

Drowning deaths among Aboriginal and Torres Strait Islander peoples

A 10-year analysis 2008/09 to 2017/18





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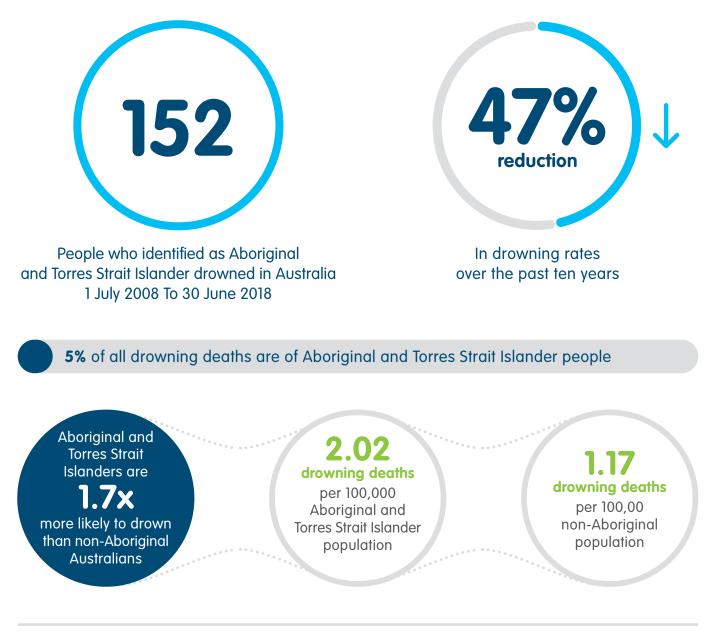
Acknowledgement

Royal Life Saving Society – Australia acknowledges and pays respect to the Gadigal people of the Eora nation who are the traditional custodians of the land on which is now called Sydney.

We would also like to acknowledge and pay respect to the traditional owners of country throughout Australia and recognise the continuing connection to lands, waters and communities. We pay our respect to Aboriginal and Torres Strait Islander cultures; and to Elders past, present and emerging.

Warning: this report discusses the deaths of Aboriginal and Torres Strait Islander people and may be distressing for some readers. No individuals have been identified at any time, this report may include images of deceased persons.

ABORIGINAL AND TORRES STRAIT ISLANDER DROWNING REPORT SNAPSHOT

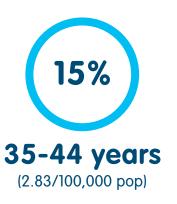


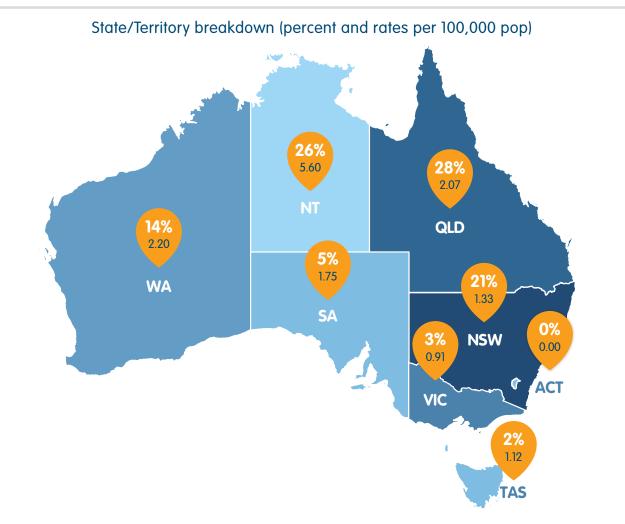
Age breakdown

17%	11%	15%	14%	15%	17%	11%
0-4yrs	5-14yrs	15-24yrs	25-34yr	35-44yrs	45-54yrs	55yrs+

17% 45-54 years (3.8/100,000 pop)







Age group	Location
0-4 Years	50% Swimming pool
5-14 Years	53% River/creek
15-24 Years	46% River/creek
25-34 Years	55% River/creek
35-44 Years	48% River/creek
45-54 Years	50% River/creek
55+ Years	59% River/creek

River/creek

Activity				
	81% Fall			
<u>Sã</u>	71% Swimming & recreating			
<u>Sã</u>	18% Swimming & recreating			
<u>Sã</u>	33% Swimming & recreating			
<u>Sã</u>	30% Swimming & recreating			
<u>Sã</u>	23% Swimming & recreating			
	35% Non-aquatic transport			

FOREWORD

This report presents an analysis of fatal drowning among Aboriginal and Torres Strait Islander people across Australia between 1st July 2008 and 30th June 2018. During this time, 152 people lost their lives to drowning.

We recognise that every drowning is a tragedy that has far reaching impacts on families and communities. Despite these numbers, real progress has been made, with a 48% decrease in Aboriginal and Torres Strait drowning deaths over the past decade, with school aged children aged 5 to 14 years recording the lowest number and rates than any other age group.

Royal Life Saving, along with our partners, have made commendable efforts in supporting Aboriginal and Torres Strait Islander communities to address drowning prevention and develop water safety skills. The case studies highlight a commitment to improving drowning, water safety, and swimming outcomes in partnership with communities across the country. Many of these initiatives target social and economic outcomes, including education, training and employment and aim to improve overall health and well-being. These programs have a positive impact on communities, particularly those in remote locations.

However, we know more is needed. Royal Life Saving is committed to strengthening our relationships with health agencies and community leaders to build community capacity, support delivery of effective water safety and health promotion programs and address the gaps in knowledge. Alignment to policies such as Closing the Gap are essential to create meaningful change and impact for Aboriginal communities across multiple areas.

The Australian Water Safety Strategy 2030 will identify ways to reduce drowning over the next decade. Partnership with Aboriginal communities and stakeholders is high on the list of priorities and is vital to making further progress and to achieving our vision of a nation free from drowning.

Justin Scarr Chief Executive Officer Royal Life Saving Society – Australia



The Report – "Drowning Deaths among Aboriginal and Torres Strait Islander peoples" 2020

I write this foreword as the newest member of the Board of Royal Life Saving WA and the only Aboriginal person to hold this office in the 125year history of Royal Life Saving Society nationally. The report outlines the remarkable achievement of a nearly 50% reduction of drowning in Aboriginal and Torres Strait Islander communities. This outstanding achievement was reached by focusing on water safety programs and the accessibility of such programs within Aboriginal and Torres Strait Islander communities. It was critical to look at a co-design model that ensured Aboriginal and Torres Strait Islander peoples had input into the content and execution of such programs. A co-design model creates a sense of ownership by the communities that ensured serviceability of such programs because people have buy-in. When Aboriginal and Torres Strait Islander communities are consulted and included in the solutions brokering, it empowers communities to be proactive and invested, thus ensuring success of such programs.

Aboriginal and Torres Strait Islander peoples have always had a strong spiritual alignment to water, water protection and the sacredness of the water source because of our deep interconnectedness with the great Spirits who created the waterways and our responsibility to keeping those spaces flourishing and secure.

Research in prevention historically has been very limited and more needs to be done to affirm the qualitative research that drive changes in behaviours within the communities that Royal Life Saving service. Qualitative research has a profound impact on the behavioural change within an Organisation as well, those behaviours once embedded, drives company culture.

Building an evidence base informs the objectives and direction of this Organisation thus ensuring we meet the needs of the communities we service. It is an aspirational goal to continue to work toward a greater reduction of drowning in Aboriginal and Torres Strait Islander communities and this will be accomplished where Royal Life Saving continues to work more collaboratively with Aboriginal and Torres Strait Islander communities to co-design programs that are fit for purpose.

I look forward to the progress in this space.

Gningala Yarran-Mark LLB, MBL, BSc (Hons) Royal Life Saving Western Australia Board Member (October 2020)



Ngadyung Program Royal Life Saving ACT

NGADYUNG is the word used by the traditional landowners in the ACT region – the Ngunnawal People – to describe water and various activities associated with it. Royal Life Saving ACT first established "Ngadyung" with funding from the ACT Health Department in 2007.

Ngadyung is Canberra's only dedicated Aquatic Recreation Program for Aboriginal and Torres Strait Islander families and provides free access to the RLSSA Swim and Survive program for children aged 4 to 12 years. The ACT Ngadyung Program was implemented as a mechanism to encourage more Aboriginal and Torres Strait Island families and children to get engaged and active in aquatic sport and recreation activities. Ngadyung Program Leaders focus heavily on developing strong foundation skills for all ages before introducing more technical swimming and survival skills and sequences.

Objectives:

- Break down participation barriers to aquatic activity for Indigenous families in the ACT
- Increase accessibility to structured aquatic participation programs for Indigenous children in the ACT
- Improve Indigenous representation within aquatic sport and recreation activities in schools
- Improve Indigenous representation within aquatic sport and recreation activities in community

Since 2007, over 500 school-aged children have gone through the program. Ngadyung is supported by the Australian Government's national Inland Waterways Drowning Prevention Project which enables participants to attend the program free of charge. "As a grandmother I strongly support this valuable program and my grandchildren have thoroughly enjoyed attending these lessons. This is a culturally appropriate and sensitive program that works with our community to improve our outcomes. This program builds resilience, improves our children's self-esteem, and provides a holistic approach to health and closing the gap. This program promotes so many positive attributes that can only enhance our children and their future. It saves our children's lives and improve our health outcomes." Gaby Sledge, grandmother

"The Ngadyung program has become such an important part of my children's lives over the past few years. They look forward to their lessons every week. The program has given my children the confidence to get in the water and participate successfully in school swimming carnivals in which they otherwise wouldn't have had the opportunity to do. They thoroughly enjoy the program and we are extremely grateful that this program has been implemented in our community, giving our children the knowledge of water safety." Allison Gonzalez, parent



BACKGROUND

Reducing drowning among Aboriginal and Torres Strait Islander people and communities has been a priority area in the Australian Water Safety Strategy since its inception in 1998 [1-5], with progress towards achieving the goals set in the Strategy differing across States/Territories.

Aboriginal and Torres Strait Islander people are considered to be at higher risk of drowning [5]. While drowning among Aboriginal and Torres Strait Islander people has been highlighted in previous drowning reports, an in-depth analysis of drowning on a national scale has not been carried out. Previous research has largely been focused at the State/Territory level.

This research provides an understanding of drowning within a local context to enable prevention strategies and interventions to be tailored to the needs of local communities. Key findings from drowning, water safety, and injury prevention research are summarised below.

For the purposes of this study, the authors have chosen to use the term 'Aboriginal and Torres Strait Islander' people, as recommended by current guidelines and in consultation with Aboriginal injury prevention practitioners and researchers. [6, 7]

Research on drowning and water safety among Aboriginal and Torres Strait Islander people has broadly concentrated on three key areas:

- Drowning (fatal and non-fatal)
- Swimming and water safety skills
- Health, well-being and social benefits



Drowning (fatal and non-fatal)

Several studies on fatal and non-fatal drowning show Aboriginal and Torres Strait Islander children to be at higher risk of drowning than non-Aboriginal children.

A Queensland study reported drowning rates (fatal and non-fatal) among Aboriginal and Torres Strait Islander children and adolescents (aged 0 to 19 years) as being 44% higher when compared with non-Aboriginal children. [8] Similarly, a Western Australian study [9] found that Aboriginal children (aged 5 to 14 years) were 1.8 times more likely to be involved in a drowning event than non-Aboriginal children. This study found that Aboriginal children were 8.6 times more likely to fatally drown than non-Aboriginal children. However, rates of non-fatal drowning were found to be similar across both groups, with Aboriginal children recording 3.7 hospital admissions recorded per 100,000 compared with 3.5 admissions per 100,000 for non-Aboriginal children. [9]

Statistics from the Australian Institute of Health and Welfare report that drowning is among the leading causes of unintentional fatal injuries among Aboriginal people across all ages, accounting for approximately 3% of total deaths, at a rate of 2.1 per 100,000 population. [10]



Swimming and water safety skills

Aboriginal and Torres Strait Islander children have been reported to have lower levels of swimming and water safety skills compared with non-Aboriginal children and are less likely to achieve the 'benchmark' skills outlined in the National Swimming and Water Safety Framework. [11] While research has reported that children progress well when swimming programs are provided regularly, children may not be achieving the minimum level of skills to swim safely in natural waterways where aquatic activities commonly take place. [12]

An evaluation of a swimming program delivered to remote Aboriginal communities in the Northern Territory found that after the first five years of the program being carried out annually in each community, a consistent increase in the number of students achieving the benchmark skills was seen, indicating that children are likely to build on the skills learned each year. [13]



Health, wellbeing and social benefits

As well as drowning prevention, swimming and water safety programs, and local swimming pools provide broader health, wellbeing and social benefits to individuals and the wider community. This is true in any community, including those with Aboriginal and Torres Strait Islander people. Research investigating the value of swimming pools in remote communities reported decreased skin, ear and nose infections, and increased physical activity, and hygiene. [14]

Swimming and water safety programs have been used as an incentive for school attendance and good behaviour. [12, 13, 15] Community swimming pools also provide employment opportunities for local community members to be trained as pool lifeguards, pool managers and swim teachers. [13, 16]

The case studies in this report highlight some of the inspiring work that is being carried out to address drowning, health and social outcomes among Aboriginal and Torres Islander communities across Australia. These are only some examples, with many initiatives being incorporated into holistic health promotion and injury prevention programs to increase overall health and well-being.



Injuries and injury prevention programs

Aboriginal and Torres Strait Islander people record higher rates of fatal and non-fatal injuries overall compared with non-Aboriginal people, and particularly among young children. [10, 17, 18] In response to these trends, a broad range of injury prevention studies and evidence-based interventions have been developed in recent years to, for example, prevent falls among older Aboriginal and Torres Strait Islander people [19], increase awareness and use of child car restraints [20, 21], and improve child safety in and around the home. [22]

Lessons learned from these studies that may be helpful for drowning prevention include (but not restricted to):

- Identifying barriers to accessing programs, such as financial and transport constraints, lack of cultural safety, and absence of community networks
- Engaging with Aboriginal and Torres Strait Islander communities and Elders throughout program/ service development, delivery and evaluation
- Including Aboriginal and Torres Strait Islander staff and steering committees when developing and leading programs to create ownership
- Including content to acknowledge physical, social, mental and spiritual well-being
- Developing practical and hands-on programs to make them more meaningful and effective
- Including yarning circles to pass on traditional knowledge, story-telling and experience
- Developing more visual and less text-heavy resources
- Building capacity within the community
- Subsidising programs rather than making them free to ensure that people value programs
- Integrating educational initiatives into existing programs (e.g. child safety)

Alignment with other strategies/plans

Drowning prevention can be aligned to other strategies and plans that enhance the health and wellbeing of Aboriginal and Torres Strait Islander individuals and communities. It is important to consider drowning in the context of these plans to ensure that strategies, programs and research are relevant and follow best practice guidelines:

- National Aboriginal Health Plan 2013-2023
- Closing the Gap in Partnership (July 2020)
- Indigenous Advancement Strategy
- National Aboriginal and Torres Strait Islander Community Controlled Health Services Priorities
- National Health and Medical Research Council Guidelines for Researching with Aboriginal and Torres Strait Islander Peoples and Communities

Note: This is a selected list in alphabetical order of national level strategies/plans and guidelines and is not exhaustive. For local context, it is best to also consult specific plans for each State/Territory.

The authors recognise that this report focuses on people who have died as a result of drowning and the information presented relates to real families and communities and is not just about statistics. The aim of this report is to better understand the circumstances leading to each drowning event and to prevent other families and communities going through a similar experience in the future. These findings will inform future strategies and programs that can be tailored to best meet the needs of communities.



AIMS & OBJECTIVES

The purpose of this report is to present current data on unintentional fatal drowning of people who identified as Aboriginal and Torres Strait Islander in order to inform evidence-based strategies, polices, program and funding/grant opportunities to reduce drowning.

This study aimed to:

- Conduct a national analysis of drowning among Aboriginal and Torres Strait Islander people
- > Determine the burden and key risk factors for drowning among this population
- Provide recommendations on the direction of future drowning prevention projects pertaining to Aboriginal and Torres Strait Islander people





Talent Pool is an innovative training and employment program that provides a springboard for young Aboriginal people to take action and achieve employment. It uses a place-based approach to build the capacity and capability of a community by ensuring local young people are equipped and empowered to participate in the local economy as paid professionals in the aquatics industry.

The program takes a 'Triple A' approach which outlines a 'Staircase of Opportunity' assisting Aboriginal young people to step out of poverty through:

- Aboriginal aspiration identifying goals for personal development focused on areas of vocational interest and ongoing employment opportunity
- Aboriginal action harnessing the courage to take the necessary steps to become competent through accredited and non-accredited training
- Aboriginal achievement building an expectation of success by achieving professional and personal goals that improve employability

Four key aspects to Talent Pool:

> Training.

Training through the Talent Pool program provides skills development and employment opportunities for young Aboriginal people.

> Employment.

Talent Pool works to provide ongoing employment opportunities for program graduates both within and beyond the aquatic industry.

> Engagement.

Local swimming pools can be positioned as attractive hubs for youth participation, training and employment, providing engagement opportunities for the Talent Pool program.

> Industry support.

The continued success of Talent Pool relies on support from industry to generate a healthier, engaged, employment-ready Aboriginal workforce.

Key outcomes to date:

- > 215 training positions provided
- 62 people supported into first-time employment
- 28 community trainers as part of a State-wide network to assist with ongoing training delivery



FOR MORE INFORMATION AND SUCCESS STORIES https://royallifesavingwa.com.au/programs/talent-pool

DROWNING IN ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE 2008/09 TO 2017/18

Overview

There were 152 drowning deaths involving people who identified as Aboriginal and Torres Strait Islander, representing 5.5% of total drowning deaths.

Aboriginal and Torres Strait Islander people (2.02/100,000 pop) were 1.7 times more likely to drown than non-Aboriginal and Torres Strait Islander people (1.17/100,000 pop).

The highest crude rate (3.03) was recorded in 2013/14 and the lowest (1.09) in 2017/18.

Overall, drowning deaths of Aboriginal and Torres Strait Islander people decreased by 46.8% over the 10 year study period.



Drowning deaths

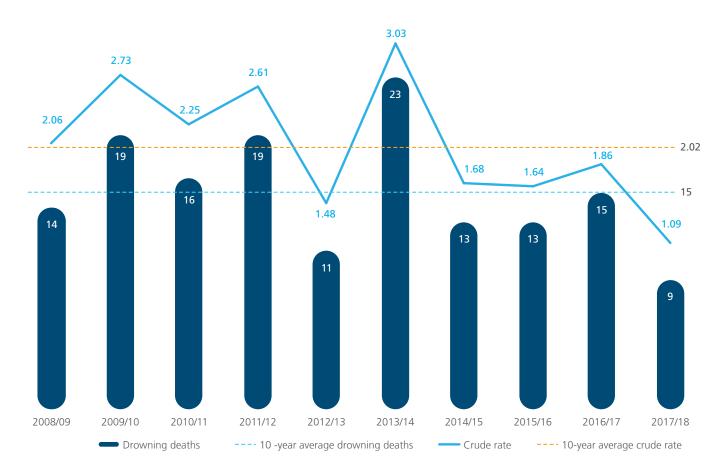
Higher than non-Aboriginal Australians

Overall drowning rates decreased by **47%** over 10 years



Aboriginal and Torres Strait Islander people are over-represented in drowning data, accounting for 5.5% of total drowning deaths in Australia, despite only making up 3.3% of the Australian population.

Drowning deaths of Aboriginal and Torres Strait Islander people, Australia, 2008/09 to 2017/18



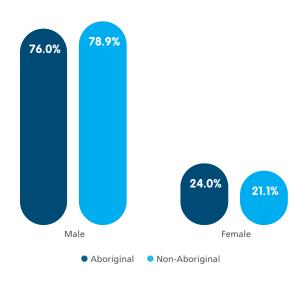
75% of all drowning deaths were males

Drowning risk was **greatest** in children aged 0-4 years and adults aged 45-54 years.

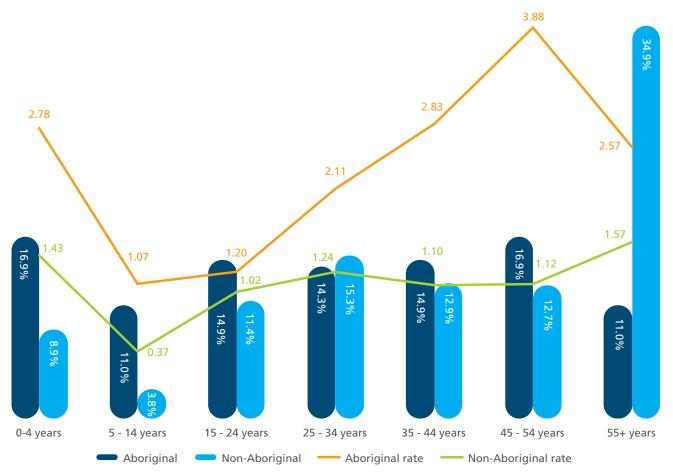
School-aged children (5-14 years) recorded the lowest drowning rates for both groups, however Aboriginal and Torres Strait Islander children were **2.9x more** likely than non-Aboriginal children to drown.

Aboriginal and Torres Strait Islander adults aged 45-54 years were **3.5x more** likely to drown than non- Aboriginal people of the same age. Drowning deaths in Australia of Aboriginal and Torres Strait Islander people vs. non-Aboriginal people by sex, 2008/09 to 2017/18

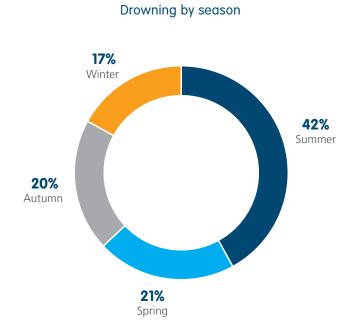
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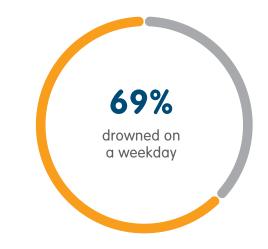






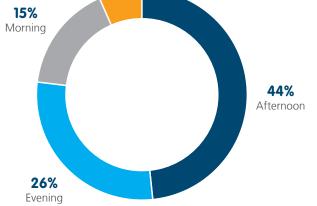


Drowning by weekday or weekend





Drowning deaths by time of day



Time of death was unknown in 9% of cases



CASE STUDY: Indigneous Weather Knowledge Hub

The Indigenous Weather Knowledge Hub produced by the Bureau of Meteorology, recognises the weather and climate knowledge that has been passed through generations of Aboriginal and Torres Strait Islander people. The Indigenous Weather Knowledge Hub is a great resource to learn about the Indigenous Australian seasons, and how it links to traditional environment knowledge of plants and animals according to the seasonal cycles across the diverse regions across Australia.

To learn more, visit the Bureau of Meteorology's Indigenous Weather Knowledge Hub http://www.bom.gov.au/iwk/index.shtml



Remote Swim, Survive and Strive Program Royal Life Saving Northern Territory (NT)

The Remote Swim, Survive and Strive Program (RSSSP) is a community development program that aims to improve quality of life for Aboriginal and Torres Strait Islander people living in remote communities across the NT, the most represented groups in both drowning and poor health statistics.

The program incorporates swimming and water safety lessons for children, community lifesaving carnivals and nationally accredited training in first aid, Bronze Medallion, pool lifeguard and pool plant operator's awards. Nationally recognised AUSTSWIM swimming and water safety teacher training is also offered through the Aboriginal and Torres Strait Islander AUSTSWIM mentoring program.

A significant component of the RSSSP is the establishment of a network of community pools in remote communities throughout the NT. The RSSSP is inter-sectoral in nature, addressing all five areas of the Aboriginal and Torres Strait Islander Advancement Strategy, and has produced tangible results across the whole of community that will provide benefits well into the future. The RSSSP is funded by the Australian Government through the Aboriginal and Torres Strait Islander Advancement Strategy. Key achievements from 2008 - 2020:

- > Over 23,000 children in remote communities have been taught swimming and water safety skills
- > Over 2,000 children have participated in a Pool Lifesaving Carnival
- Approximately 2,000 nationally accredited awards have been gained by Aboriginal and Torres Strait Islander adults in remote communities in the NT
- > 93 Aboriginal and Torres Strait Islander adults have gained or retained employment as a result of accredited training (e.g. first aid and pool lifeguard)





Remoteness

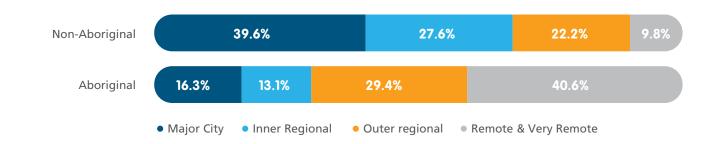
Drowning deaths mostly occurred in locations classified as very remote (31.6%), followed by outer regional locations (29.6%). Combined, over two-thirds (69.7%) of total drowning deaths occurred in outer regional, remote and very remote locations.

In comparison, drowning deaths among non-Aboriginal Australians were more likely to occur in major cities (39.6% vs 16.4%) and inner regional locations (27.6% vs 13.2%). The proportion of drowning deaths that occurred in outer regional, remote and very remote locations were over-represented compared with the size of the population living in those areas:

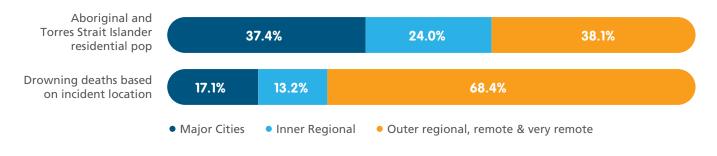


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Drowning deaths of Aboriginal and Torres Strait Islander people vs. non-Aborignal people and remoteness of drowning location, 2008/09 to 2017/18

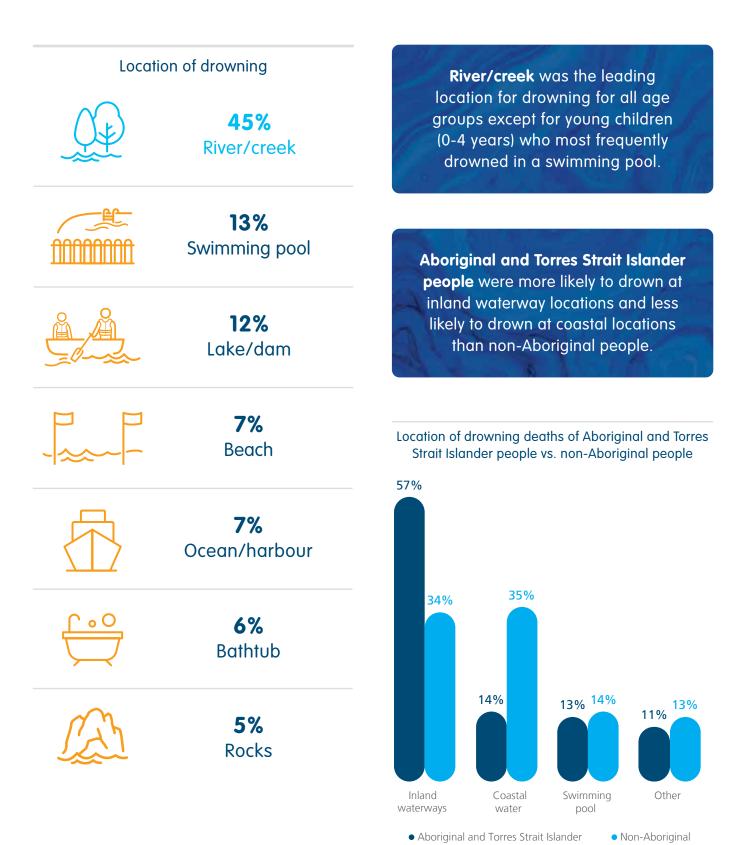


Drowning deaths of Aboriginal and Torres Strait Islander people by remoteness of drowning location and residential population, 2008/09 to 2017/18



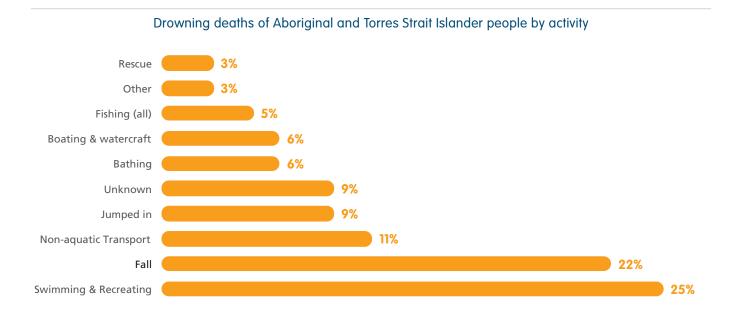
Visitor status

86% lived locally to where they drowned, within the same postcode



The leading activities being undertaken prior to drowning were swimming and recreating, and falls, consistent with non-Aboriginal drowning deaths.

Swimming and recreating was the leading activity for every age group except for children aged 0-4 years and people aged 55 years and over. A similar proportion of drowning deaths occurred when the person intentionally entered the water (e.g., swimming, jumping, diving, bathing), compared with those that occurred when the person did not intend to be in the water (e.g., fall, non-aquatic transport) (44.1% vs 42.8%).



Age group		Location
0-4 Years		50% Swimming pool
5-14 Years		53% River/creek
15-24 Years		46% River/creek
25-34 Years		55% River/creek
35-44 Years		48% River/creek
45-54 Years		50% River/creek
55+ Years	<u>O</u>	59% River/creek

Activity				
	81% Fall			
<u>Sã</u>	71% Swimming & recreating			
<u>Sã</u>	18% Swimming & recreating			
<u>Sã</u>	33% Swimming & recreating			
<u>Sã</u>	30% Swimming & recreating			
<u>Sã</u>	23% Swimming & recreating			
	35% Non-aquatic transport			





45% of Aboriginal and Torres Strait Islander drowning deaths (aged 15+ years) involved **alcohol**

Of which, **82%** recorded a blood alcohol concentration (BAC) ≥ 0.05% (above the legal driving limit)

Overall, **32%** of Aboriginal and Torres Strait Islander adults who drowned recorded a BAC ≥ 0.05%, compared with **24%** of non-Aboriginal adults 28%

28% of Aboriginal and Torres Strait Islander drowning deaths recorded **drugs** present

Of people aged 15 years and over that recorded drugs present, **61%** recorded illegal drugs

Overall, **20%** of Aboriginal and Torres Strait Islander adults who drowned had consumed illegal drugs prior to drowning



36% of Aboriginal and Torres Strait Islander drowning deaths recorded a **pre-existing medical condition**

96% of these were among adults

Swimming ability

- Swimming ability was recorded for 19% of drowning deaths
- Of these, 34% were thought to be competent/good swimmers
- > 17% were thought to be poor swimmers
- The remaining were all were aged 0 to 4 years and non-swimmers

Medical conditions included cardiac conditions, diabetes and epilepsy



Supervision

- Most children who drowned were not being supervised by an adult at the time of drowning
- Some children were being indirectly supervised where parents/carers were in the vicinity of the child but were not within sight of the child

The following table compares key data for States/Territories for a quick comparison.

A detailed breakdown has been provided for Queensland, Northern Territory, New South Wales and Western Australia which have the highest proportion of Aboriginal and Torres Strait Islander drowning deaths.

No drowning deaths among Aboriginal and Torres Strait Islander people were recorded in ACT during the study period.

The remaining States/Territories recorded very small numbers of drowning deaths and have not been shown to respect the confidentiality of those who have drowned.

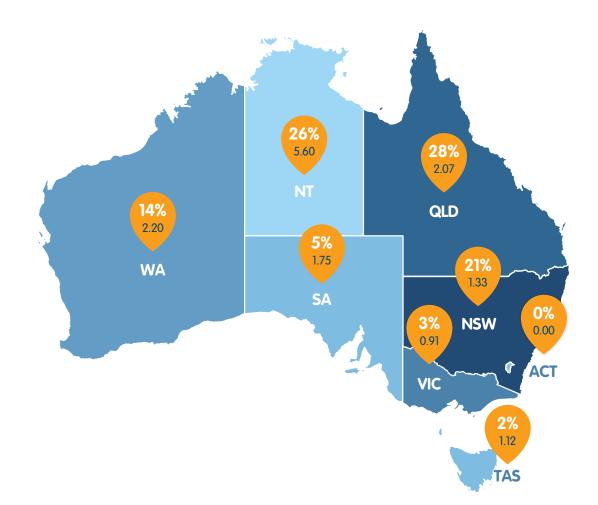


This table compares key data for States/Territories for a quick comparison.

- *NA: No one clear leading age/location/activity
- *Swimming: Swimming and recreating
- *Rivers: Includes river, creek

*NAT: Non-aquatic transport

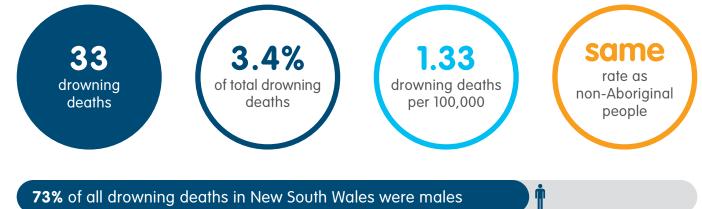
STATE/TERRITORY	Ν	PERCENT	RATES /100,000	MALE	FEMALE	LEADING AGE GROUP
NSW	33	22	1.33	73	27	30% 0-4 years
NT	40	26	5.60	85	15	25% 25-34 years
QLD	43	28	2.07	74	26	21% 0-4 years
SA	7	5	1.75	43	57	29% 35-45 years
TAS	3	2	1.12	100	0	67% 35-45 years
VIC	5	3	0.91	80	20	40% 55+ years
WA	21	14	2.20	76	24	24% 0-4 years
Total	152	100	2.02	76	24	17% 0-4 years



Three quarters of all Aboriginal and Torres Strait Islander drowning deaths occurred in Queensland (QLD) (28%), the Northern Territory (NT) (26%) and New South Wales (NSW) (21%).

2ND AGE GROUP	LEADING LOCATION	LEADING ACTIVITY	2ND ACTIVITY	ALCOHOL (15YEARS+)	PRE-EXISTING MEDICAL CONDITION
24% 15-24 years	36% River	27% Fall	NA*	58%	27%
18% 35-44 years & 18% 45-54 years	60% River	30% Swimming	20% NAT	71%	37%
21% 45-54 years	51% River	37% Swimming	30% Fall	67%	37%
29% 45-54 years	29% Beach	43% Swimming	29% Bathing	43%	57%
NA*	67% Ocean/ harbour	57% Boating	NA*	33%	0%
NA*	40% River	NA*	NA*	0%	80%
19% 25-34 years	38% River	38% Fall	14% Swimming	78%	29%
17% 45-54yrs	45% River	25% Swimming	22% Fall	45%	36%





73% of all drowning deaths in New South Wales were males

309	%	3%	24%	3%	15%		12%		12%	
• 0-4 years	• 5 - 14 years	• 15 - 24 years	• 25-34 Years	• 35-	44 Years	• 45-	54 Years	• 5	5 years+	

91% drowned within their home postcode area 21% in the Hunter Region 33% in major cities

60% in Summer & Autumn (30% each)



27% in the evening





Age group	Location	Activity
0-4 Years	60% Swimming pool	60% Fall
5-14 Years	100% Lake/dam	100% Boating
15-24 Years	37.5% River/creek	Various
25-34 Years	100% Bathtub	33% Bathing
35-44 Years	60% River/creek	Various
45-54 Years	50% River/creek	50% Fishing
55+ Years	75% River/creek	Various

Risk factors for drowning

- > Alcohol consumption (32% BAC≥0.05%)
- Presence of drugs (33% total, 4% illegal drugs)
- Presence of a pre-existing medical condition (55%)
- > Lack of supervision by a responsible adult

Compared to non-Aboriginal drowning deaths

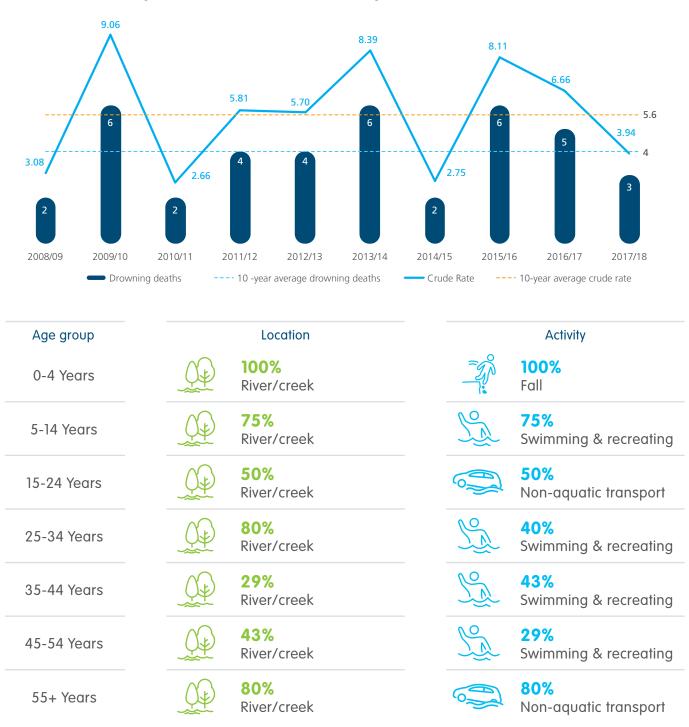
- A higher proportion of Aboriginal and Torres Strait Islander children aged 0-4 years (30% vs 7%) and people aged 15-24 years (24% vs 3%) drowned
- Aboriginal and Torres Strait Islander drowning deaths were more likely to occur at inland waterways (49% vs 34%)
- Non-Aboriginal people were more likely to drown at coastal locations (32% vs 3%)



58%

in the afternoon

80% drowned within 10km of their home48% in the Darwin Region50% in very remote locations



Aboriginal and Torres Strait Islander drowning deaths in NT, 2008/09 to 2017/18

Risk factors for drowning

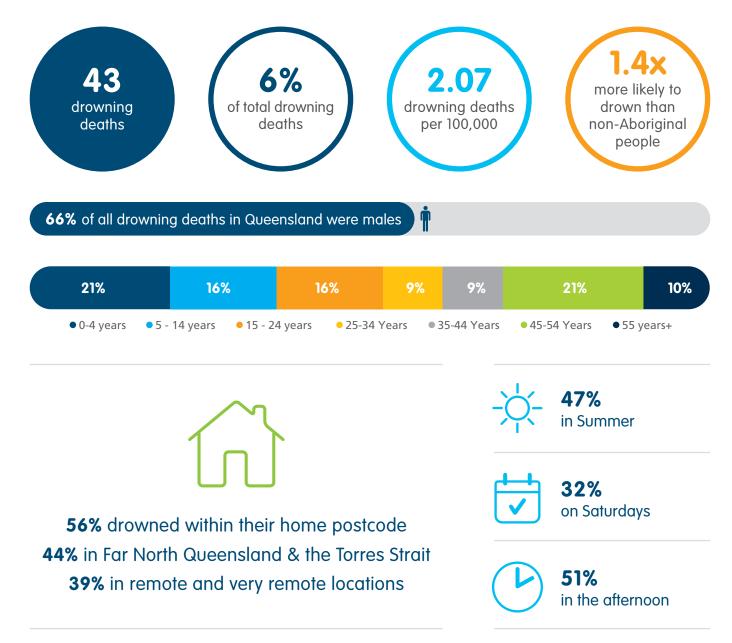
- > Alcohol consumption (57% BAC≥0.05%)
- Presence of drugs
 (23% total, 2% illegal drugs)
- > Unintentional entry into water (35%)

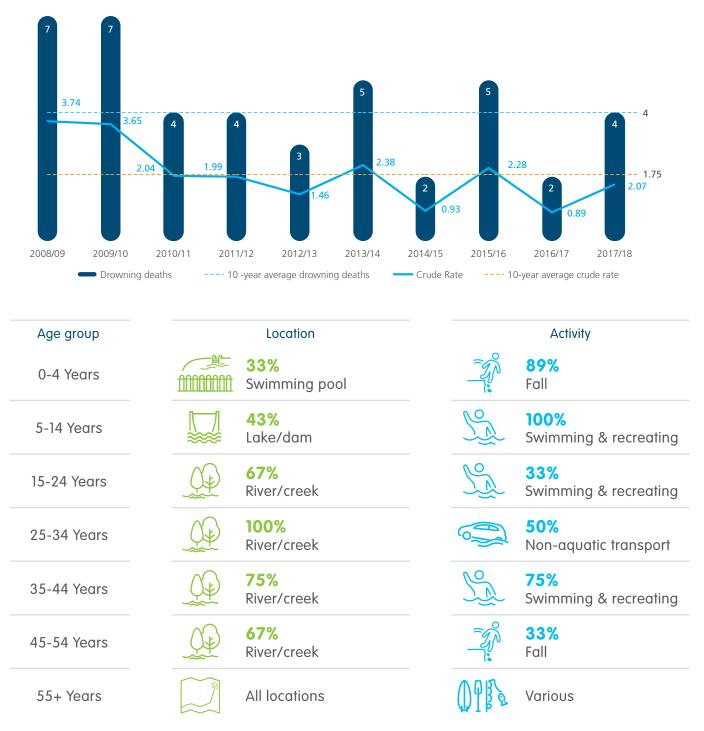
Compared to non-Aboriginal drowning deaths

- > A lower proportion of Aboriginal and Torres Strait Islander children (0-4 years) drowned than non-Aboriginal children (3% vs 12%)
- Aboriginal and Torres Strait Islander drowning deaths were more likely to occur at inland waterways (70% vs 33%)
- More Non-Aboriginal drowning deaths occurred in swimming pools (29% vs 3%) and coastal locations



Source: Richard Franklin





Aboriginal and Torres Strait Islander drowning deaths in QLD, 2008/09 to 2017/18

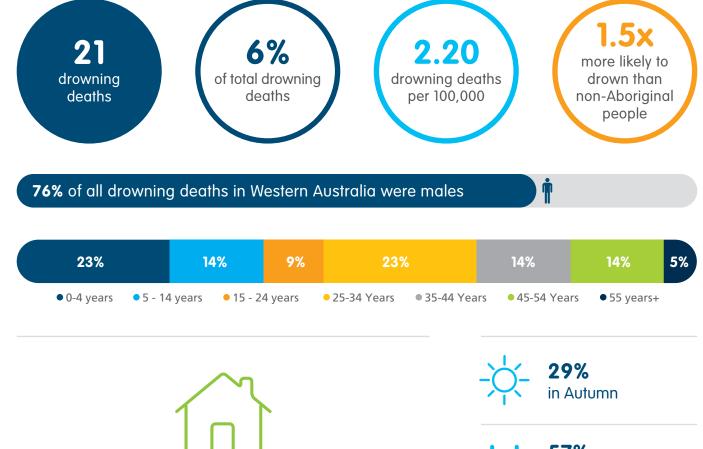
Risk factors for drowning

- > Alcohol consumption (48% BAC≥0.05%)
- Presence of drugs (21% total, of which 44% recorded illegal drugs)
- Presence of a pre-existing medical condition (37%)
- > Poor/no swimming ability

Compared to non-Aboriginal drowning deaths

- A higher proportion of Aboriginal and Torres Strait Islander children aged 0-4 years (21% vs 12%) and people aged 45-54 years (21% vs 11%) drowned
- Aboriginal and Torres Strait Islander drowning deaths were more likely to occur at inland waterways (68% vs 42%)
- More Non-Aboriginal drowning deaths occurred at coastal locations (32% vs 12%)





95% drowned within their home postcode47% in the Kimberley Region52% in very remote locations

57% mid-week (Tues/Wed/Thurs)

52% in the afternoon

Aboriginal and Torres Strait Islander drowning deaths in WA, 2008/09 to 2017/18



Age group	Location	Activity
0-4 Years	80% Swimming pool	100% Fall
5-14 Years	100% River/creek	Various
15-24 Years	50% Lake/dam	? 100% Unknown
25-34 Years	50% Lake/dam	50% Swimming & recreating
35-44 Years	67% River/creek	67% Other
45-54 Years	67% River/creek	33% Fall
55+ Years	All locations	Various

Risk factors for drowning

- > Alcohol consumption (33% BAC≥0.05%)
- Presence of drugs (33% total, of which 57% recorded illegal drugs)
- Presence of a pre-existing medical condition (29%)
- > Unintentional entry into water (48%)
- > Lack of supervision by a responsible adult

Compared to non-Aboriginal drowning deaths

- A higher proportion of Aboriginal and Torres Strait Islander children aged 0-4 years (23% vs 9%) drowned
- Aboriginal and Torres Strait Islander drowning deaths were more likely to occur at inland waterways (57% vs 18%)
- More Non-Aboriginal drowning deaths occurred at coastal locations (45% vs 10%)



> Age

Children 0-4 years old and adults aged 35-54 years recorded the highest rates of drowning. This suggests that tailored strategies for each age group may be required, to make an impact, and should be designed by the community.

Children 0 to 4 years

Prevention strategies should be specific to child safety around swimming pools and unintentional falls into water. In addition, these strategies should include tailored supervision messages that involve the wider family, including specific roles. These strategies should be informed by the community.

Adults aged 35 to 55 years

Prevention efforts should focus on river safety awareness and messaging to convey the impact of alcohol, and medical conditions on a person's ability to participate in aquatic activities safely.



> Inland waterways

Over half of all drowning deaths among Aboriginal and Torres Strait Islander people occurred at inland waterways. Rivers were the leading location across all age groups, except children aged 0 to 4 years. These findings may suggest regular participation at river locations, and may be in areas where access to public pools and home pools are limited.

This also highlights the need for increased awareness of environmental factors specific to inland waterways, such as depth of water, sudden drop-offs, cold water, currents, submerged objects, and water visibility and are often unpatrolled. Rivers and waterways have an important role in Aboriginal culture. Incorporating Aboriginal and Torres Strait Islander perspectives and knowledge of Country is important for greater effectiveness and strategies focusing on inland waterways.

This report identifies key age groups, locations, and risk factors for drowning prevention. These findings are not necessarily unique to other injury trends among Aboriginal and Torres Strait Islander communities. However, prevention approaches may be different and need to be carefully considered within the wider cultural, social and environmental context such as:

- > Family, kinship and community
- > Indigenous beliefs and knowledge
- > Cultural expression and continuity
- Indigenous language
- > Self-determination and leadership
- Connection to Country

Aboriginal and Torres Strait Islander people accounted for 5% of total drowning deaths during the study period, despite accounting for only 3% of the Australian population. However, this report highlights a 47% reduction in rates in overall drowning rates among Aboriginal and Torres Strait Islander people over the 10year study period. The lowest drowning rate of 1.09 was recorded in the last year of this study (2017/18) compared with 2.06 at the start of the study period (2008/09).

School-aged children (5 to 14 years) recorded the lowest drowning rates overall, which may reflect the concentrated effort and resources directed at reducing drowning among school-aged children. The case studies in this report highlight a commitment to improving drowning, water safety, and swimming outcomes for Aboriginal and Torres Strait Islander people, particularly among children. These findings support the need for continued efforts to embed knowledge and skills from a young age to encourage a lifetime of safe participation.



> Remote locations

At a national level, there is an over-representation of people drowning in regional and remote areas, compared with the proportion of Aboriginal and Torres Strait Islander population that live in these regions. Most drowning deaths in this study occurred in rural and remote locations close to their home, which has a direct impact on the community.

This emphasises the importance of understanding local community issues and providing relevant solutions to local problems. Remote locations are areas often a distance away from medical assistance, may have limited access roads and be without mobile phone reception. This means that it can take longer to raise the alarm and for rescue and emergency services to arrive. Community training in first aid and cardiopulmonary resuscitation (CPR) skills could increase skills and knowledge of community members, empowering people to assist in drowning and other emergencies.



> Alcohol

This study found that 45% of people recorded levels of alcohol over the legal limit for driving, compared with 24% for non-Aboriginal people. Alcohol not only affects balance, coordination and judgement, but can increase risk of child injury such as impacting on supervision and the ability to help in an emergency.

The impacts of alcohol consumption are far reaching in remote communities and Aboriginal and Torres Strait Islander population groups and go beyond drowning risk. Drowning prevention efforts focusing on reducing alcohol consumption can contribute to broader health and wellbeing outcomes.

Alcohol-related drowning prevention messages should be incorporated into broader injury prevention and community health promotion programs that are codesigned by the community, taking into account the local context.

Future implications

This analysis of fatal drowning shows that children (aged 0 to 4 years) and adults aged 35 to 54 years are at most risk of drowning. This provides the opportunity to take an intergenerational approach to water safety by involving whole families and communities in water safety programs rather than focusing on key messages for separate age groups.

Taking a broader health and well-being approach, and promoting swimming and water safety in a fun and positive manner, may be more effective when engaging with communities. Alignment to National or State/Territory Aboriginal and Torres Strait Islander health strategies or plans should be considered to continue the progress made in reducing drowning among Aboriginal and Torres Strait Islander communities. This ensures that programs take a holistic approach which can provide multiple benefits.

The new National Agreement on Closing the Gap provides clear direction and targets that drowning prevention and water safety strategies can align to. In addition, recognition of the cultural determinants of health [6] should be incorporated into any drowning and health promotion strategy. ____

Examples of how drowning prevention and water safety initiatives can be aligned to the Closing the Gap Objectives and Targets (July 2020)

Closing the Gap (July 2020)	Objectives and Targets	Examples of how drowning prevention strategies can align to these objectives
	Outcome 4 - Aboriginal and Torres Strait Islander children thrive in their early years Target 4 - By 2031, increase the proportion of Aboriginal and Torres Strait Islander children assessed as developmentally on track in all five domains of the Australian Early Development Census (AEDC) to 55 per cent	Water familiarisation programs for children aged 0 to 4 years and their families/carers that achieve physical, mental and social development milestones, and promotes positive family interaction. Ensure access to programs for families and communities.
	Outcome 5 - Aboriginal and Torres Strait Islander students achieve their full learning potential Target 5 - By 2031, increase the proportion of Aboriginal and Torres Strait Islander people (age 20-24) attaining year 12 or equivalent qualification to 96 per cent.	Water safety programs for secondary students that include formal qualifications that contribute to educational outcomes e.g. first aid courses. Swimming and water safety programs can be used as incentives for school attendance and retention.
Image: Construction of the second sec	Outcome 6 – Aboriginal and Torres Strait Islander students reach their full potential through further education pathways Target 6 - By 2031, increase the proportion of Aboriginal and Torres Strait Islander people aged 25-34 years who have completed a tertiary qualification (Certificate III and above) to 70 per cent.	Promote vocational pathways through the Aquatic Industry e.g. Pool Lifeguard, AUSTSWIM swimming and water safety teacher qualifications. Enhance strategies that improve access to culturally appropriate vocational training opportunities with flexible delivery models
	Outcome 7 - Aboriginal and Torres Strait Islander youth are engaged in employment or education Target 7 - By 2031, increase the proportion of Aboriginal and Torres Strait Islander youth (15-24 years) who are in employment, education or training to 67 per cent	Swimming pools, and water safety programs provide educational and employment opportunities in communities; pool lifeguards, supervisors/managers, pool plant operators, swimming and water safety teachers. E.g. Talent Pool program in WA is addressing this.

Closing the Gap Objectives and Targets (July 2020)

Outcome 8 - Strong economic participation and development of Aboriginal and Torres Strait Islander people and communities Target 8 - By 2031, increase the proportion of Aboriginal and Torres Strait Islander people aged 25-64 who are employed to 62 per cent	 Increase employment opportunities in the Aquatic Industry for Aboriginal and Torres Strait Islander people nationwide. Through the following: workforce development organisational policy in relation to commitment towards increasing the proportion of of Aboriginal and Torres Strait Islander staff
Outcome 14 - Aboriginal and Torres Strait Islander people enjoy high levels of social and emotional wellbeing Target 14 - Significant and sustained reduction in suicide of Aboriginal and Torres Strait Islander people towards zero	Develop and provide culturally safe programs that provide opportunities for social and emotional growth, including gender specific, positive spaces to enhance physical, mental, social and spiritual health. Improve access to swimming and water safety programs and swimming pools, to facilitate positive social and emotional health and well- being outcomes for Aboriginal and Torres Strait Islander peoples.
Outcome 15 - Aboriginal and Torres Strait Islander people maintain a distinctive cultural, spiritual, physical and economic relationship with their land and waters Target 15b - By 2030, a 15 per cent increase in areas covered by Aboriginal and Torres Strait Islander people's legal rights or interests in the sea	Drowning prevention and water safety programs should incorporate learning about Aboriginal and Torres Strait Islander connections with the land and water. Developing relationships and working with land managers to build capacity and empowerment within their communities in lifesaving, first aid skills.
Outcome 16 - Aboriginal and Torres Strait Islander cultures and languages are strong, supported and flourishing Target 16 - By 2031, there is a sustained increase in number and strength of	Water safety education resources developed by, and for, Aboriginal and Torres Strait Islander people.

Target 16 - By 2031, there is a sustained increase in number and strength of Aboriginal and Torres Strait Islander

languages being spoken

Examples of how drowning prevention strategies can align to these objectives

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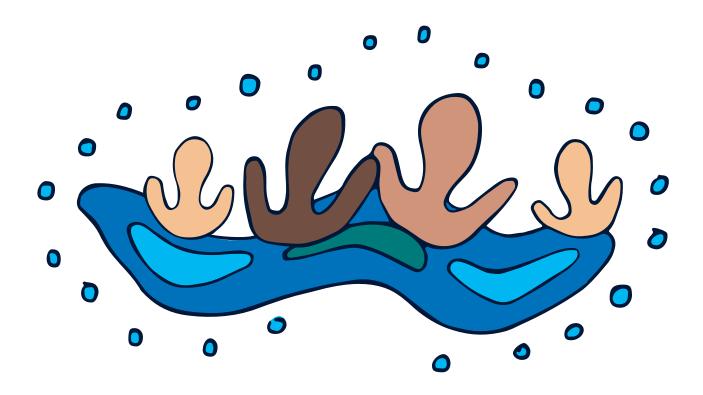
OPPORTUNITIES FOR ENGAGEMENT

Developing and implementing drowning prevention and water safety initiatives provides opportunities for greater engagement and learning between the aquatic industry and Aboriginal and Torres Strait Islander communities.

It is important to acknowledge that challenges may arise when developing and implementing strategies, which may be navigated by:

- Ensuring that programs and services are developed and delivered in partnership with local Aboriginal and Torres Strait Islander people
- Ensuring that programs and services are culturally appropriate, including the provision of a diverse workforce that includes Aboriginal and Torres Strait Islander staff
- > Understanding that accessing remote Aboriginal communities can take time (in terms of planning and delivery as well as gaining approval from Aboriginal and Torres Strait Islander communities)
- Acknowledging that program delivery in remote locations can be resource intensive, both from a staffing and financial perspective, and provides opportunities to build capacity in Aboriginal and Torres Strait Islander communities

- Involve community leaders and Aboriginal and Torres Strait Islander organisations to ensure that programs are relevant, sustainable and can achieve real outcomes that are valued by everyone
- Respecting cultural commitments and traditions, even if this results in the interruption of programs
- Incorporating cultural connections to water and stories into programs, which are rarely considered as part of swimming and water safety program content
- Advocating to State/Territory and local governments to recognise the value of swimming pools in remote communities in improving health and social outcomes among remote Aboriginal and Torres Strait Islander people



ALL OUR WATERWAYS – JILALGA MURRAY

This contemporary Aboriginal artwork was created by Jilalga Murray for Royal Life Saving Western Australia to help with their ongoing journey to 'Reconciliation'. Royal Life Saving WA and Jilalga have kindly allowed Royal Life Saving Society – Australia to showcase this beautiful artwork throughout this report.

Here, Jilalga explains what her artwork means in the context of the WA environment.

It is a creative celebration, to remind everyone that their work around water safety is very important to the lives of all West Australians and visitors to our wonderful state.

My artwork sends a message, that "we must all be respectful of where we live, work and play." It features important contemporary symbols which I've created for everyone to feel part of this all-encompassing WA story.

Firstly, the bold organic symbols joined at the base of the work represent important women's and men's cultural sites which are in close proximity to the RLSSWA headquarters in Crawley, on Whadjuk Boodjar. The area for women's business is on the left, while the men's site features on the right. Customs, and laws were practiced here on healthy fertile lands over many thousands of years, the Wadjuk people were able to live and prosper. Fresh water flowed, and people travelled all around this special area, enjoying a bountiful life where everyone was healthy and happy. I pay respects to the First Nation people of this area.

Central to the artwork, you can see the Derbal Yirrigan (The Swan River) winding its way across the land lifting everyone's spirits. This represents fresh flowing water being accessible to everyone. I also feel that everyone can gain from the act of Reconciliation. Yes, the journey can seem up and down at time, but it's important to keep flowing, goodness will be felt by all.

Rivers, waterholes, dams and swimming pools bring people together. Across the artwork I show a variety of body shapes, skin shades, people of different ages, with varying swimming capabilities, all enjoying water. It's a beautiful happy image which captures good energy and one that respectfully celebrates our diversity. Yes, everyone can truly enjoy 'All Our Waterways."

> About Jilalga Murray

Jilagla Murray of JILALGA DESIGNS is a proud urban Nyangumarta and Yorta Yorta woman who has lived on Whadjuk Boodjar land for over 10 years. Her mother's family originates from the Pilbara, and are Nyangumarta people.

Her father's family is from the Riverina region in NSW and Victoria (Yorta Yorta/ Wamba Wamba). Both connections give her the gift of creating striking and diverse paintings, where vibrant colours merge with her deep respect for Country and give her individual expression as an urban Aboriginal woman living a modern Australian life.







The Remote Aboriginal Swimming Pools Project (RASP) Royal Life Saving WA

Swimming pools in remote Aboriginal communities have significant roles to play in reducing many of the challenges faced by these groups including social and emotional health and wellbeing issues, poorer health, lack of community cohesion, high rates of school absenteeism and unemployment.

The Remote Aboriginal Swimming Pools Project (RASP) in Western Australia (WA) was started in 2000 to address these challenges and now works with eight remote communities in the north-west of WA (Balgo, Bidyadanga, Burringurrah, Fitzroy Crossing, Jigalong, Kalumburu, Warmun and Yandeyarra). Employed pool managers live and work in the communities for nine months each year to deliver safe, efficient and effective aquatic facilities and programs.

The program is managed by Royal Life Saving Society WA and funded by the Housing Authority and BHP Billiton. The eight community pools are located in communities within the Gascoyne, Pilbara and Kimberley regions in the north-west of WA, with populations ranging from between 150 and 700 primarily Aboriginal residents. All exhibit great diversity with uniquely ingrained history, cultural practice and language groups that cement local identity. Each community has high rates of acute and chronic illness with local health services providing a number of individual and community preventive health programs.

The project aims to:

work in consultation with remote Aboriginal communities to run safe, efficient, and effective aquatic facilities and to meet the needs and expectations of the communities.

For more information and success stories https://royallifesavingwa.com.au



Objectives

- Deliver practical water safety programs in remote Aboriginal communities
- Provide, support and encourage safe participation within aquatic facilities
- Promote community support and patronage of swimming pools

Key outcomes

- Increased participation and pool attendance
- Increased swimming and water safety skills
- Health benefits as assessed by improved hygiene, improved health and wellbeing, increased levels of physical activity, and improved nutrition
- Social benefits as determined by decreased crime and anti-social behaviour, improved social cohesion, and increased employment and training opportunities

Next steps - ongoing

- Advocate for more swimming pools to be built in remote Aboriginal communities
- Encourage greater engagement with local communities and groups
- Create more local employment opportunities within swimming pools



RECOMMENDATIONS



> Partnership

- Strengthen partnerships and engage with agencies, e.g. Aboriginal Community Controlled Health Organisations, at a local level to ensure strategies are developed and implemented in a culturally appropriate, locally relevant manner.
- Acknowledge and recognise the deep connection Aboriginal and Torres Strait Islander peoples across Australia have with the land and water. Stronger recognition of this aspect within programs should occur by working with local communities to incorporate this knowledge into water safety education design and delivery.
- Implement cultural training and educational activities for non-Aboriginal organisations looking to work in partnership with Aboriginal and Torres Strait Islander communities to ensure that those engaged in relevant positions have the understanding and capacity to successfully partner.



> Research

- Improve drowning data pertaining to Aboriginal and Torres Strait Islander peoples, including non-fatal drowning data, to understand the full burden of drowning.
- Support Aboriginal and Torres Islander-led and community engaged research in line with National Guidelines, e.g. National Health and Medical Research Council Guidelines for Researching with Aboriginal and Torres Strait Islander Peoples and Communities.
- Align to other health and injury prevention strategies for a holistic approach to enhancing Aboriginal and Torres Strait Islander health and wellbeing, e.g. road safety.
- Evaluate the effectiveness of relevant campaigns, programs and services pertaining to Aboriginal and Torres Strait Islander peoples.





> Policy

- Develop policies and promote pathways for training, employment and leadership roles within the aquatic industry and beyond to reflect the local community and increase community participation
- Develop culturally appropriate strategies and programs with Aboriginal and Torres Strait Islander communities
- Align drowning prevention strategies with other strategies and policy documents to support a holistic approach to enhance Aboriginal and Torres Strait Islander health and well-being, e.g. Closing the Gap objectives, Aboriginal and Torres Strait Islander Advancement Strategy.
- Royal Life Saving Society Australia should develop an organisational Reconciliation Action Plan for engaging and working with Aboriginal and Torres Strait Islander communities
- Ensure inclusive employment policies relating to Aboriginal and Torres Strait Islander people to ensure workforce diversity
- Develop and enhance existing policies that increase access to, and include, Aboriginal and Torres Strait Islander people in swimming and water safety education programs



> Advocacy

- Advocate for drowning prevention to be included within the child health agenda
- Advocate for sustainable funding to increase access to programs and aquatic infrastructure in remote locations



> Practice

- Increase access to culturally appropriate drowning prevention and water safety programs and services for Aboriginal and Torres Strait Islander people
- Continue to increase awareness and promotion of the dangers of drinking alcohol in and around aquatic environments, tailored to all high-risk populations
- Create awareness of 'child-safe' play areas in rural and remote locations that have access to inland waterways
- Develop programs with Aboriginal and Torres Strait Islander communities to best meet the needs of specific communities
- Strengthen community capacity, e.g. by providing first aid courses, and training pool managers, and lifeguards, in order to create long term sustainability for local aquatic facility operation
- Identify community champions for injury and drowning prevention and water safety

NEXT STEPS

This study highlights that drowning prevention and water safety programs for Aboriginal and Torres Strait Islander communities need to be continued, especially for families with young children.

It is important that future strategies and programs acknowledge that wider social and cultural determinants of health influence drowning risk for an individual, their family and the community as a whole. Many initiatives already successfully address drowning and water safety within a holistic model, as shown by the case studies in this report. However, it is important to continue increasing cultural awareness and diversity within the aquatic sector to ensure effective and appropriate program delivery for these communities.

While this study provides an analysis of fatal drowning, gaps exist in relation to national non-fatal drowning data and qualitative research. Further research with Aboriginal and Torres Strait Islander research partners is required to better understand the full burden of drowning among Aboriginal and Torres Strait Islander peoples across Australia, and to identify the most appropriate, effective and successful solutions.

Despite the decreasing trend in drowning deaths, it is clear that more needs to be done to reduce the impacts of drowning among Aboriginal and Torres Strait Islander communities.

Water safety and drowning prevention programs provide opportunities to build upon and contribute to broader health outcomes, and address social disadvantage experienced by Aboriginal and Torres Strait Islander people. Future drowning prevention and water safety strategies need to be developed and implemented in partnership with community-based organisations to ensure effective and marked progress in the next 10 years.



Based on the findings of this report, the following plan of action is proposed:

- Develop stronger relationships at a national level between the Royal Life Saving Society – Australia and Aboriginal and Torres Strait Islander researchers, health agencies and community leaders to address the gaps in knowledge and practice
- Increase engagement between swimming and water safety program providers and Aboriginal and Torres Strait Islander communities to promote leadership, encouraging local empowerment, and create pathways to build more resilient communities
- Review current initiatives and establish key learnings and best practice within the sector, in partnership with Aboriginal and Torres Strait Islander communities and organisations
- Seek advice on convening a National Aboriginal and Torres Strait Islander water safety forum, or appropriate sessions at a State/Territory or local level
- Develop a Reconciliation Action Plan for Royal Life Saving Society - Australia
- Recognise Aboriginal and Torres Strait Islander populations as a priority population in the Australian Water Safety Strategy 2030, and identify appropriate short, medium and longterm goals to reduce drowning by 2030

METHODS

All unintentional, fatal drowning deaths in Australian waterways of people who identified as Aboriginal or Torres Strait Islander between 1 July 2008 and 30 June 2018 were included. All unintentional fatal drowning deaths during the study period were checked against the National Coronial Information System (NCIS), including cases where Aboriginal status was unknown to ensure accuracy, unknown cases were not included in this analysis. No individuals have been identified and all results have been aggregated to prevent potential identification of any person. Reporting of Aboriginal and Torres Strait Islander status was updated by the NCIS in early 2020, and now includes information from the Births, Deaths & Marriages register which was used to identify relevant cases for inclusion. Gaps in data and inaccuracies in reporting of Aboriginal and Torres Strait Islander status may be present due to reliance on coronial files.

An all year-round media monitoring service was used to identify drowning deaths reported in the media, which were then corroborated with information sourced from ethical access to the NCIS, State/Territory Police Services. Data was also cross-checked with State/Territory offices where appropriate.

All care is taken to ensure that the information is as accurate as possible. Please note that the figures from more recent financial years may change depending on the outcomes of ongoing coronial investigations and findings. This report contains information correct as at 28 February 2020. As of this date, 94.6% of cases were closed (i.e., no longer under coronial investigation).

Drowning deaths known to be as a result of suicide or homicide, deaths from natural causes, shark and crocodile attack, or hypothermia where known have been excluded from the data. All information presented is about drowning deaths or deaths where drowning was a factor.

Data analysis

The age-adjusted rates of drowning were calculated based the on the Australian Bureau of Statistics (ABS) population estimates and projections for Aboriginal and Torres Strait Islander people, to 2031, which were released in July 2019 [24]. Population projections were used as the current census data (up to 2016) does not provide age, sex or regional breakdowns by State/Territory and covered the entire study period. The authors acknowledge that there are limitations in using population projections. Calculating non-Aboriginal population rates was based on the methods recommended by the ABS currently used for national reporting purposes.[24]

Data analysis by State/Territory was reported as a percentage rather than raw numbers for ethical reasons; numbers were very small and otherwise may have made it possible for people to be identified. Reporting percentages allowed for comparison. Data were analysed using IBM SPSS Version 24.

Definitions

Definitions and terms are consistent with those used in Australian Water Safety Strategy 2016-2020 [5] and the Royal Life Saving Society – Australia's Drowning Database Definition Manual:

- Remoteness classification: used for both drowning and residential location, based on postcode and defined using the Australian Standard Geographical Classification – Remoteness Area (ASGC-RA) system.
- 2. Time of drowning: Coded into four bands: early morning (12:01am to 6am), morning (6:01am to 12pm), afternoon (12:01pm to 6pm) and evening (6:01pm to 12am).
- 3. Activity: The primary activity the person was undertaking immediately prior to the drowning incident, causing the drowning victim to be in, on, or near water.
- 4. Alcohol relevance: A blood alcohol concentration (BAC) greater than or equal to 0.05g/mL (0.05 grams of alcohol per 100 millilitres of blood) was noted when it was considered relevant and contributory to the drowning death. For the purposes of this report, alcohol relevance was reported for people aged 15 years and over.
- 5. Drugs: This includes illicit drugs such as cannabis and methamphetamine, cocaine and ecstasy were (i.e., illegal drugs), and legal drugs such as prescribed and over-the-counter medications.
- 6. Swimming ability: Was sourced from coronial or police reports where provided and based on a description of family/friends' perception of their ability. Swimming ability was grouped as: non-swimmer, poor swimmer or a good swimmer.
- Supervision: This is noted for drowning incidents involving children aged 0 to 4 years, as limited information was available on supervision reported in drowning deaths of children aged five and older.
- 8. Inland waterways. This includes rivers/creeks/streams and lakes/dams/lagoons
- 9. Coastal waterways. This includes beach and ocean/ harbour
- 10. Swimming pool. This includes All pools including public and home pools
- 11. Other Locations. This includes bathtubs/spa bath and rocks

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Alison Mahony, Royal Life Saving Society - Australia Royal Life Saving is focused on reducing drowning and promoting healthy, active and skilled communities through innovative, reliable, evidence-based advocacy, strong and effective partnerships, quality programs, products and services, underpinned by a cohesive and sustainable national organisation.

Royal Life Saving is a public benevolent institution (PBI) dedicated to reducing drowning and turning everyday people into everyday community lifesavers. We achieve this through advocacy, education, training, health promotion, aquatic risk management, community development, research, sport, leadership and participation, and international networks.

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