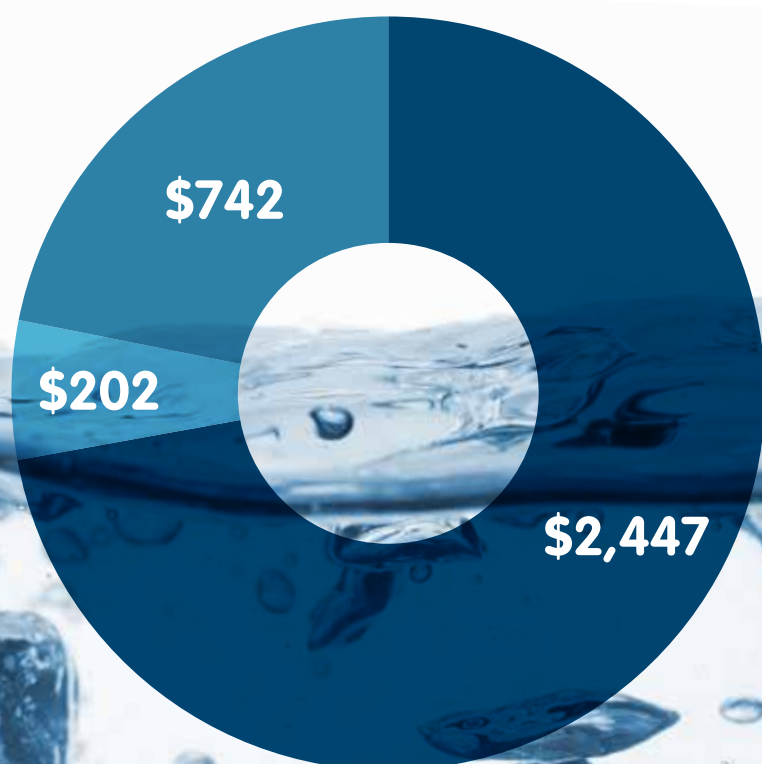


Figure 40: Breakdown of financial gains from becoming active

- Health value
- Health care costs
- Absenteeism

FATAL DROWNING RISK FACTORS

Risk factors that can increase a person's chance of drowning include age, sex and socio-economic status, as well as the presence of pre-existing medical conditions and prior consumption of drugs and/or alcohol.

The following are case studies investigating the frequency of several risk factors in the drowning deaths that occurred in 2017/18.

PRE-EXISTING MEDICAL CONDITIONS

Of the 249 people who drowned, 48 were known to have a pre-existing medical condition. This represents 19% of all drowning deaths in this year's National Drowning Report. Of these, 83% were male and more than 48% were aged 65 years and over.

The most common medical conditions were cardiac conditions, such as ischaemic heart disease and coronary artery atherosclerosis. Cardiac conditions were recorded in 44% of cases where a pre-existing condition was known to be present. Other commonly occurring medical conditions were mental and behavioural disorders (17%) and epilepsy (13%).

A pre-existing medical condition was deemed to have been contributory to the chain of events that led to the drowning in 70% of cases where a medical condition was known to be present.

Royal Life Saving recommends that people aged 65 years and over undergo regular medical check-ups, as well as anyone participating in activities such as scuba diving. Children or adults with a history of epilepsy should always be supervised when in, on or around the water.



48

PEOPLE WHO DROWNED
HAD PRE-EXISTING
MEDICAL CONDITIONS

VISITOR STATUS

In 74 cases (30%) the person who drowned was known to be a visitor to the location where they drowned. Of these, 40 people drowned within their own State or Territory in a postcode that was 100km or further from their residential postcode. A further 17 people were visiting a different State or Territory when they drowned.

This year, 17 people who drowned were overseas tourists, predominately from North America (35%) and Europe (24%). Overseas tourists commonly drowned at beaches (35%) and ocean harbour locations (35%). The most common activities being undertaken immediately prior to drowning were non-aquatic transport incidents (47%) and swimming and recreating (29%).

Regardless of how far you live from the aquatic environment you visit, particularly with inland waterways, conditions can change rapidly and without warning. Where possible you should check with a local resident regarding the conditions prior to entering the water. International tourists to Australia should ensure they take care when diving in the ocean, to always swim at patrolled beaches between the flags and to take care when recreating in and around our inland waterways.

DRUGS & ALCOHOL

There were 31 people who drowned who were known to have recorded positive readings for alcohol in their bloodstream at the time of drowning. 81% recorded a blood alcohol concentration that was equal to or greater than the legal limit for operating boats and motor vehicles in most States and Territories (0.05%). Of those, 32% recorded a blood alcohol concentration that was 1.5 times the legal limit (0.150%) or higher.

There were 28 people who drowned that were known to have some kind of drug in their system when they drowned. In almost two-fifths (39%) of cases, the drug(s) consumed was known to be illegal or an abuse of legal drugs. Commonly occurring illegal drugs were cannabis (36%) and methamphetamine (18%).

The consumption of illegal drugs and/or alcohol prior to undertaking aquatic activity is known to increase the risk of drowning as they can impair judgment, slow reaction times, impair coordination and result in a greater risk-taking behaviour.

Some medications can also increase the risk of drowning as they may make people unsteady on their feet or slow reaction times. Mixing prescription medication with alcohol can also increase a person's risk of drowning. Royal Life Saving strongly urges people to refrain from consuming alcohol or taking illicit drugs when around water, as well as considering the possible side effects of prescription medication.



74

**PEOPLE DROWNED WHO
WERE VISITORS TO THE
INCIDENT LOCATION**

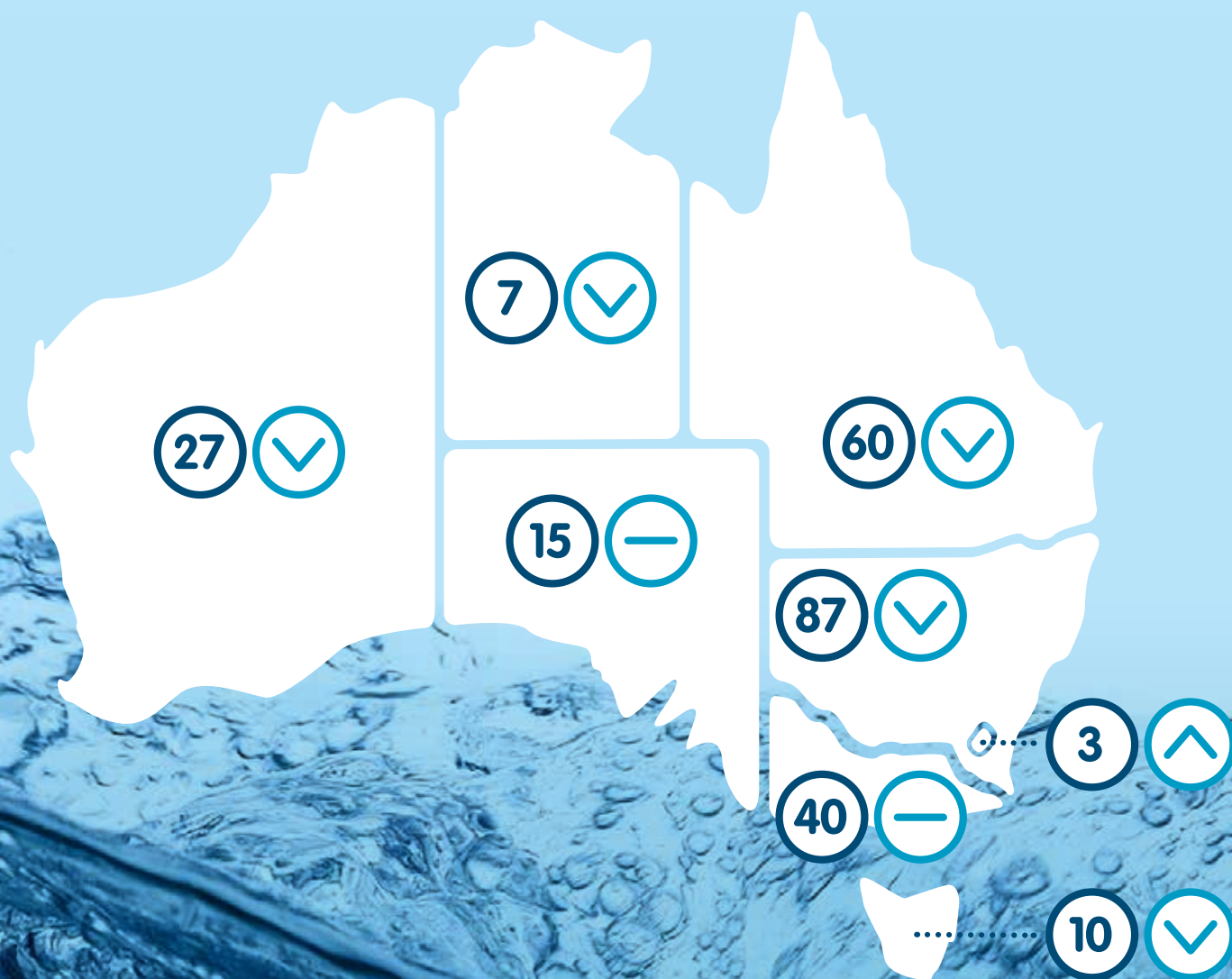


31

**PEOPLE DROWNED WHO
RECORDED POSITIVE
READINGS FOR ALCOHOL**

STATE AND TERRITORY FATAL DROWNING ANALYSIS

Arrows reflect 2017/18 progress against the 10 year average.



“OUR PEOPLE
ARE OUR MOST
VALUABLE ASSET”



AUSTRALIAN CAPITAL TERRITORY

There were 3 people who drowned in the Australian Capital Territory in 2017/18. This is a 25% reduction on last year and a 50% increase on the 10 year average.

100% of drowning deaths in the ACT in 2017/18 were of males.

100% of drowning deaths in the ACT in 2017/18 occurred in inland waterways.

A key focus of Royal Life Saving Society ACT's prevention strategies and water safety messages are to increase awareness of the hazards associated with different aquatic environments and the drowning risk they pose to different age groups. Key messages include:

- Be aware of strong currents, submerged objects and cold water. Always Respect the River
- Read safety signs to understand dangers
- Swim between the red and yellow flags at beaches wherever possible when on holidays
- Never swim alone
- Alcohol affects your swimming ability and judgement of dangerous situations
- Always wear a lifejacket, it buys you time to survive

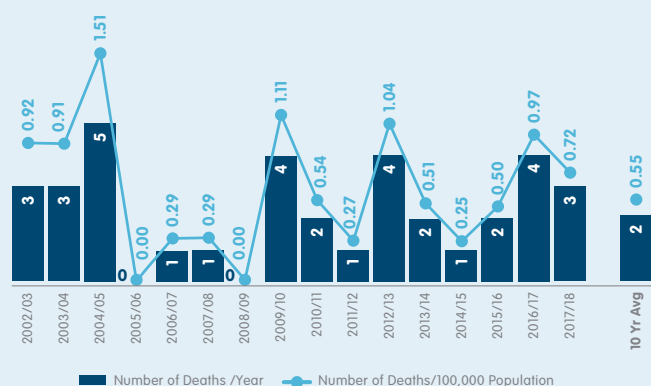


Figure ACT1: Unintentional Drowning Deaths and Crude Death Rates, Australian Capital Territory, 2002/03 to 2017/18, 10 Year Average



**PEOPLE WHO DROWNED
IN AUSTRALIAN CAPITAL
TERRITORY IN 2017/18**

CASE STUDY: ACT SWIM 4 LIFE PROGRAM

Royal Life Saving ACT's Swim 4 Life course teaches children how to swim and stay safe around various aquatic environments. Practical sessions are held over two weeks at local pools in Canberra, as well as an outdoor session at Lake Gininderra or Pine Island. This open water session allows children to experience swimming in an open body of water, and learn safety and survival skills such as safe entries, checking depth, and using a lifejacket.

"Coming to the river and places like that is real world," said Kate, mother of five-year-old Ava. "Being in a pool is different. The water is warm, it's a very controlled environment. But this (the river) is what they need to be prepared for. We've found this program invaluable. She's learned skills over the two weeks that we wouldn't have been able to teach and she'd obviously be lacking if this program hadn't been made available to us."

Children who have missed out on formal swimming lessons are nominated by local non-profit community groups to participate in Swim 4 Life. The program is free, removing the barriers that have prevented these children from learning to swim.

"Children in this program come from a variety of backgrounds," said trainer and program coordinator, Jackie Rousseau. "We have Aboriginal Australians, people from non-English speaking backgrounds and also new arrivals to the country."

"Many of the children also come from low-income families and may not have the funds to pay for structured lessons, so bringing this program to them is vital."

In 2017/2018, the program received additional funding from the IMB Bank Community Fund and Uncle Tobys Swim My Way program, allowing more children to learn vital lifesaving and survival skills.

This year, 370 children from around Canberra participated in the Swim 4 Life program.

"At the beginning of the program, Ava could swim maybe 10 metres or so freestyle," said Kate. "Now, she's learned breaststroke, some backstroke and some water safety skills."

Amanda, mother of Ethan, 6, said, "In the last two weeks alone, Ethan's confidence in the water has grown rapidly. He can now safely get in and out of water, he can float, he knows how to ask for help if he's stuck in water. It's made a world of difference for Ethan and I think these are skills that need to be taught."

See the program in action at:
royallifesaving.com.au/programs/swim-my-way



NEW SOUTH WALES

There were 87 people who drowned in New South Wales in 2017/18. This is a 7% reduction on last year and an 11% reduction on the 10 year average.

75% of those who drowned in New South Wales were male.

The 45-54 years age group recorded the highest number of drownings with 16 deaths.

Rivers, creeks and streams were the leading location for drowning in New South Wales and almost one quarter (24%) of deaths occurred while swimming and recreating.

Almost half of all drowning deaths in New South Wales (47%) occurred in the Summer months.



**PEOPLE WHO DROWNED
IN NEW SOUTH WALES
IN 2017/18**



**RIVERS, CREEKS AND
STREAMS WERE THE
LEADING LOCATION
FOR DROWNING IN
NEW SOUTH WALES**

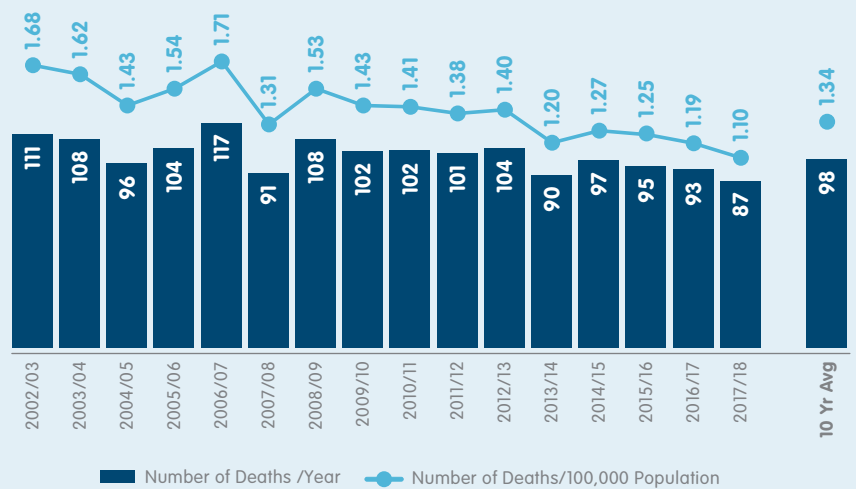


Figure NSW1: Unintentional Drowning Deaths and Crude Death Rates, New South Wales, 2002/03 to 2017/18, 10 Year Average

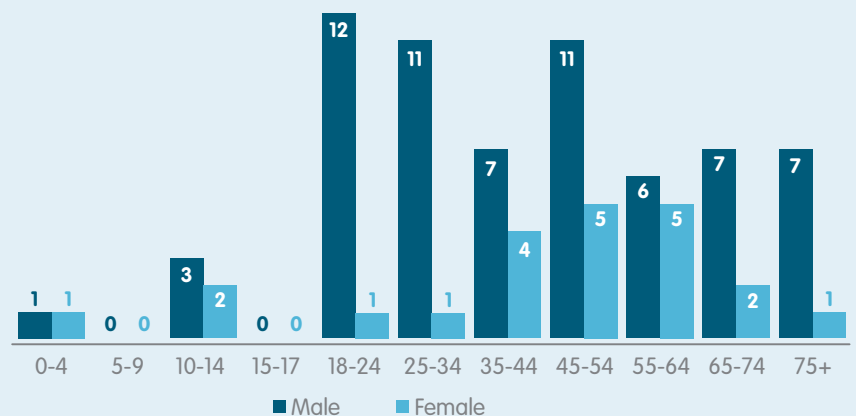


Figure NSW2: Drowning Deaths by Age Group and Sex, New South Wales, 2017/18

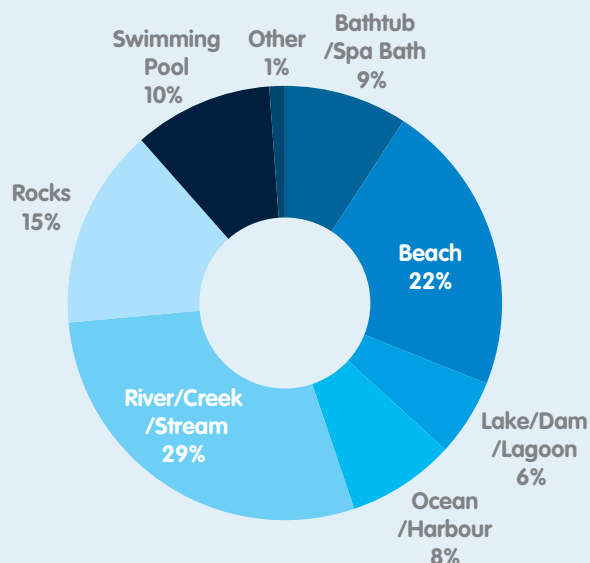


Figure NSW3: Location of Drowning Deaths, New South Wales, 2017/18

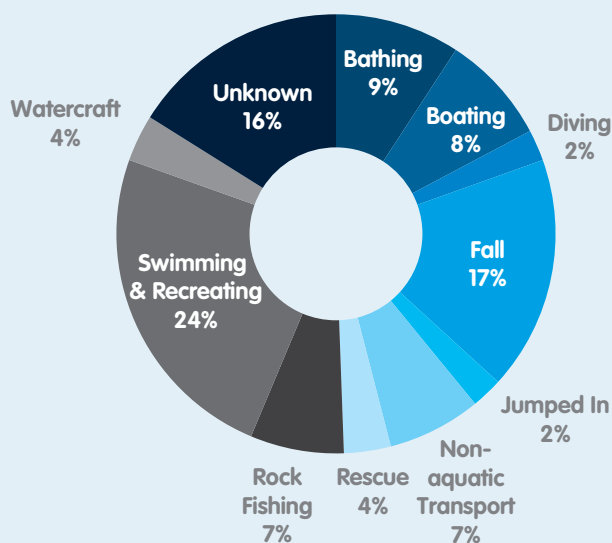


Figure NSW4: Activity Prior to Drowning, New South Wales, 2017/18

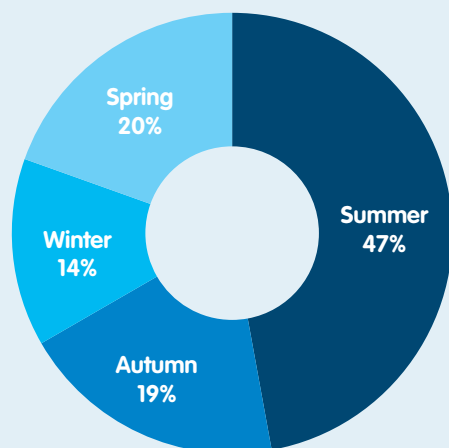


Figure NSW5: Drowning Deaths by Season, New South Wales, 2017/18

A key focus of Royal Life Saving Society New South Wales' prevention strategies and water safety messages are to increase awareness of the hazards associated with different aquatic environments and the drowning risk they pose to different age groups.

Key messages include:

- Be aware of strong currents, submerged objects and cold water. Always Respect the River
- Always swim between the flags at patrolled beaches
- Never swim alone
- Always actively supervise children around water
- Alcohol affects your swimming ability and judgment of dangerous situations
- Always wear a lifejacket, it buys you time to survive

NORTHERN TERRITORY

There were 7 people who drowned in the Northern Territory in 2017/18. This is a 13% reduction on last year and a 22% reduction on the 10 year average.

57% of those who drowned in the Northern Territory were male.

The 25-44 years age group accounted for 71% of all deaths.

Rivers, creeks and streams and swimming pools were the leading locations for drowning in the Northern Territory and almost half (43%) of deaths in the NT occurred while swimming and recreating.

71% of drowning deaths in the NT last year took place in the dry season.

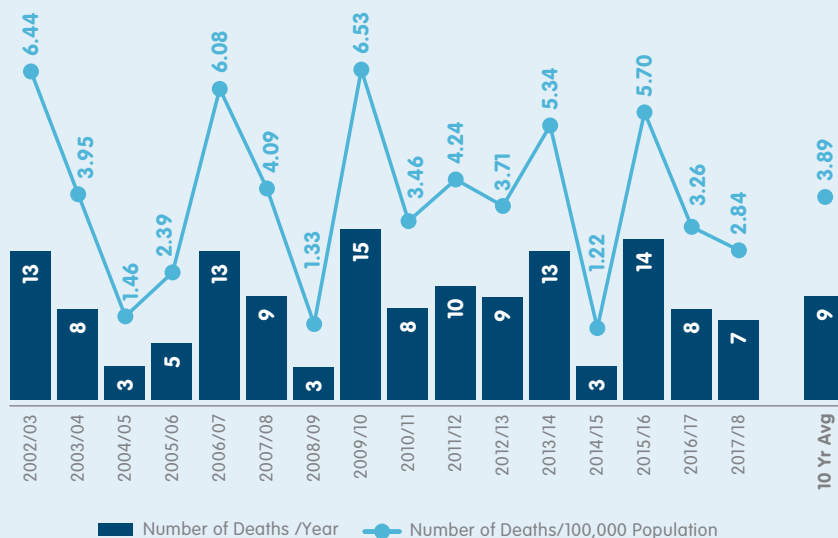


Figure NT1: Unintentional Drowning Deaths and Crude Death Rates, Northern Territory, 2002/03 to 2017/18, 10 Year Average

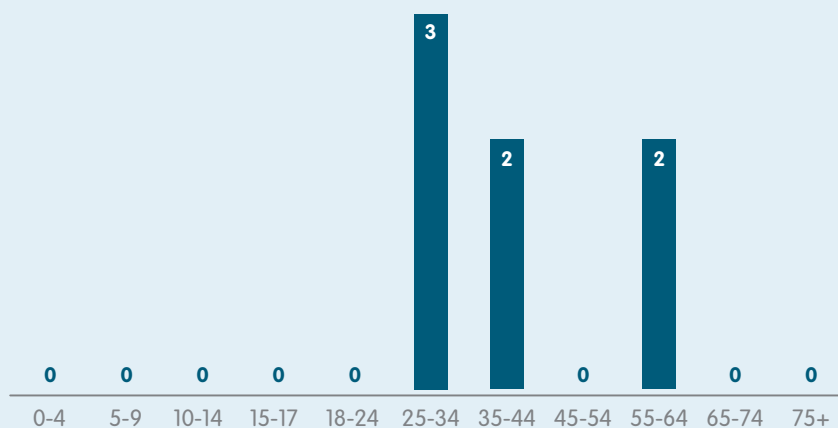


Figure NT2: Drowning Deaths by Age Group, Northern Territory, 2017/18



**PEOPLE WHO DROWNED
IN NORTHERN TERRITORY
IN 2017/18**



**57% OF THOSE WHO
DROWNED IN THE
NORTHERN TERRITORY
WERE MALE**

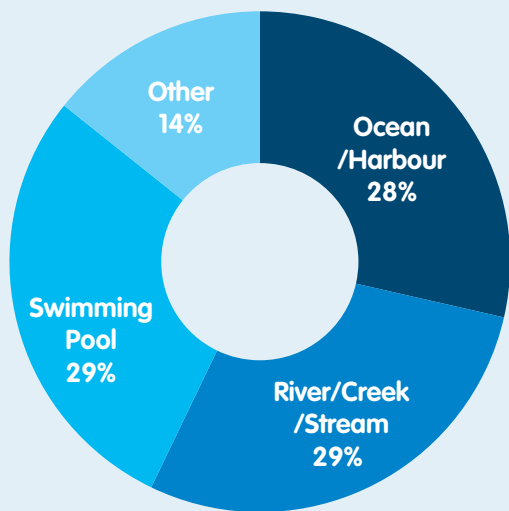


Figure NT3: Location of Drowning Deaths, Northern Territory, 2017/18

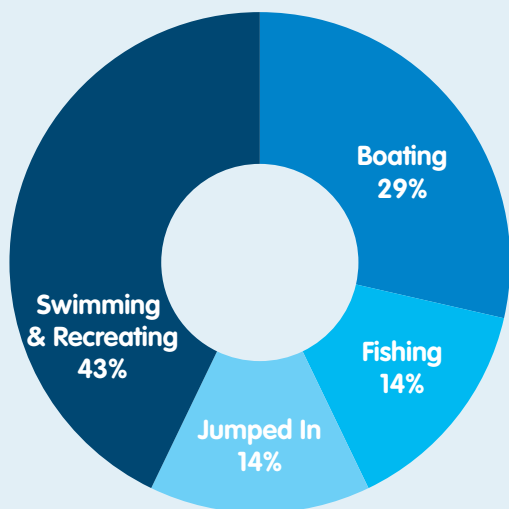


Figure NT4: Activity Prior to Drowning, Northern Territory, 2017/18

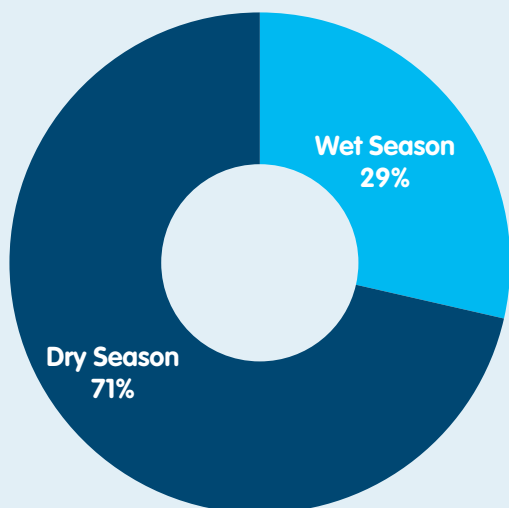


Figure NT5: Drowning Deaths by Season, Northern Territory, 2017/18

A key focus of Royal Life Saving Society Northern Territory's prevention strategies and water safety messages are to increase awareness of the hazards associated with different aquatic environments and the drowning risk they pose to different age groups.

Key messages include:

- Children need constant supervision around water – Keep our kids safe and Keep Watch
- Never swim alone
- Be aware and be prepared for changes in aquatic conditions
- Be aware of strong currents, submerged objects and fast flowing water. Always Respect the River #BeRiverSafe
- Alcohol affects your swimming ability and judgment of dangerous situations, look after your mates and family – don't drink and drown!
- Our ocean is great for fishing and boating – keep your mates safe on your boat and have a sober skipper in charge of the boat
- Always wear a lifejacket, it buys you time to survive
- We share our ocean and rivers with crocodiles so Be Crocwise

QUEENSLAND

There were 60 people who drowned in Queensland in 2017/18. This is an 18% reduction on last year and a 13% reduction on the 10 year average.

67% of those who drowned in Queensland were male.

The 65-74 years age group recorded the highest number of drowning deaths, accounting for 18% of all deaths.

Rivers, creeks and streams were the leading locations for drowning in Queensland and one-fifth of all deaths in the State occurred due to boating incidents.

One third of all drowning deaths in Queensland occurred in Spring.

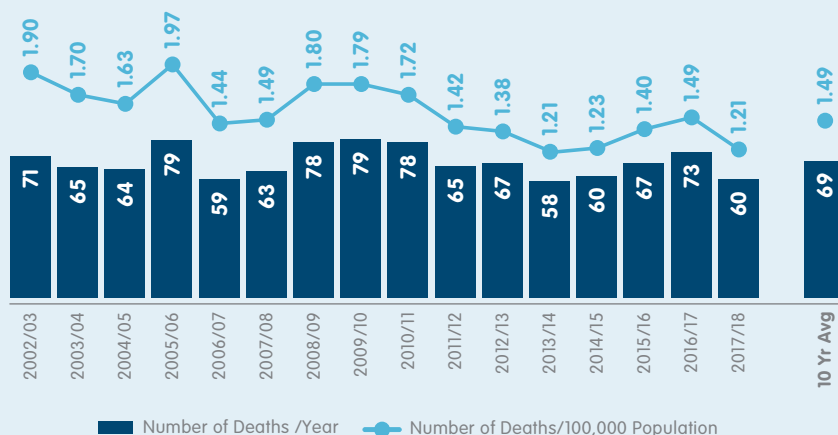


Figure QLD1: Unintentional Drowning Deaths and Crude Death Rates, Queensland, 2002/03 to 2017/18, 10 Year Average

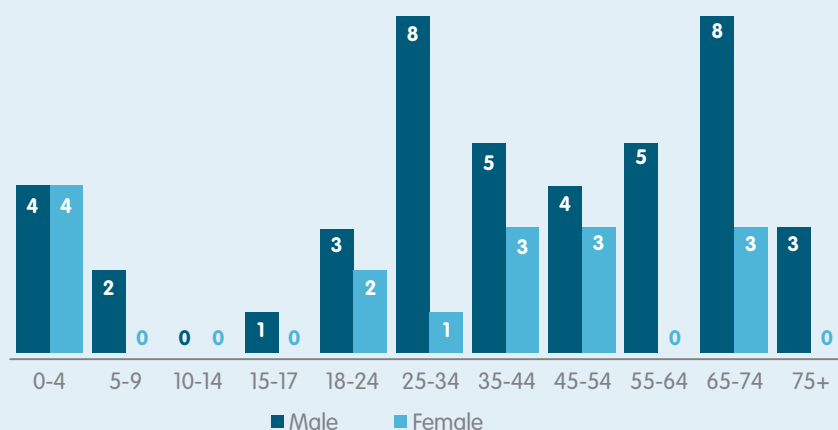


Figure QLD2: Drowning Deaths by Age Group and Sex, Queensland, 2017/18
*Please note there was one case in Queensland with unknown age.



PEOPLE WHO DROWNED IN QUEENSLAND IN 2017/18



65-74 YEARS AGE GROUP RECORDED THE HIGHEST NUMBER OF DROWNING DEATHS, ACCOUNTING FOR 18% OF ALL DEATHS

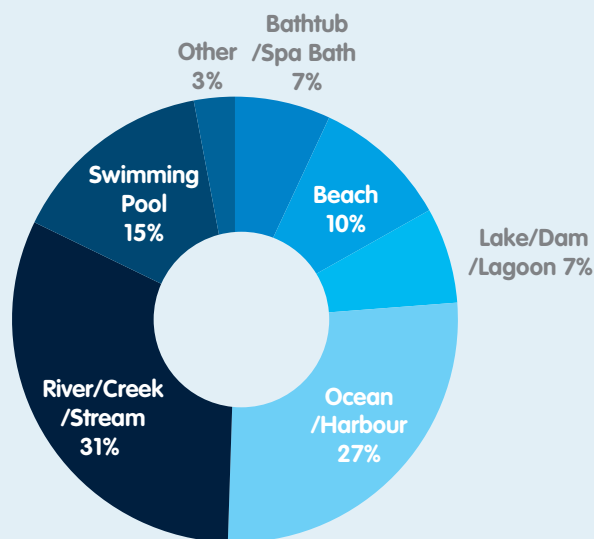


Figure QLD3: Location of Drowning Deaths, Queensland, 2017/18

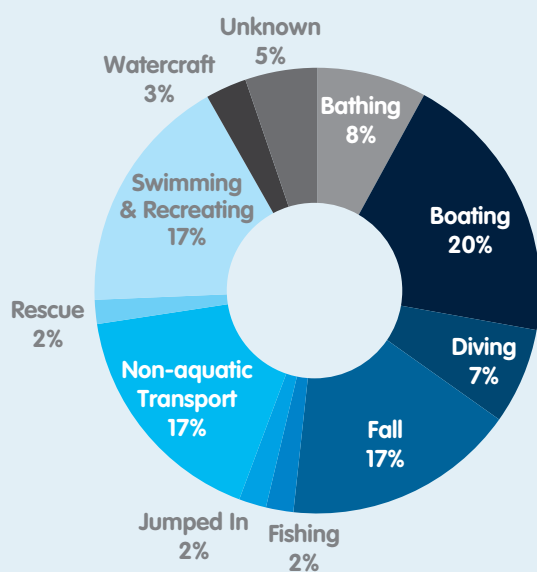


Figure QLD4: Activity Prior to Drowning, Queensland, 2017/18

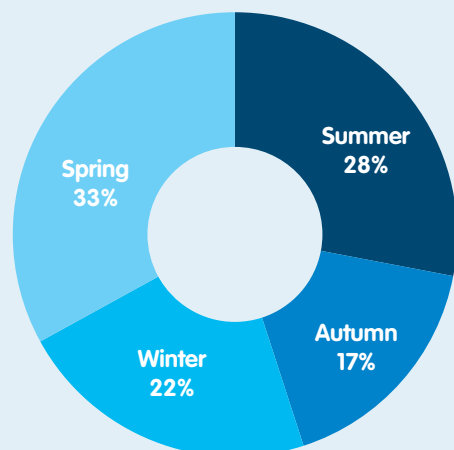


Figure QLD5: Drowning Deaths by Season, Queensland, 2017/18

A key focus of Royal Life Saving Society Queensland's prevention strategies and water safety messages are to increase awareness of the hazards associated with different aquatic environments and the drowning risk they pose to different age groups.

Key messages include:

- Alcohol affects your swimming ability and judgment of dangerous situations
- Learn to swim and be aware of variable conditions
- Be aware of strong currents, submerged objects and slippery banks. Always Respect the River
- Swim between the red and yellow flags at beaches wherever possible
- Always actively supervise children around water
- Always wear a lifejacket, it buys you time to survive

SOUTH AUSTRALIA

There were 15 people who drowned in South Australia in 2017/18. This is the same number of drowning deaths recorded last year and the same as the 10 year average.

60% of those who drowned in South Australia were male.

40% of all drowning deaths in South Australia were people aged 55 years and older.

Bathtubs and spa baths were the leading location for drowning in South Australia, accounting for 27%. Bathing and swimming and recreating were the leading activities being undertaken prior to drowning, accounting for 27% of all deaths respectively.

40% of drowning deaths in South Australia last year took place in the Summer months.



**PEOPLE WHO DROWNED
IN SOUTH AUSTRALIA
IN 2017/18**



**BATHING AND SWIMMING
AND RECREATING WERE
THE LEADING ACTIVITIES
BEING UNDERTAKEN PRIOR
TO DROWNING**

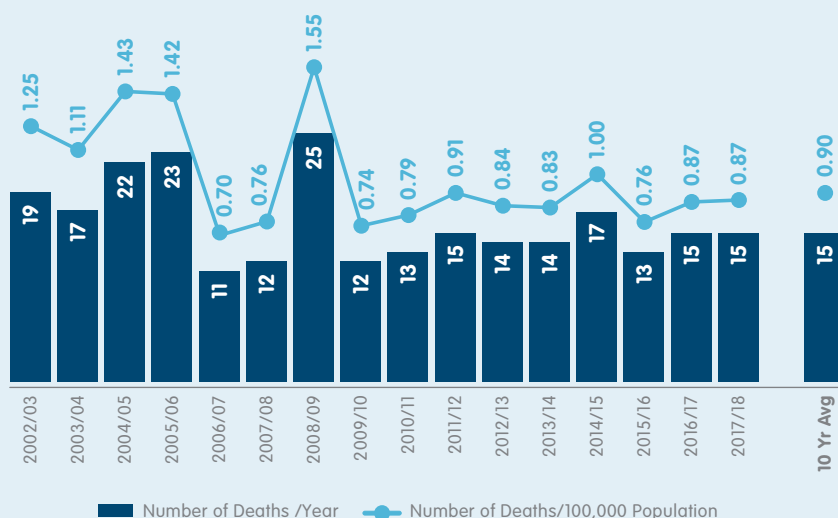


Figure SA1: Unintentional Drowning Deaths and Crude Death Rates, South Australia, 2002/03 to 2017/18, 10 Year Average

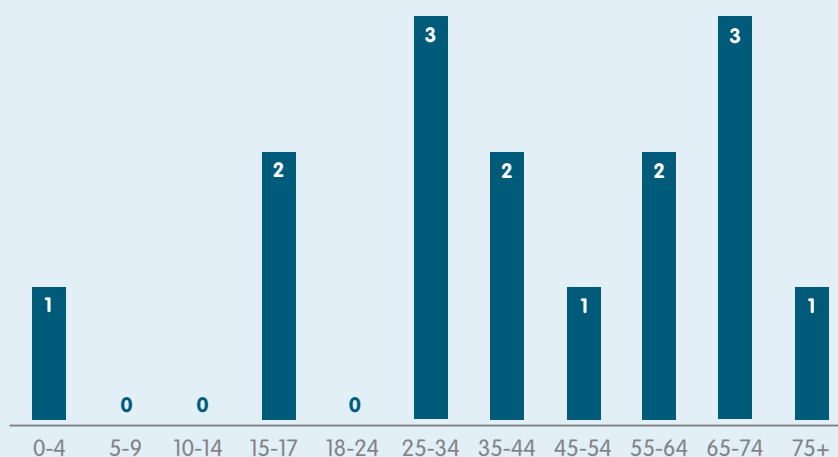


Figure SA2: Drowning Deaths by Age Group, South Australia, 2017/18

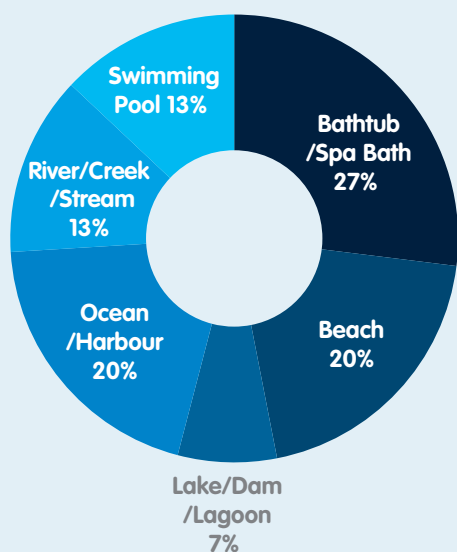


Figure SA3: Location of Drowning Deaths, South Australia, 2017/18

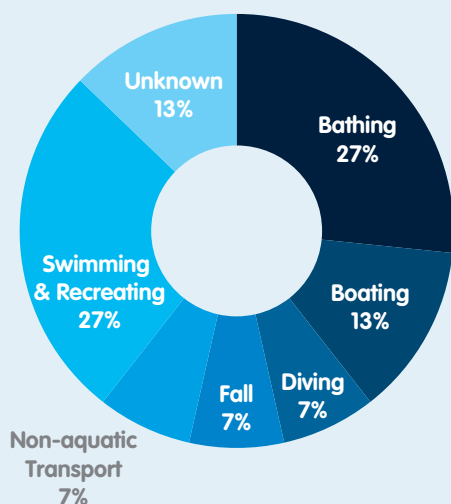


Figure SA4: Activity Prior to Drowning, South Australia, 2017/18

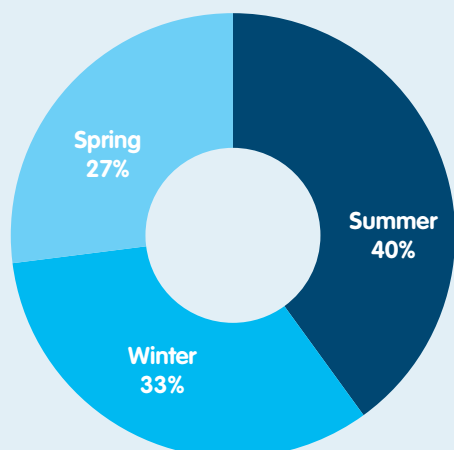


Figure SA5: Drowning Deaths by Season, South Australia, 2017/18

A key focus of Royal Life Saving Society South Australia's prevention strategies and water safety messages are to increase awareness of the hazards associated with different aquatic environments and the drowning risk they pose to different age groups.

Key messages include:

- Be aware of the role of pre-existing medical conditions and their impact on drowning risk
- Always swim between the flags at patrolled beaches
- Never swim alone
- Alcohol affects your swimming ability and judgment of dangerous situations
- Always wear a lifejacket, it buys you time to survive

TASMANIA

There were 10 people who drowned in Tasmania in 2017/18. This is both a 9% reduction on last year and the 10 year average.

70% of those who drowned in Tasmania were male.

40% of those who drowned in Tasmania this year were aged 55 years and older.

Ocean and harbour locations accounted for the highest proportion of drowning deaths in Tasmania last year (40%). Boating-related incidents accounted for half of all drowning deaths in Tasmania.

The largest proportion of drowning deaths in Tasmania last year occurred in Autumn (40%).

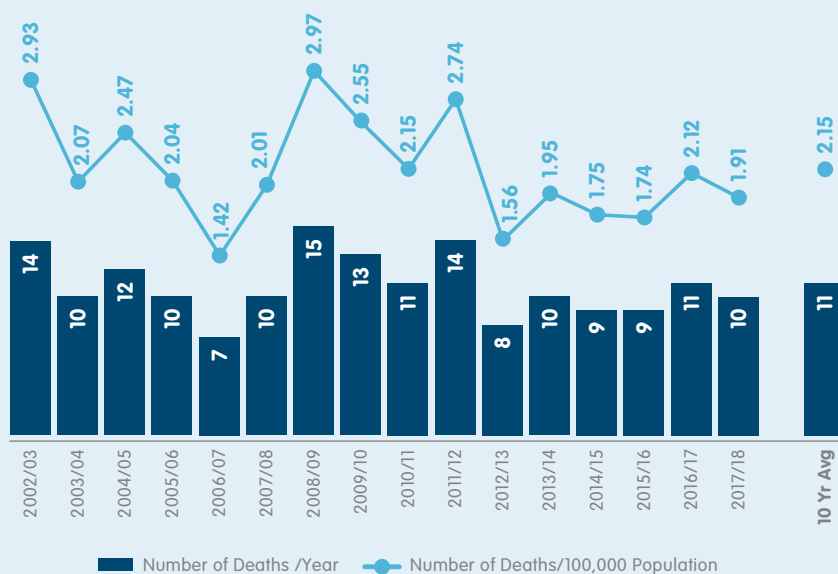


Figure TAS1: Unintentional Drowning Deaths and Crude Death Rates, Tasmania, 2002/03 to 2017/18, 10 Year Average

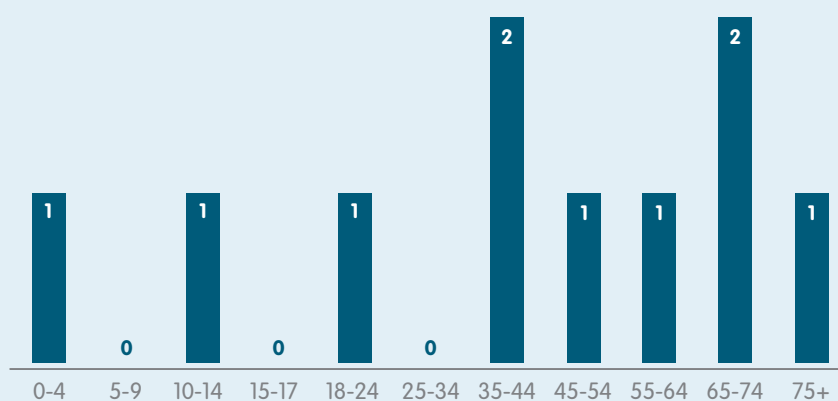


Figure TAS2: Drowning Deaths by Age Group, Tasmania, 2017/18



**PEOPLE WHO DROWNED
IN TASMANIA IN 2017/18**



**BOATING-RELATED
INCIDENTS ACCOUNTED FOR
HALF OF ALL DROWNING
DEATHS IN TASMANIA**

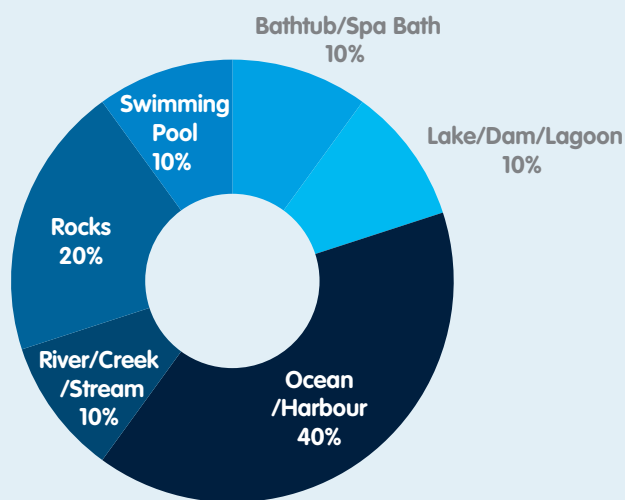


Figure TAS3: Location of Drowning Deaths, Tasmania, 2017/18

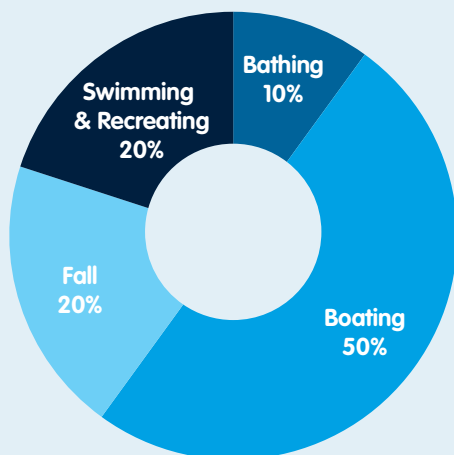


Figure TAS4: Activity Prior to Drowning, Tasmania, 2017/18

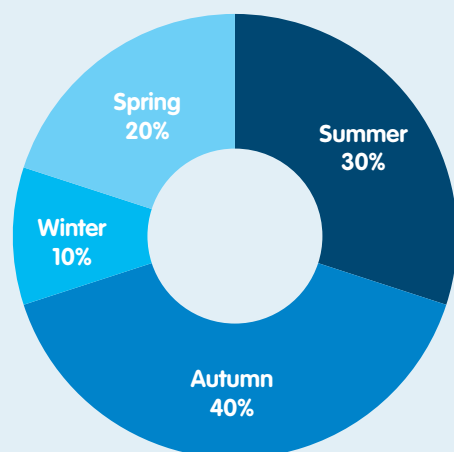


Figure TAS5: Drowning Deaths by Season, Tasmania, 2017/18

A key focus of Royal Life Saving Society Tasmania's prevention strategies and water safety messages are to increase awareness of the hazards associated with different aquatic environments and the drowning risk they pose to different age groups.

Key messages include:

- When boating, check the forecast for inland and open waterways before heading out
- Always wear a lifejacket, it buys you time to survive
- Be aware of strong currents, submerged objects and cold water. Always Respect the River
- Keep your distance from rocky outcrops and never go alone
- Constant adult supervision is vital for children under five years, be it pools or bathtubs

VICTORIA

There were 40 people who drowned in Victoria in 2017/18. This is an 11% reduction on last year and the same as the 10 year average.

73% of those who drowned in Victoria were male.

The 35-44 years age group recorded the highest number of drowning deaths, accounting for 25% of all deaths.

35% of all drowning deaths in Victoria last year took place at beaches. Swimming and recreating was the leading activity being undertaken prior to drowning, accounting for 40% of all drowning deaths.

60% of drowning deaths in Victoria last year took place in Summer.

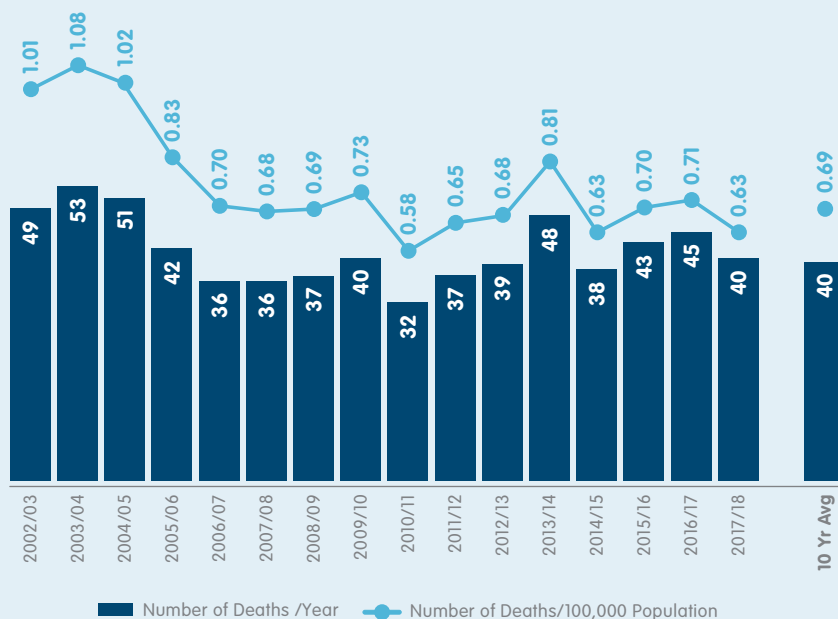


Figure VIC1: Unintentional Drowning Deaths and Crude Death Rates, Victoria, 2002/03 to 2017/18, 10 Year Average



**PEOPLE WHO DROWNED
IN VICTORIA IN 2017/18**

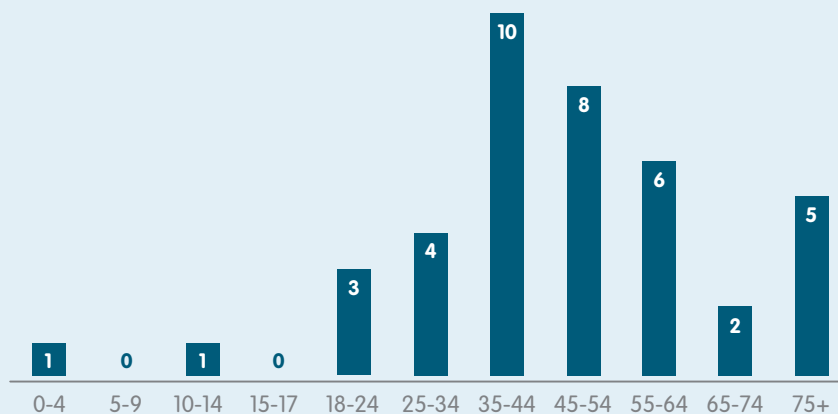


Figure VIC2: Drowning Deaths by Age Group, Victoria, 2017/18



**35% OF ALL DROWNING
DEATHS IN VICTORIA
LAST YEAR TOOK PLACE
AT BEACHES**

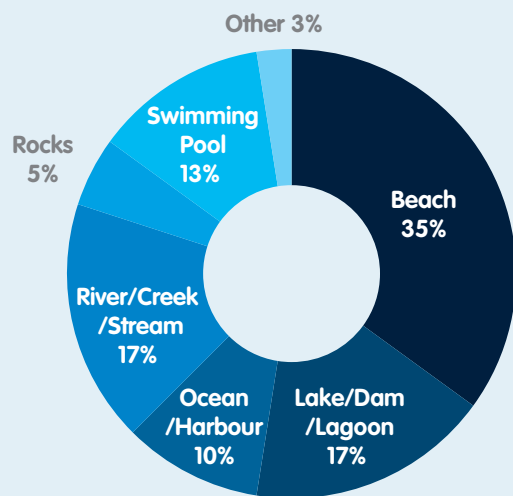


Figure VIC3: Location of Drowning Deaths, Victoria, 2017/18

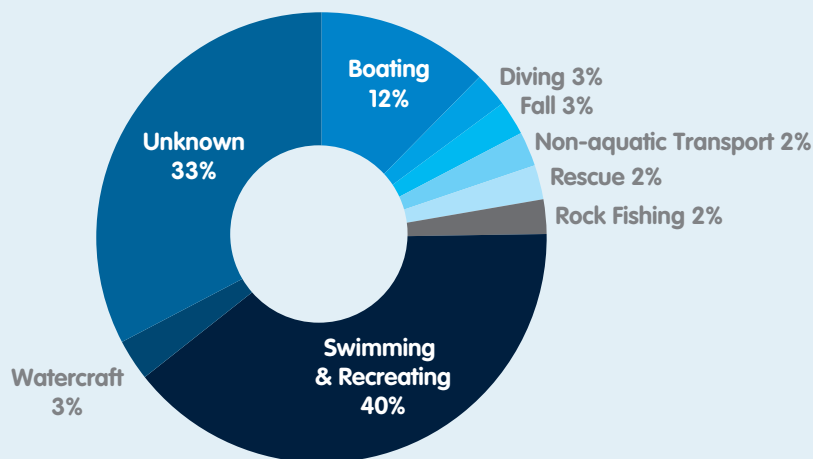


Figure VIC4: Activity Prior to Drowning, Victoria, 2017/18

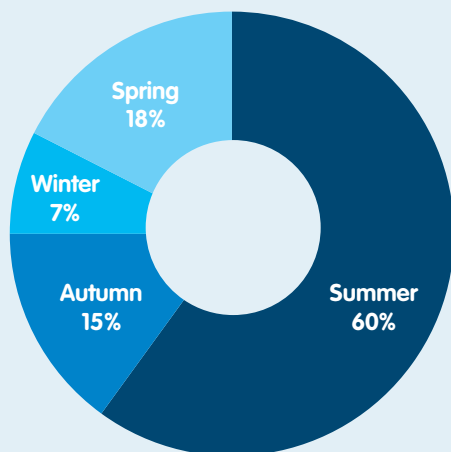


Figure VIC5: Drowning Deaths by Season, Victoria, 2017/18

A key focus of Life Saving Victoria's prevention strategies and water safety messages are to increase awareness of the risks associated with swimming and recreational activities at both coastal and inland waterways.

Key messages include:

- Be aware and prepared for conditions
- Read safety signs to understand dangers
- Swim between the red and yellow flags at beaches wherever possible
- Never swim alone
- Alcohol affects your swimming ability and judgment of dangerous situations
- Always wear a lifejacket, it buys you time to survive

WESTERN AUSTRALIA

There were 27 people who drowned in Western Australia last year. This is a 31% reduction on last year and a 21% reduction on the 10 year average.

67% of those who drowned in Western Australia were male.

The biggest reductions this year in Western Australia, were seen in the 25-54 years age group, with a 47% reduction on the five year average.

Swimming pools were the leading location for drowning in Western Australia last year, accounting for 19% of all deaths. Falls into water were the leading activity immediately prior to drowning.

41% of drowning deaths in Western Australia last year took place in Summer.

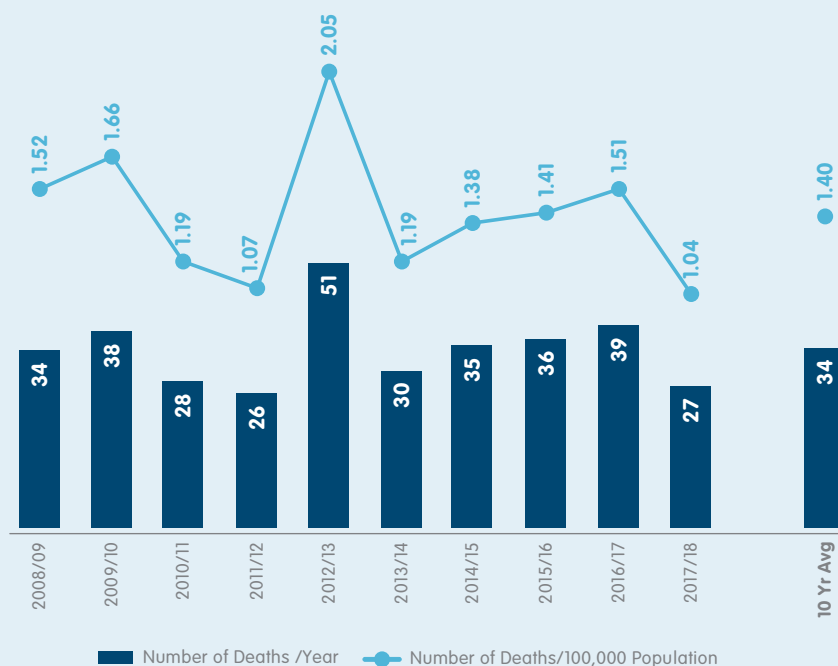


Figure WA1: Unintentional Drowning Deaths and Crude Death Rates, Western Australia, 2008/09 to 2017/18, 10 Year Average



27
PEOPLE WHO DROWNED
IN WESTERN AUSTRALIA
IN 2017/18

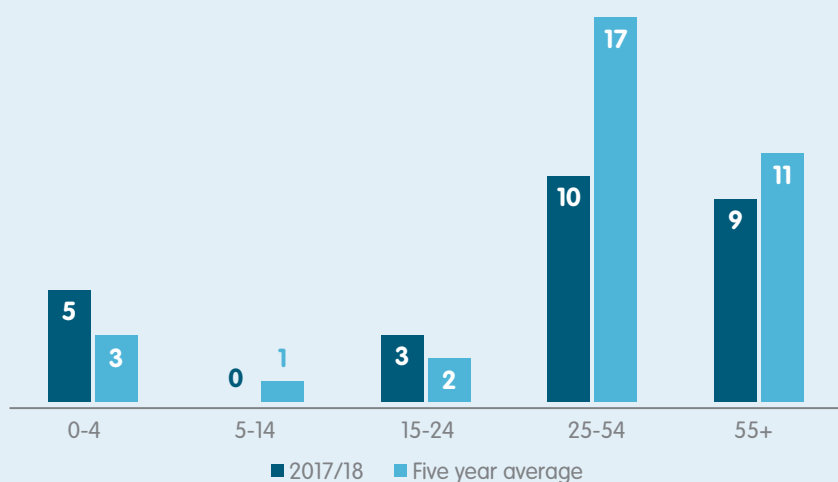


Figure WA2: Drowning Deaths by Age Group and Sex, Western Australia, 2017/18



67% OF THOSE WHO
DROWNED IN WESTERN
AUSTRALIA WERE MALE

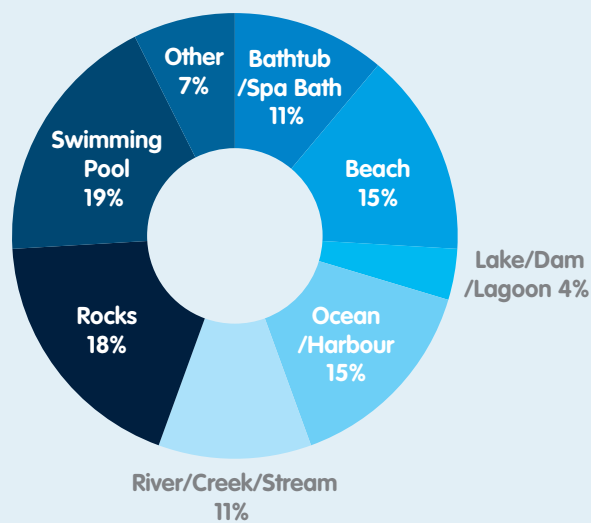


Figure WA3: Location of Drowning Deaths, Western Australia, 2017/18

A key focus of Royal Life Saving Society Western Australia's prevention strategies and water safety messages are to increase awareness of the hazards associated with different aquatic environments and the drowning risk they pose to different age groups.

Key messages include:

- Supervise children when around water
- Check pool barriers are compliant and in good working order
- Learn to Swim and Survive
- Learn lifesaving skills
- Check conditions before activity

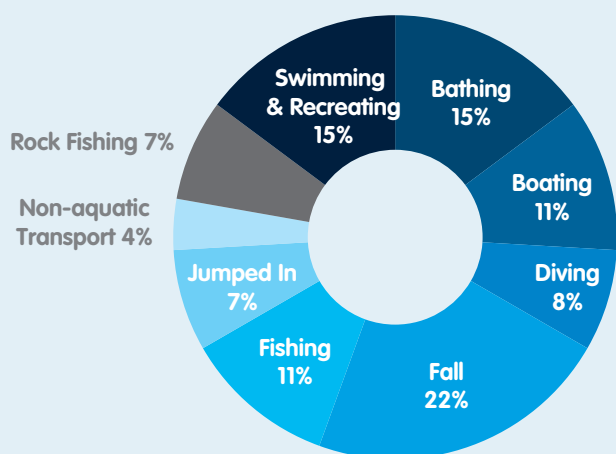


Figure WA4: Activity Prior to Drowning, Western Australia, 2017/18

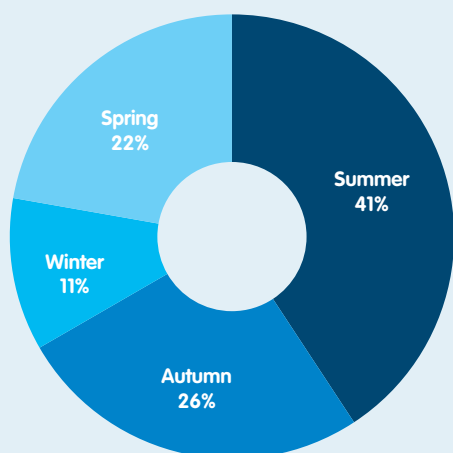


Figure WA5: Drowning Deaths by Season, Western Australia, 2017/18

METHODS

Information presented in the Royal Life Saving National Drowning Report 2018 has been collated from the National Coronial Information System (NCIS), State and Territory Coronial offices and year round media monitoring. Cases are collated in partnership with Royal Life Saving State and Territory Member Organisations (STMOs) and Surf Life Saving Australia and are analysed by Royal Life Saving Society – Australia.

Royal Life Saving uses a media monitoring service (broadcast, print and online) all year round to identify drowning deaths reported in the media. This information is then corroborated with information from the NCIS, police reports and Royal Life Saving STMOs before being included in the National Drowning Report.

All care is taken to ensure that the information in this report is as accurate as possible. Figures may change depending upon the ongoing coronial investigations and findings as 81% of cases were still under investigation (i.e. open) at the time of the production of this report. Royal Life Saving regularly publishes more detailed studies, which are a stronger basis for policy planning purposes.

Information on coastal cases is correct as at 24 July 2018. Information on all other cases is correct as at 10 August 2018. Historical drowning data is correct as of 1 July 2018, in accordance with Royal Life Saving's ongoing data quality assurance policy. All cases in the Royal Life Saving National Fatal Drowning Database are checked against the NCIS on a regular basis and figures are updated in annual National Drowning Reports as cases close. The 10 year averages in this report were calculated from drowning death data from 2007/08 to 2016/17 inclusive.

Drowning rates per 100,000 population are calculated using population data from the ABS publication 'Australian Demographic Statistics' (Cat 3101.0). Percentages and averages are presented as whole numbers and have been rounded up or down accordingly.

Exclusions from this report include: drowning deaths as a result of suicide or homicide, deaths from natural causes, shark and crocodile attacks, or hypothermia. All information presented is about drowning deaths or deaths where drowning is a contributory cause of death. The category of 'Non-aquatic Transport' related to drowning deaths involving means of transport not primarily designed or intended for aquatic use such as cars, motorbikes, bicycles and aeroplanes among others. Means of transport primarily used for aquatic purposes are captured in the 'Boating' (water-based wind or motor powered vessels, boats, ships and personal watercraft, e.g. boats, jet skis, sail boats, yachts) and 'Watercraft' categories (water-based non-powered recreational equipment such as those that are rowed or paddled, e.g. rowboats, surfboats, kayaks, canoes, boogie boards).

The category of 'Swimming Pool' includes home swimming pools, public swimming pools, hotel and motel pools and portable swimming pools among others. In the absence of up-to-date data on non-fatal drowning, non-fatal drowning incidents in 2015/16, 2016/17 and 2017/18 were estimated using the observed ratios of fatal to non-fatal incidents for each age group and sex between 2002/03 and 2014/15. The applicable average ratio of fatal to non-fatal incidents over that period was then used to project the likely number of non-fatal incidents based on the number of fatal incidents for that age group and sex in 2015/16, 2016/17 and 2017/18, respectively.

Since available counts of non-fatal incidents do not include all drowning incidents, the proportion of missing incidents was estimated based on a four year sample of fatal incident data which compared incident counts using both broad and restrictive definitions of 'drowning'. The estimated proportion of drowning incidents not captured in existing non-fatal data for each age group was then used to scale-up estimates of non-fatal incidents to arrive at a projection comparable with the broad definition of drowning used to count fatal drowning incidents in this report.

Acknowledgements

Royal Life Saving would like to thank the following people and organisations for their assistance in producing the Royal Life Saving National Drowning Report 2018:

- Royal Life Saving State and Territory Member Organisations (STMOs)
- The National Coronial Information System (NCIS)
- Surf Life Saving Australia (SLSA)
- The Queensland Family and Child Commission (QFCC)
- Shane DAW (SLSA)
- Eveline Rijkssen (SLSA)
- Leanne Daking (NCIS)
- Bernadette Matthews (LSV)
- Lauren Nimmo (RLSSWA)
- Rick Carter (Studio One Another)

The drowning prevention research of the Royal Life Saving Society – Australia is supported by the Australian Government.

Data in this report was compiled by Amy Peden, National Manager – Research and Policy and Alison Mahony, Senior Project Officer – Research and Policy, Royal Life Saving Society – Australia. The report was written by Amy Peden.



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PEOPLE DROWNED IN AUSTRALIAN WATERWAYS

1 JULY 2017 AND 30 JUNE 2018

This year's figure is a 14% reduction on 2016/17 and an 11% reduction on the 10 year average of 279 drowning deaths.

- ⬆ means an increase on the 10 year average
- ⬇ means a decrease on the 10 year average
- ⬇ means this year's result is the same as the 10 year average

SEX AND AGE GROUP

- ⬇ 179 (72%) drowning deaths were male
- ⬆ 70 (28%) drowning deaths were female
- ⬇ 18 (7%) drowning deaths occurred in children aged 0-4 years
- ⬇ 9 (4%) drowning deaths occurred in children aged 5-14 years
- ⬇ 29 (12%) drowning deaths occurred in young people aged 15-24 years
- ⬇ 103 (41%) drowning deaths occurred in males aged 25-64 years
- ⬇ 52 (21%) drowning deaths occurred in people aged 65 years and over

STATE AND TERRITORY

- ⬇ 87 (35%) drowning deaths occurred in New South Wales
- ⬇ 60 (24%) drowning deaths occurred in Queensland
- ⬇ 40 (16%) drowning deaths occurred in Victoria
- ⬇ 27 (11%) drowning deaths occurred in Western Australia

LOCATION AND ACTIVITY

- ⬇ 61 (24%) drowning deaths occurred at rivers, creeks and streams
- ⬇ 46 (18%) drowning deaths occurred at beaches
- ⬇ 40 (16%) drowning deaths occurred at ocean/harbour locations
- ⬇ 33 (13%) drowning deaths occurred in swimming pools
- ⬆ 63 (25%) were swimming and recreating immediately prior to drowning
- ⬆ 36 (15%) were boating immediately prior to drowning
- ⬇ 35 (14%) drowned as a result of a fall into water



“A NATION FREE FROM DROWNING”

2017/18 RESEARCH AND POLICY HIGHLIGHTS

Royal Life Saving's research and policy contribution in 2017/18 has been diverse and continues to impact drowning prevention policy and programs.

Below we showcase our achievements across the year in numbers.

•.....
2

GOVERNMENT
SUBMISSIONS MADE

•.....
4

AUSTRALIAN STANDARDS
COMMITTEE REPRESENTATION

•.....
11

REPORTS PUBLISHED

•.....
13

ACADEMIC ARTICLES
PUBLISHED

•.....
22

PRESENTATIONS
DELIVERED

•.....
60

DATA REQUESTS
PROVIDED

.....
95

ATTENDEES AT ROYAL LIFE
SAVING SYMPOSIUMS

.....
842

MEDIA PIECES GENERATED BY
DROWNING REPORT 2017

.....
6,052

TOTAL MEDIA PIECES

.....
6,752

NATIONAL CORONIAL INFORMATION
SYSTEM SEARCHES

.....
35,236

RESEARCH REPORT
ONLINE PAGE VIEWS

.....
105,273,196

TOTAL MEDIA
AUDIENCE

CASE STUDY: **SWIMMING AND WATER SAFETY EDUCATION SYMPOSIUM 2018**

In May 2018, Royal Life Saving convened the second National Swimming and Water Safety Education Symposium in Sydney. The first Symposium produced six high level action statements aimed at building a national approach to increasing swimming and water safety education for all Australian children. Representatives from across Government, the Education Sector, Academia and the Aquatic Industry came together to reconfirm the sector's commitment to collaboration and progression towards these statements.

The Swimming and Water Safety Education action statements are:

- Strengthen school and vacation swimming and water safety programs in the community;
- Revise the National Swimming and Water Safety Framework;
- Set and report progress against a National Benchmark;
- Devise strategies to increase access and participation for those 'at risk';
- Improve availability and access to aquatic facilities;
- Increase the swimming and lifesaving skills of Secondary School students.

This second symposium focussed on the following key areas:

1. State and Territory Government programs

- To provide a complete Australia-wide perspective of State and Territory school and vacation swimming and water safety programs

2. The National Swimming and Water Safety Framework

- To consider the revised draft of the Framework
- To discuss strategies for implementation and promotion of the Framework

3. Swimming and water safety for under 5's and children with disabilities

- To review participation in swimming and water safety program by children under 5
- To increase understanding of participation, the issues, challenges and success of water safety programs and initiatives for those 'at-risk' and/or 'overrepresented' in drowning statistics

4. Swimming and lifesaving beyond primary school

- To increase understanding in participation of youth in swimming and water safety programs
- To discuss strategies to address the challenges to participation



Results of the Symposium

The Symposium delegates committed to the following actions:

- Launch of the National Swimming and Water Safety Framework.
- Promotion and advocacy of the Framework as the industry standard for swimming and water safety education
- Investigate ways to improve the quality of swimming and water safety education programs for children under 5 and their families
- Explore opportunities for partnerships and strategies to improve access and participation opportunities for children with disabilities
- Investigate swimming and water safety programs that offer greater flexibility, less structure and that meet the motivation needs of secondary school students (and beyond)
- Advocate for improved investment towards new and existing aquatic infrastructure to increase access and inclusion for high-risk populations

In summary

Royal Life Saving, in partnership with Government and industry stakeholders, will continue to work together to identify solutions and opportunities that will enable all Australian children to access and learn essential swimming and water safety skills and knowledge, regardless of their cultural background, location or socio-economic status. To date, much has been achieved to address the issues surrounding swimming and water safety education however more work is still required.



Key points:

- The Northern Territory experiences a high incidence of home pool drowning among children under 5 relative to its population and number of home pools.
- The risk of drowning in an unfenced home pool is 3.7 times higher than in a pool which is properly fenced.
- Royal Life Saving research into drowning during school and public holidays suggests that temporary visitors staying in holiday accommodation are likely to be more vulnerable to the risks posed by unfenced pools.
- The Swimming Pool Drowning Index – the rate of child drowning in the Northern Territory's home pools – is more than twice as high as in Western Australia, even after adjusting for the high level of pool ownership in the Northern Territory.
- There is a link between pool fencing laws and rates of child drowning in pools. Areas of Australia with fewer exemptions from best practice fencing standards and more regular inspections experience fewer fatal drowning incidents.
- For every fatal drowning in a home pool there are 4.83 non-fatal incidents requiring hospitalisation. More than 7% of non-fatal drowning incidents lead to permanent disabilities for the victim.
- On average, the fatal drowning of a child under 5 costs Australian society \$6.32 million, and non-fatal drowning leading to hospitalisation costs an average of \$883 thousand.

How pool fencing enforcement prevents child drowning

The Swimming Pool Drowning Index (SPDI) calculates the incidence of fatal drowning in an area as a proportion of the number of people estimated to have access to a swimming pool. It adjusts for local differences in the penetration of private swimming pools on the expected rate of drowning.

Our calculations show that the SPDI for the Northern Territory over the last 15 financial years is 9.98 per 10 million persons with pool access, compared to the Australia-wide figure of 8.

This means that the Northern Territory experiences 20% more home pool child drownings per-person-per-pool than Australia as a whole. The difference is even starker when compared to the recent results in Western Australia, Queensland and New South Wales which have, to varying extents, implemented best-practice pool fencing regulations.

Over the last three financial years, Western Australia has achieved a SPDI of 4.78, while Queensland and New South Wales have SPDIs of 5.97 and 7.18 over the same period. This implies that the rate of home pool child drowning in the Northern Territory is more than twice as high as that achieved in Western Australia via strengthened pool fencing laws and regular inspections.

In addition to fatal drowning, home swimming pools pose a serious risk of non-fatal drowning for young children. We estimate that Under fives in the Northern Territory experienced 39 non-fatal drowning incidents leading to hospitalisation in the 15 financial years to 2016/17.

Four-sided exclusion fencing for pools offers significant safety benefits

Royal Life Saving estimates the difference in risk of drowning between fenced and unfenced pools based on the two most relevant studies cited in the Cochrane Injuries Group's review of pool fencing. These two studies respectively find that the odds ratio of fatal drowning in a fenced pool is 0.27 or 0.29. Based on considerations of sample size and study quality, the Cochrane meta-analysis concludes that the best estimate for the odds of fatal drowning in an unfenced pool is 0.27, which is the figure we have used in our calculations.

This is equivalent to assuming that children are 73% less likely to drown in a fenced pool than an unfenced one, or that unfenced pools are 3.7 times as dangerous as fenced ones.

A 2017 study, showed that the 2009 introduction of more effective pool fencing legislation in Queensland led to a statistically significant decline in children drowning in home pools in the subsequent five years, with incidence in under fives falling from 2.03 to 0.96 per 100 thousand persons.

Conclusion

The Northern Territory experiences higher rates of child drowning in home pools than the rest of Australia, even after adjusting for levels of pool ownership. Four-sided exclusion fencing makes home pools safer, and increasing the share of pools which comply with the Swimming Pool Safety Act would make the Northern Territory's children safer, as well as reducing the significant costs of fatal and non-fatal home pool drowning.

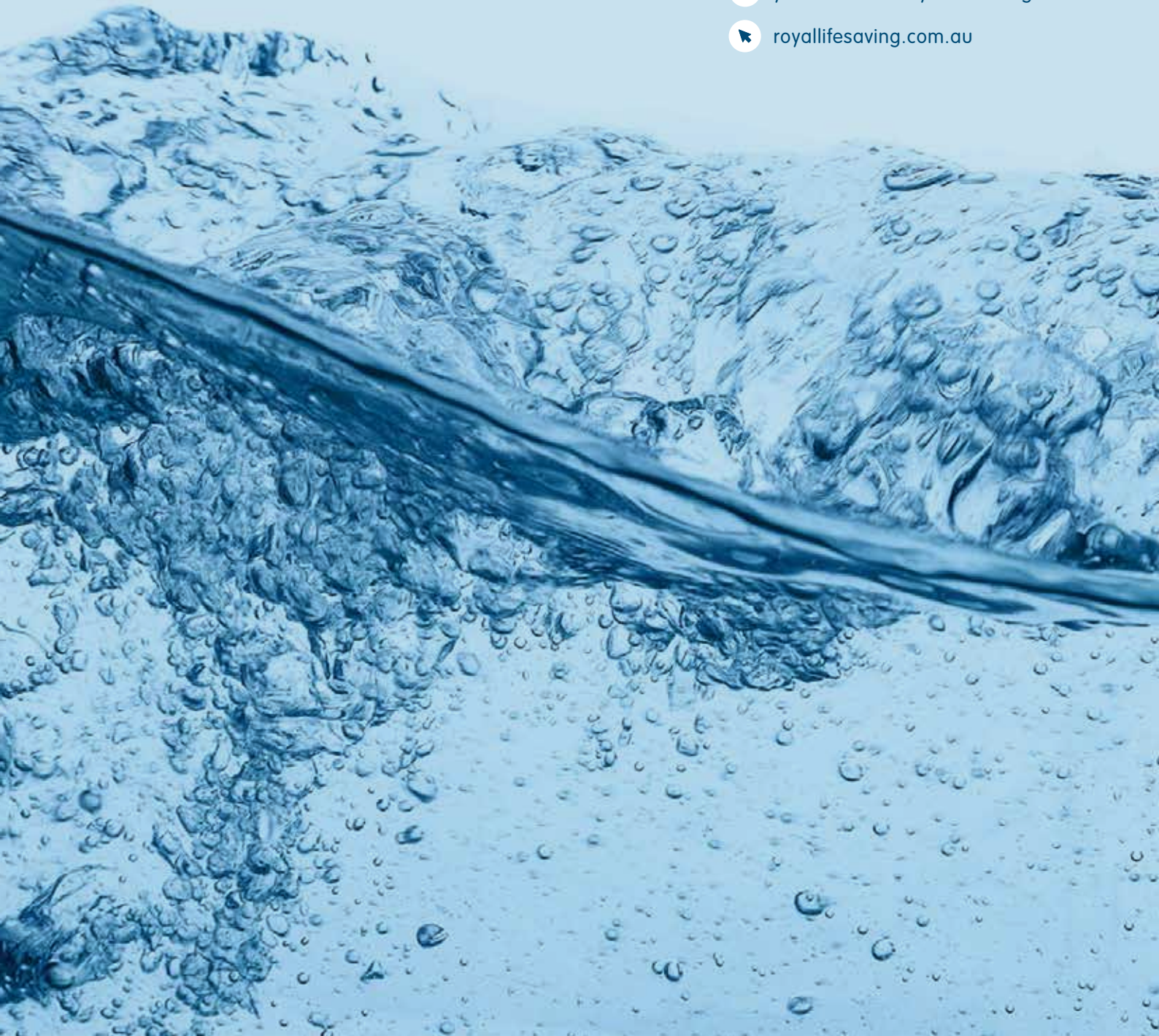
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