
AUSTRALIAN WATER SAFETY STRATEGY 2016-2020



**TOWARDS A
NATION FREE FROM
DROWNING**

AUSTRALIAN WATER SAFETY COUNCIL

Background

The Australian Water Safety Council (AWSC) is deeply committed to drowning prevention in Australia and is a collective voice for Australia's leading water safety organisations.

The Council acts as a consultative forum comprising of the major water safety and related government agencies and focuses on the presentation of key water safety issues to governments, industry and the community.

The Australian Water Safety Council is committed to improving water safety in Australia as demonstrated through the production and implementation of four National Water Safety Plans/Strategies. These documents have generated bipartisan support for water safety in Australia and have seen the improvement of water safety throughout the country.

The Australian Water Safety Council member bodies continue to demonstrate their commitment to water safety by directing resources of their respective organisations towards the development and implementation of the Australian Water Safety Strategy.

Members

Royal Life Saving Society - Australia (RLSSA)
Surf Life Saving Australia (SLSA)
Australasian Council for the Teaching of Swimming and Water Safety (AUSTSWIM)
Australian Leisure Facilities Association (ALFA)
Australian Local Government Association (ALGA)
Australian National Sports Fishing Association (ANSFA)
Australia New Zealand Safe Boating Education Group (ANZSBEG)
Australian Swimming Coaches & Teachers Association (ASCTA)
Divers Alert Network (DAN) Asia-Pacific
Farmsafe Australia
Surfing Australia
Swimming Australia Limited (SAL)
The Child Accident Prevention Foundation of Australia (Kidsafe)

Contact

Justin Scarr

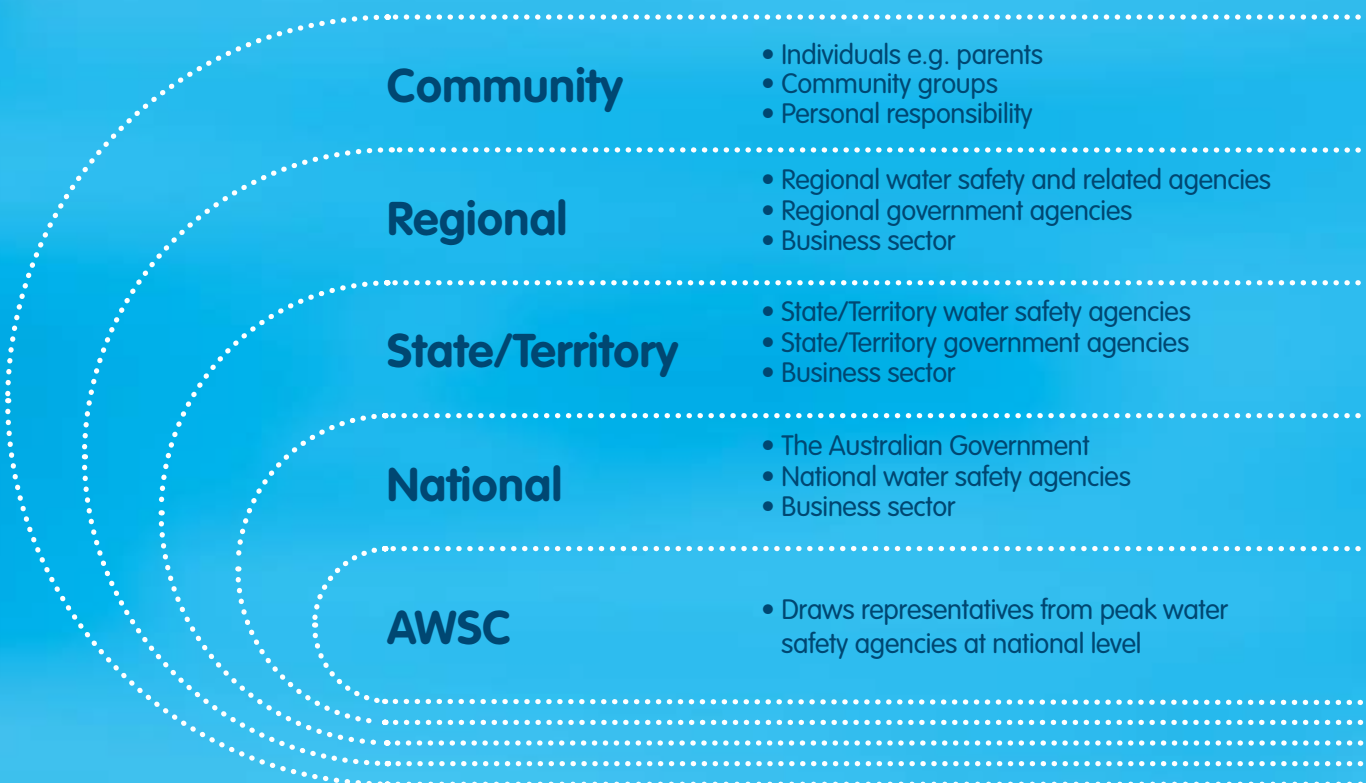
Convenor, Australian Water Safety Council
Chief Executive Officer, Royal Life Saving Society - Australia
PO Box 558, Broadway NSW 2007
Phone: (02) 8217 3111 Fax: (02) 8217 3199
Email: jscarr@rlssa.org.au
www.watersafety.com.au

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The Australian Water Safety Strategy 2016-2020 working group consists of: Justin Scarr, Amy Peden, Nathan Hight, Anthony Bradstreet, Alison Mahony and Jared Wilson.

Figure 1: Australian Water Safety Strategy 2016-20 stakeholder map



AUSTRALIAN WATER SAFETY STRATEGY 2016-2020

Foreword by Minister	4
Introduction	5
Reducing Drowning Deaths by 50% by 2020 – Maintaining Focus and Commitment	6
Progress Report – towards the aspirational goal of a 50% reduction in drowning by 2020	7
Non-Fatal Drowning: Acknowledging the Full Burden of Drowning	8
Drowning Prevention Pillars	9
Priority Area One - Taking a Life Stages Approach	11
GOAL 1: Reduce Drowning Deaths in Children Aged 0-14	12
Key Objectives	13
GOAL 2: Reduce Drowning Deaths in Young People Aged 15-24	14
Key Objectives	14
GOAL 3: Reduce Drowning Deaths in Males Aged 25-64	15
Key Objectives	15
GOAL 4: Reduce Drowning Deaths in People Aged 65+	16
Key Objectives	17
Priority Area Two - Targeting High-Risk Locations	19
GOAL 5: Reduce Drowning Deaths in Inland Waterways	20
Key Objectives	21
GOAL 6: Reduce Drowning Deaths in Coastal Waters	22
Key Objectives	23
GOAL 7: Reduce Drowning Deaths by Strengthening the Aquatic Industry	24
Key Objectives	24
Priority Area Three - Focusing on Key Drowning Challenges	27
GOAL 08: Reduce Alcohol- and Drug-Related Drowning Deaths	28
Key Objectives	29
GOAL 09: Reduce Boating, Watercraft and Recreational Activity Related Drownings	30
Key Objectives	31
GOAL 10: Reduce Drowning Deaths in High-Risk Populations	32
Key Objectives	33
GOAL 11: Reduce the Impact of Disaster and Extreme Weather on Drowning Deaths	34
Key Objectives	35
State and Territory Fatal Drowning Data Profiles	37
Australian Capital Territory (ACT)	37
New South Wales (NSW)	37
Northern Territory (NT)	38
Queensland (QLD)	38
South Australia (SA)	39
Tasmania (TAS)	39
Victoria (VIC)	40
Western Australia (WA)	40
Drowning Data Methodology	41
Glossary of Key Terms and Acronyms	42
References	43
Appendix One: Developing the Strategy 2016-20	44
Appendix Two: Australian Water Safety Strategy Framework	45
Appendix Three: National Water Safety Education Competency Framework	46
Past Contributors	47

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Australian Government

Foreword by Minister

In Australia, we are lucky to have access to some of the world's most beautiful beaches and waterways, and our ability to embrace and enjoy the outdoors, is what helps make this country great.

But for many the water can bring tragedy and sorrow, each year too many Australians drown. This is why we are committed to water safety and educating Australians about the risks associated with our coastlines and inland waterways.

The Australian Water Safety Strategy 2016-2020 is the result of detailed analysis of drowning data and interventions and strong collaborations across the drowning prevention sector. The Australian Government remains committed to the Australian Water Safety Council target of reducing drowning by 50 per cent by 2020.

The Strategy identifies eleven goals where action is required to reduce drowning. Advocacy, research, collaboration, safe venues, workforce, policy and education are all areas where the AWSC believes progress can be made.

This Strategy reinforces the need to work with those most at risk of drowning. These groups often include people living in rural and remote communities, indigenous Australians and people from diverse cultural backgrounds.

The Strategy includes a new key goal focusing on men aged between 25 and 64, who are over-represented in the current drowning statistics. The inclusion of detailed data and objectives regarding key goals, emphasises the ongoing commitment of the Australian Water Safety Council to ensure all people are safe on our shores, in our waterways and in our pools.

I encourage all Australians to be aware of the dangers of water and take steps to ensure they remain safe.

I commend the Council and all involved in the development of this Strategy.



The Hon Sussan Ley MP

Minister for Health, Minister for Aged Care, Minister for Sport



Introduction

On behalf of the Australian Water Safety Council (AWSC), I am pleased to present to you the Australian Water Safety Strategy 2016-2020 - Towards a Nation Free from Drowning.

The Strategy is the outcome of a detailed analysis of drowning data and interventions, strong collaboration across the drowning prevention sector and is driven by a strong commitment to achieving the goal of reducing drowning by 50% by 2020.

The Strategy provides a framework spanning three priority areas of; Taking a Life Stages Approach, Targeting High-Risk Locations, and Focusing on Key Drowning Challenges. Several goals have been adjusted to reflect areas where further progress must be made.

The Strategy identifies eleven goals where action is required to reduce drowning. Progress in each of the Goals is underpinned by activities described in the Strategy as drowning prevention pillars. Advocacy, research, collaboration, safe venues, workforce, policy and education are all areas where the AWSC believes progress can be made.

The Strategy recognises that drowning is often non-fatal, with many people and families impacted by drowning incidents that leave lifelong impacts on a person's health, social and economic outcomes.

The Strategy also reinforces the need to work with those most at risk of drowning. These groups often include people living in rural and remote communities, indigenous Australians and people from diverse cultural backgrounds.

The AWSC recognises that in order to achieve the goal of reducing drowning by 50% by 2020, partnerships must extend to State and Territory Water Safety Councils, and in many cases to targeted communities through location specific drowning prevention plans as evident in the Coastal and Inland Waterway blackspot programs being implemented by Surf Life Saving Australia and Royal Life Saving Society – Australia respectively.

In recent years the notion of National Water Safety Plans has taken on a new global significance. In 2014, the World Health Organisation released the first Global Report on Drowning, which calls upon all nations to develop national water safety plans as providing a basis for raising drowning prevention awareness, increasing multi-sectoral cooperation, setting targets and improving evidence based drowning prevention efforts.

In launching the Global Report on Drowning, Dr Margaret Chan, Director-General World Health Organization stated that "The multi-sectoral nature of drowning prevention demands improved coordination across various agendas and sectors". The Australian Water Safety Strategies puts Australia in a strong position relative to other nations, but we must not be complacent.

The Australian Government's commitment to the Australian Water Safety Strategy is extremely important. This support reinforces our strong collaboration and commitment to working together to reduce drowning and promote the safe use of our waterways.

We are a population adept in a diverse range of aquatic pursuits and water safety is a unique part of the Australian way of life. Often our water safety work creates lifelong skills and increases the health and social wellbeing of the Australian Community.

As we commence the implementation of this Strategy, and with less than four years until 2020, the AWSC urges all organisations across the drowning prevention sector to increase their commitment to the goals within the Strategy. Still, too many people and families are impacted by drowning. Through this strategy, let's recommit ourselves to the ideals of a nation free from drowning.

Justin Scarr
Convenor
Australian Water Safety Council



Reducing Drowning Deaths by 50% by 2020

Maintaining Focus and Commitment

In 2008, the Australian Water Safety Council (AWSC) established an ambitious aspirational goal of achieving a 50% reduction in drowning deaths by the year 2020. Since 2008, Australia has experienced a concerning increase in drowning deaths across the range of demographics, locations and activities. While in most years, the number of drowning deaths has remained under 300, unfortunately in 2008-09 more than 300 people died as a result of drowning and in 2009-10, 303 drowning deaths were recorded.

The current 10-year average (Figure 2) for fatal drowning in Australia stands at 284 deaths per year, which equates to a rate of 1.31 fatal drownings per 100,000 population. Looking at the data for 2004/05 to 2006/07, although the rate has decreased marginally against the 10-year average (1.39 to 1.31) no reduction has been achieved in drowning deaths when evaluating the 10-year average against the baseline.

The AWSC conducted a National Drowning Prevention Summit in August 2014. The major recommendations of that summit were:

- Maintain the original aspirational goal to achieve a 50% reduction by 2020
- Maintain the existing framework used within the Australian Water Safety Strategy 2012-15
- Streamline goals and objectives to add focus in critical areas

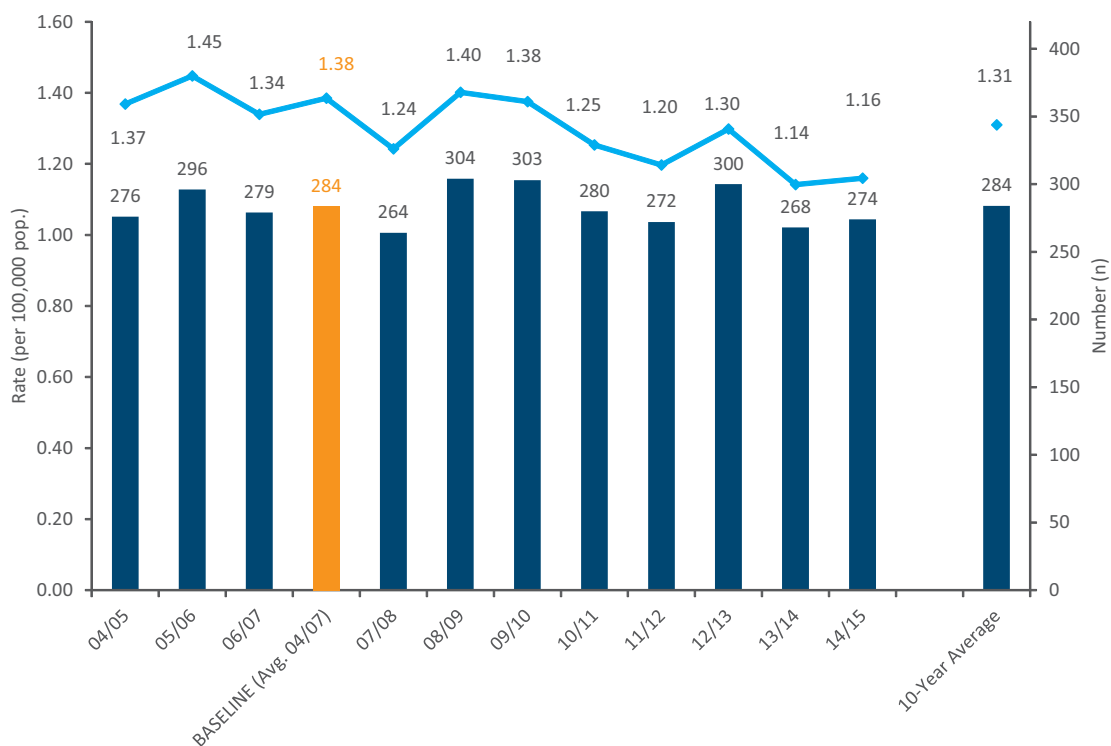
The Australian Water Safety Strategy (AWSS) 2016-2020 reflects the recommendations of the summit and provides clear objectives under existing goals to give the drowning prevention and water safety sector the best chance of achieving a 50% reduction in drowning by the year 2020 when this strategy will end.

Three Key Drivers for Drowning Reduction

In the AWSS 2016-20, the AWSC maintains a focus on the three key drivers to achieve the reduction aimed for in the AWSS 2012-15.

- Taking a life stages approach
- Targeting high-risk locations
- Focusing on key drowning challenges

Figure 2: Drowning deaths and drowning death rates per 100,000 population, Australia (2004/05 to 2014/15), 10-Year Average



Progress Report – Towards the aspirational goal of a 50% reduction in drowning by 2020

While the number of drowning deaths remains unacceptably high in Australia, progress is being made in some key priority areas. Figure 3 outlines the progress made against the goals of the AWSS 2012-2015 with respect to fatal drowning rates in Australia against the 2004/07 baseline.

Goal		2004/07 Yearly Average	2020 Target	2014/15	Progress Report	
1	Reduce drowning deaths in children aged 0-14	0-4 years	35	18	26	Of High Concern
		5-14 years	16	8	9	On Track
2	Reduce drowning deaths in young people aged 15-24	34	17	23	Of Some Concern	
3	Reduce drowning deaths in males aged 25-64	124	62	127	Of High Concern	
4	Reduce drowning deaths in people aged 65+	45	23	59	Of Some Concern	
5	Reduce drowning deaths at inland waterways	101	51	100	Of High Concern	
6	Reduce drowning deaths in coastal waters	108	54	116	Of High Concern	
7	Reduce drowning deaths by strengthening the aquatic industry	5	3	5	Of Some Concern	
8	Reduce alcohol- and drug-related deaths	115	58	57	Of High Concern*	
9	Reduce boating, watercraft and recreational activity related drownings	76	38	90	Of High Concern	
10	Reduce drowning deaths in high-risk populations	72	36	60	Of High Concern	
11	Reduce the impact of disaster and extreme weather on drowning deaths	9	5	13	Of Some Concern	

Figure 3: Progress report against goals of AWSS 2016-2020 as at 2014/15

*Determination made due to quality of available data.

** Baseline is calculated as a three-year average from 2004/05 to 2006/07.

Note: Data for the new/revised goals of people aged 65+, males aged 25-64 and coastal locations have been sourced from historical data from the Royal Life Saving National Fatal Drowning Database.

Non-Fatal Drowning: Acknowledging the Full Burden of Drowning

In 2005, a new definition for drowning was proposed by van Beeck et al. This definition defined drowning as “the process of experiencing respiratory impairment from submersion/immersion in liquid.”¹ Drowning outcomes should be classified as: death, morbidity, and no morbidity. It was also recommended that terminology such as wet, dry, active, passive, silent and secondary drowning should no longer be used.

The prevention of fatal drowning is only one part of the sector’s role. The extent of non-fatal drowning has not been well-documented, but hospitals and other health facilities have publicly reported a significant number of non-fatal drownings among young children.

Our understanding of the non-fatal burden and ratio of fatal to non-fatal burden is being refined. National injury data for 2012-13 shows that there were 544 people hospitalised for a non-fatal drowning², which based on 300 fatal drownings recorded for the same period³, equates to a national ratio of 1:1.8 fatal to non-fatal drownings.

Research released by Wallis et al in 2015 examined fatal and non-fatal drowning among children aged 0-19 years in Queensland. This research identified a drowning death to survival ratio of 1:10, with two out of three of those who survived having been admitted to hospital.⁴

The impact of a non-fatal drowning is traumatic to individuals, families, communities and health sectors. Individuals and their families deal with the persisting, and sometimes catastrophic, neurological impairments of non-fatal drowning for the rest of their lives. The AWSS 2016-20 identifies the issue of the prevention of both fatal and non-fatal drowning in relevant goals.

Samuel Morris: Shining a light on non-fatal drowning

Samuel Morris was a bright and happy cuddly little two-year-old until 9 April 2006 when he had a non-fatal drowning in the family’s backyard pool. Through extraordinary efforts of rescuers and medical staff, Samuel survived this tragic accident, albeit with a severe hypoxic brain injury and a range of severe disabilities.

Samuel’s injuries meant that he required a range of equipment and ongoing therapy. Most of the equipment that Samuel and children like him need is very expensive and the waiting lists to receive the equipment can be up to two years long.

Samuel’s parents, together with Samuel himself, worked with the drowning prevention community to advocate for the importance of child drowning prevention strategies such as active adult supervision.

As time progressed, their true contribution was helping the community to understand the full impact of drowning. Although it has taken time, the AWSC believes an increased focus on those who survive drowning is vital to efforts to prevent drowning in Australia.

Sadly, Samuel lost his battle in 2014, some seven years after his non-fatal drowning. His parents continue their work to advocate for those who experience non-fatal drowning and promote awareness of the issue to the general community through the Samuel Morris Foundation.

Drowning Prevention Pillars

Drowning Prevention Pillars are the supporting activities which will play a key role in the achievement of the goals of the AWSS 2016-20, as well as the overarching goal of a 50% reduction in drowning by the year 2020.

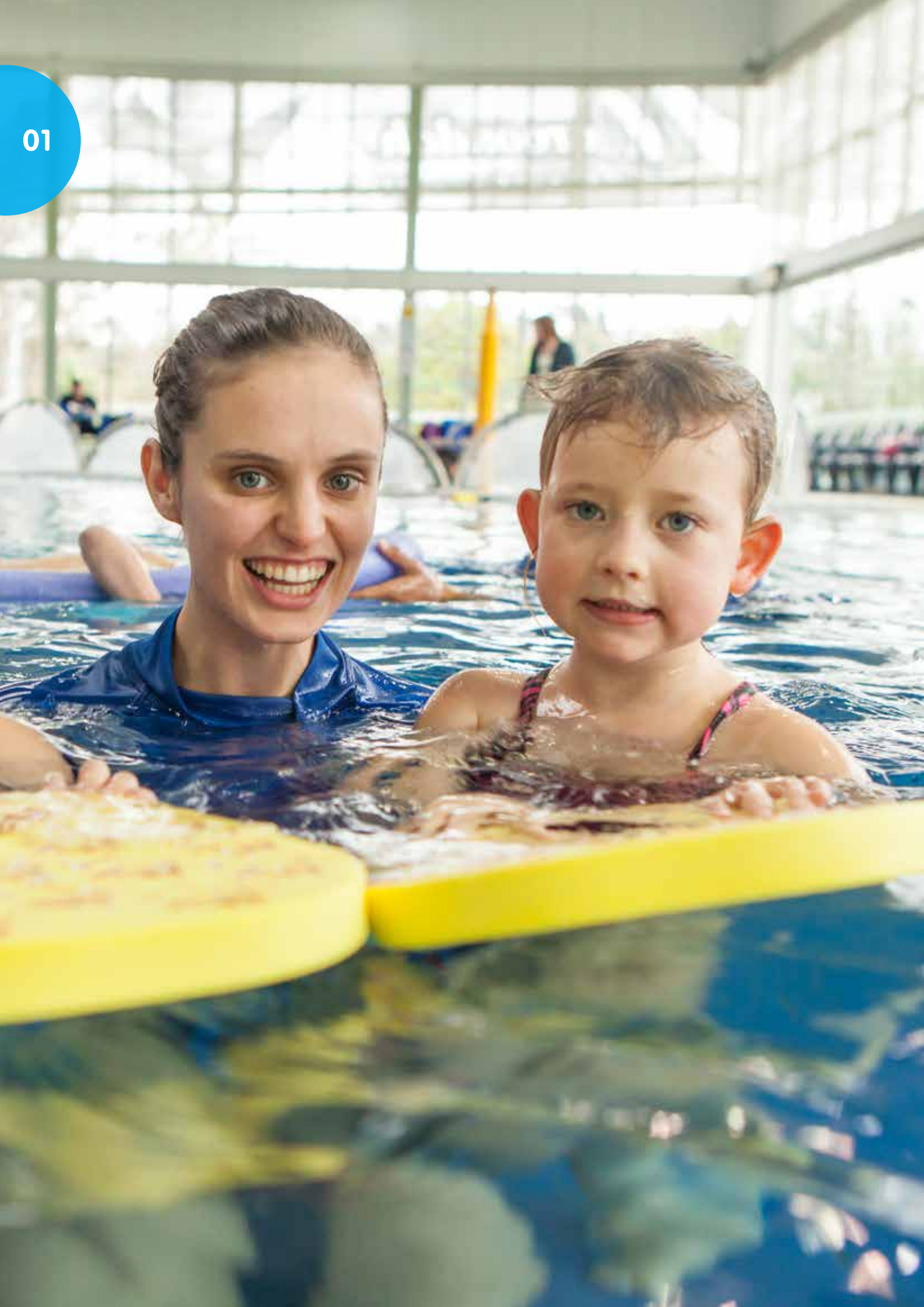
The Drowning Prevention Pillars are identified in Figure 4, described in Figure 5 and are outlined at the beginning of each priority area.



Figure 4: Drowning Prevention Pillars

Drowning Prevention Pillars	Description
1. Advocacy	The promotion of drowning prevention issues and strategies to the community, policy makers and government in a bid to increase awareness of the issue and further prevention efforts.
2. Research	Drowning prevention programs, policies and practices must be grounded in evidence-based research that clearly identifies the epidemiology and risk factors associated with a specific drowning prevention issue or area. Monitoring and evaluation is also vital to determine those successful interventions.
3. Collaboration	Collaboration within and outside the drowning prevention sector is vital, including collaboration across state and territory jurisdictions, and even internationally, to ensure best practice is enacted and efficiencies adopted.
4. Safe Venues	Safe venues are vital to achieving meaningful and sustained reductions in the Australian drowning death toll. They have a role to play as venues where people of all ages and skill levels can enjoy the aquatic environment in a supervised and controlled setting such as a public pool. They are also appropriate locations for the provision of basic swimming and water safety skills and knowledge that provide a lifetime of safer aquatic participation. Safe venues may also encapsulate signage and public rescue equipment.
5. Workforce	A skilled and passionate drowning prevention workforce is key to the implementation of a range of drowning prevention strategies. Safe venues also rely on a skilled workforce to ensure safety for all users.
6. Policy	Policy that links to evidence-based research, and is adequately communicated and enforced, can strongly assist in drowning prevention efforts. Examples include swimming pool legislation that has enforced the use of pool fencing which is a known strategy for reducing drowning among young children.
7. Education	Education is vital to increase awareness, skill and knowledge of controlled and open water environments to reduce the risk of drowning. Education mechanisms that are reinforced throughout the strategy include key life stages, parents, school education, vocational training, and public awareness including local, state and federal government sectors.

Figure 5: Drowning Prevention Pillars and descriptions



PRIORITY AREA ONE

TAKING A LIFE STAGES APPROACH

Taking a life stages approach has been a key driver of the Australian water safety strategies since 2008 and provides the framework for the first priority area. Life stages are used to differentiate between complex drowning risk factors and exposure to hazards based on age. These risk and exposure factors vary throughout a person's life based on a number of factors including geographic location and exposure, and are aligned with physical, emotional, social and developmental stages.

By profiling drowning across the life stages, understanding the risk, hazard exposures and protective factors inherent at each stage, drowning prevention strategies can be highly customised. Analysis of drowning data has allowed drowning profiles to be identifiable for each of the life stages.

Figure 6 displays drowning deaths by age and number across all age groups. The table shows clearly the burden of drowning among the key life stages: children aged 0-14 years (15% of all drowning deaths); young people aged 15-24 years (12%); males aged 25-64 years (44%); and people aged 65 years and over (19%).

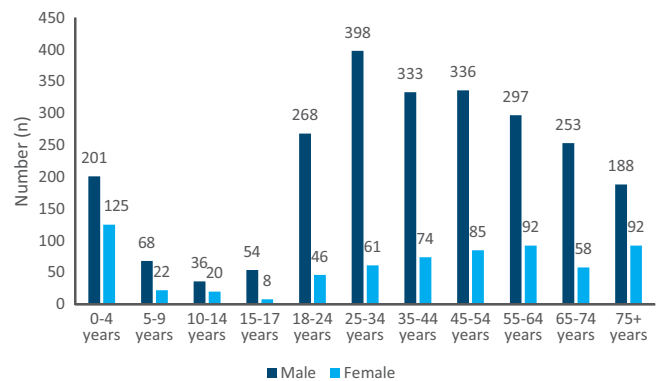


Figure 6: Age group breakdown of drowning deaths by sex, Australia (2004/05 to 2014/15)

In order to achieve a significant reduction in the number of drowning deaths, this first priority area focuses on four key life stages: children aged 0-14 years; young people aged 15-24 years; males aged 25-64; and people aged 65 years and over. This section targets key life stages, rather than trying to cover the whole life span.

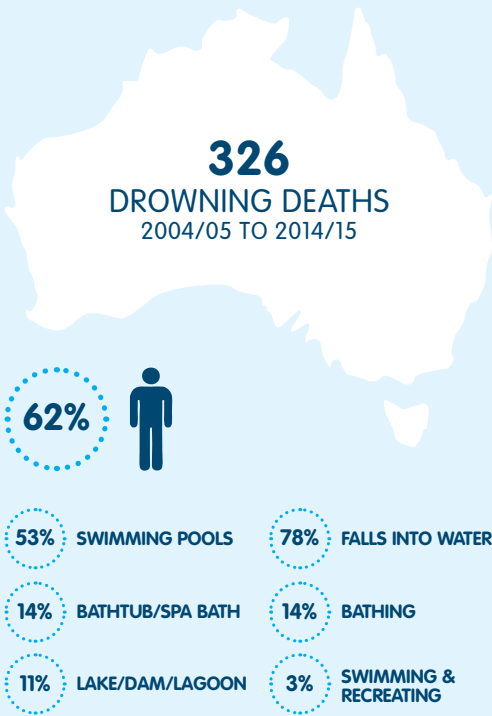
Drowning Prevention Pillars	Description
1. Advocacy	Advocacy considerations may include engaging with individuals at risk due to age (or parents and supervisors of young children) with respect to communicating risk factors and strategies for prevention.
2. Research	Research informs prevention strategies and can identify emerging issues – such as the focus within the AWSS 2016-20 regarding increasing understanding of the burden of non-fatal drowning, particularly in young children.
3. Collaboration	Collaboration within and across sectors is vital to ensure consistency of messaging and to avoid duplication. An increasing area of collaboration is among organisations focused on the reduction of drowning among young children. Collaboration with other preventative health sectors, such as falls prevention for older people, should be explored to leverage work already done within this cohort.
4. Safe Venues	Safe venues are key to the provision of swimming and water safety activities for children as well as a controlled and safe environment for older people to recreate or test out skills and fitness prior to recreating at open waterway locations.
5. Workforce	Liaison with and motivation of the diverse workforce involved with drowning prevention across the lifespan is also vital to the effective design and implementation of strategies. This may range from preschool teachers, to swimming and water safety teachers, public swimming pool operators, local, state and federal governments and the media.
6. Policy	Legislation at a state and territory level with respect to the strengthening of pool fencing legislation has in part contributed to a reduction in the number of young children drowning in home pools. Opportunity for legislative reform should be considered where it may be relevant to achieving reductions in drowning across other life stages.
7. Education	Education and training considerations include public awareness of the importance of active adult supervision of young children around water, the role of alcohol in drowning, the importance of lifejackets, skill and fitness limitations and active adult supervision as well as resuscitation training among many others.

Figure 7: Drowning Prevention Pillars and descriptions for priority area one



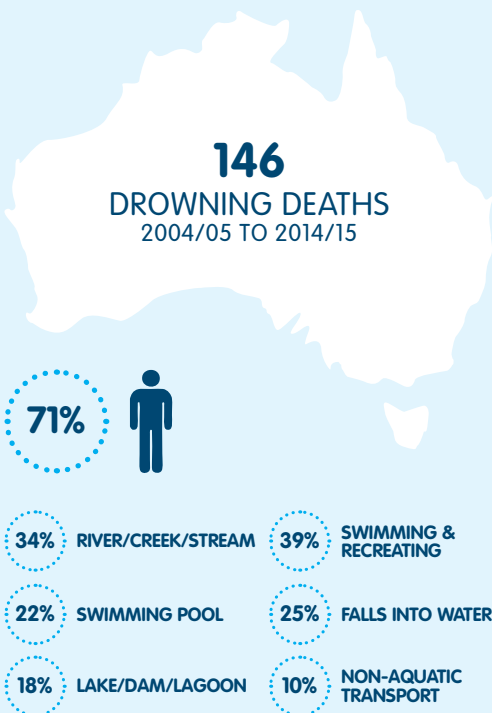
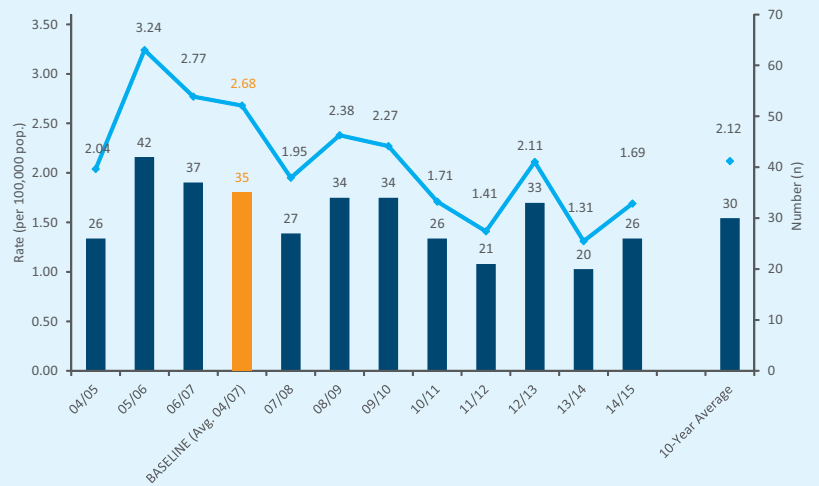
GOAL 01

REDUCE DROWNING DEATHS IN CHILDREN AGED 0-14



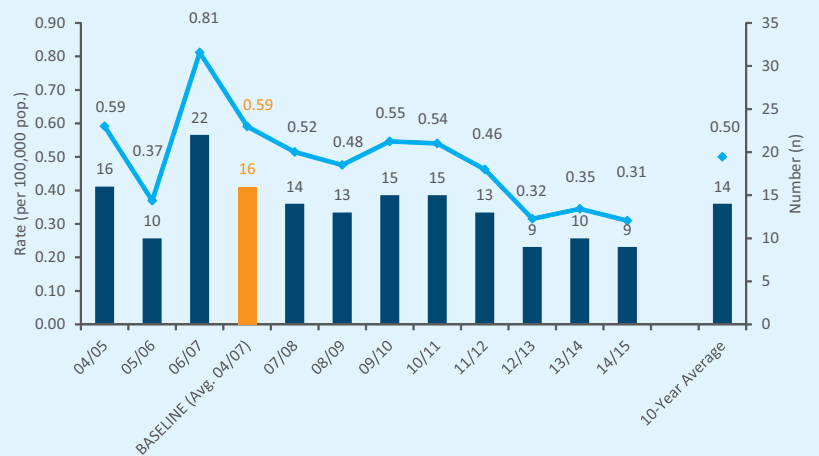
CHILDREN 0-4 YEARS

Figure 8: Drowning deaths and rates per 100,000 population, children aged 0-4 years (2004/05 to 2014/15), 10-year average



CHILDREN 5-14 YEARS

Figure 9: Drowning deaths and rates per 100,000 population, children aged 5-14 years (2004/05 to 2014/15), 10-year average



KEY OBJECTIVES

Focus on children aged 0-4 years

i. Strengthen child drowning prevention programs that raise awareness of the importance of adult supervision, pool fencing, water familiarisation and Cardio-Pulmonary Resuscitation (CPR)

The number of child drowning prevention programs has increased in recent years, such that stakeholders have expressed a need for standardisation of messaging to avoid confusion. Evidence reinforces the importance of the core preventative actions of adult supervision, pool fencing, water familiarisation and CPR skills. The AWSC resolves to create and promote standardisation of messaging and to facilitate collaboration across program providers.

ii. Increase local and state government-based systems that ensure compliance and enforcement of four-sided pool fencing

Queensland and New South Wales are the latest states to join Western Australia and Northern Territory in strengthening their pool fencing legislation and compliance programs. Evidence clearly supports the importance of compliant swimming pool fencing as a means of preventing drowning. However, reports also show relatively low rates of compliance. The AWSC continues to encourage state and territory governments to strengthen legislation, and acknowledges the role of local government in promoting and enforcing compliance.

iii. Promote community-wide rescue and resuscitation skills

Child survival and long-term outcomes are enhanced by prompt resuscitation following an immersion. It is usually provided by a parent, neighbour or community member. International resuscitation guidelines reinforce the importance of expired air resuscitation in a drowning emergency, particularly in that of a child. Australia enjoys relatively high levels of community skill in CPR and first aid compared with other countries in the region. The AWSC continues to advocate community-wide CPR skills, particularly for parents of children, pool owners, childcare workers and teachers.

iv. Focus attention on the full burden of children drowning, including non-fatal drowning and impacts on families

AWSC stakeholders point to the urgent need to consider the full burden of drowning in the community, including that experienced by children who survive an immersion and live with lifelong health, social and economic impacts. This consideration extends from research, prevention actions and service provision to the child and family. This perspective extends to the needs of families who have lost a child or relative to drowning.

v. Promote secure safe play areas on farms, rural residential properties and recreation parks

Safe play areas have been shown to prevent child injury in rural settings, and their use has been advocated to people living on rural properties where dams and other water bodies pose a significant risk to children.⁵ Coronial recommendations have also pointed to their use in recreational parks. The AWSC advocates their promotion, as well as increased partnership with groups promoting safe play areas as a means to reduce child injury.

Focus on school-aged children 5-14 years

vi. Promote compulsory swimming and water safety education for school-aged children to parents, schools, industry and policy makers

Swimming and water safety skills have been shown to reduce the risk of drowning, prompting the World Health Organization (WHO) to recommend teaching all school-aged children basic swimming, water safety and safe rescue skills.⁶ Australia has had a long history in the provision of such programs through school, vacation and private swim school programs. Consistent with past AWSS, the AWSC recommends benchmarks (see Appendix 3) for primary and secondary school-aged children, and encourages parents, schools and policy makers to prioritise swimming and water safety education for all children.^{7,8}

vii. Create and evaluate systems to benchmark children's survival swimming skills

Various studies have attempted to benchmark and evaluate swimming and water safety skills in school-aged children.^{9,10,11,12} These programs have sought to assess the proportion of children leaving primary school with adequate basic swimming and water safety skills, as well as identify any measureable differences across states, program formats and cultural groups. The AWSC recommends that benchmarking systems are created and evaluated in order to enhance policy decision making, identify children at risk and evaluate effectiveness of existing programs.



YOUNG PEOPLE
15-24

GOAL 02

REDUCE DROWNING DEATHS IN YOUNG PEOPLE AGED 15-24

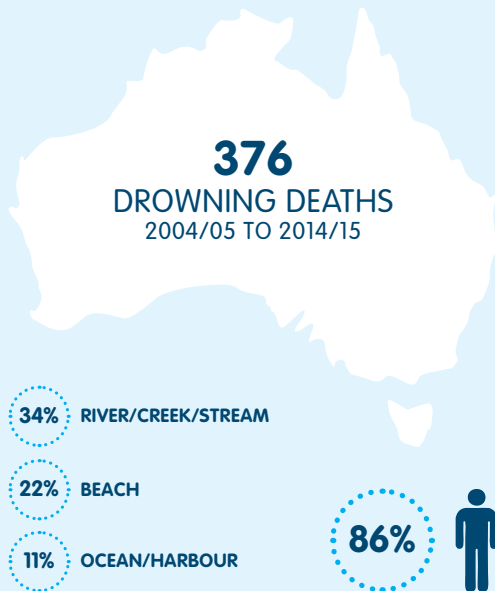
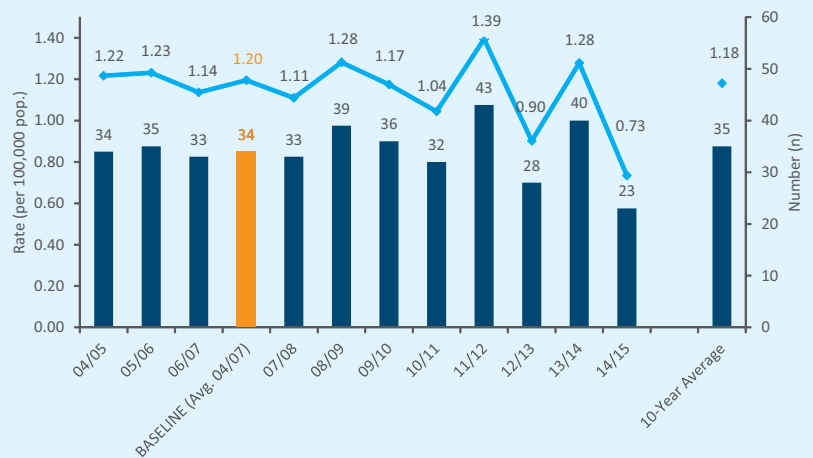


Figure 10: Drowning deaths in young people aged 15-24 years in Australia, number and rate per 100,000 population, Australia, (2004/05 to 2014/15), 10-year average



KEY OBJECTIVES

i. Target risk-taking behaviours in young people, particularly the use of alcohol and other drugs while boating or swimming in unpatrolled beaches, rivers and backyard swimming pools

Risk-taking behaviours, often involving alcohol and other drugs, are known to be significant factors in drowning incidents involving young people. Many such cases occur well away from the supervision of lifeguards or parents, at unpatrolled beaches, rivers or in backyard swimming pools.¹³ While some programs have been developed targeting these behaviours, the AWSC encourages further interventions as well as partnerships with groups targeting this age group seeking similar preventative outcomes.

ii. Promote participation in lifesaving education programs during secondary school years and through community groups working with young people

Encouraging rescue and CPR skills during the secondary school years will ensure there are more people in the community with the skills and knowledge to assist in the circumstances of a drowning emergency. Research into drowning fatalities in the late adolescent and early years of adulthood points to drowning victims recreating with their peers rather than in the protective bounds of their families.¹³ Encouraging participation in lifesaving education programs has the benefit of teaching valuable skills and knowledge that may have an impact on safe aquatic participation among themselves and those they recreate with throughout their lives.

iii. Continue to conduct research into the underlying risk factors for drowning and measure the effectiveness of programs targeting drowning prevention in young people

While dedicated research has been conducted into the epidemiology and risk factors for drowning among children aged 0-19 years,¹³ further examination of the causal factors for drowning in early adulthood is required. Research should consider both the use of coronial quantitative data as well as undertaking qualitative research among people (particularly males) in the 15-24 years age group. Prevention strategies based on accurate research and implemented across the AWSC membership will be more likely to be effective in reducing the drowning burden among this age group.



GOAL 03

REDUCE DROWNING DEATHS IN MALES AGED 25-64

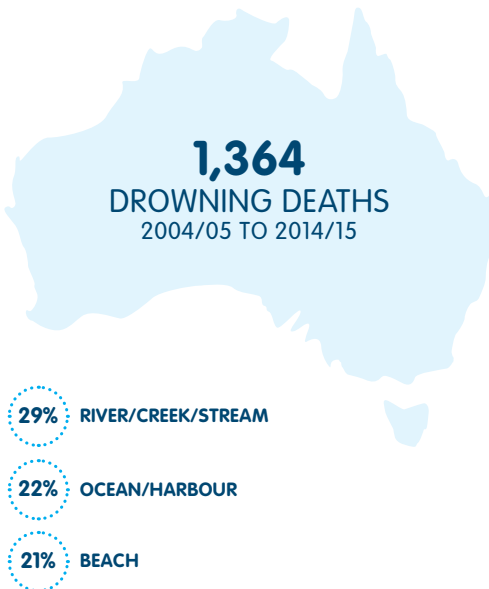
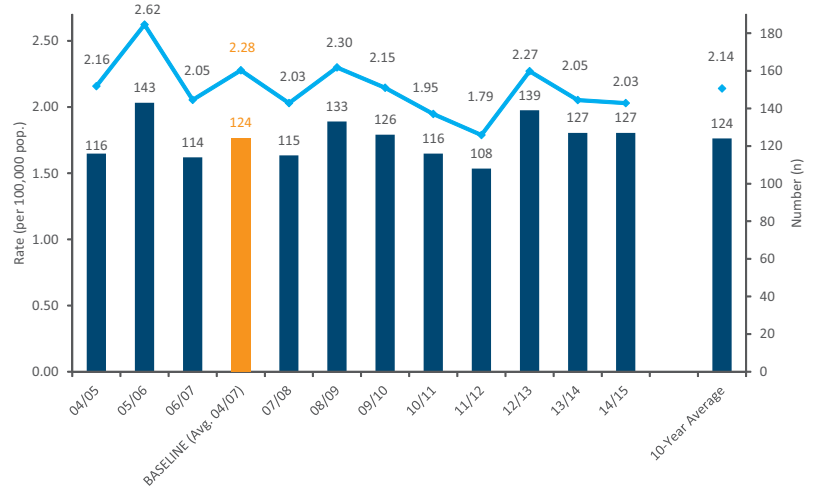


Figure 11: Drowning deaths in males aged 25-64 years, number and rate per 100,000 population, Australia, (2004/05 to 2014/15), 10-year average



KEY OBJECTIVES

i. Conduct research, implement and evaluate interventions aimed at reducing the role of alcohol and other drugs in drowning among men in this age group

The use of alcohol is a known risk factor for drowning. Research found that 37% of all drowning deaths in rivers, creeks and streams between 2002 and 2012 were known to involve alcohol.¹⁴ The AWSC recognises the role alcohol plays in fatal drowning among males and prioritises research across all aquatic locations.

ii. Develop, implement and evaluate interventions aimed at reducing the role of alcohol and other drugs within this cohort at river, creek and stream locations

Men aged 25 to 64 accounted for 47% of all drowning deaths in rivers, creeks and streams between 2004/05 and 2014/15.³ Given the burden of male drowning and the involvement of high levels of alcohol among male drowning victims at rivers, creeks and streams, a public awareness and education campaign is urgently required. This campaign should be nationally implemented and evaluated.

iii. Promote the importance of wearing a lifejacket when undertaking boating, fishing, jet skiing and rock fishing among men in this life stage

Not wearing lifejackets and a tendency to participate in risky activities, often while under the influence of alcohol, contributes to an over-representation of men in drowning statistics. All organisations within the AWSC and the broader sector should align messaging and promote the wearing of lifejackets for a range of activities in aquatic locations.

iv. Increase awareness of the role of pre-existing medical conditions and changes in skill and fitness on drowning risk among men in this life stage

As people grow older, pre-existing medical conditions become more prevalent. This, coupled with degradation in swimming and water safety skills and fitness as people age, can increase the risk of drowning. Due to the high number of deaths, the drowning prevention sector must target messages about health and fitness to this demographic.



GOAL 04

REDUCE DROWNING DEATHS IN PEOPLE AGED 65+

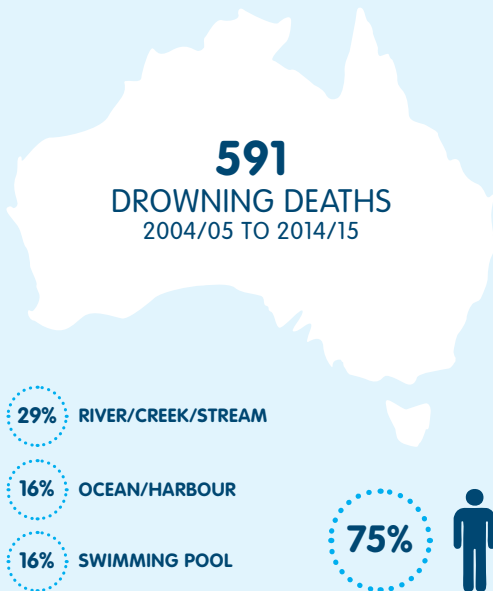
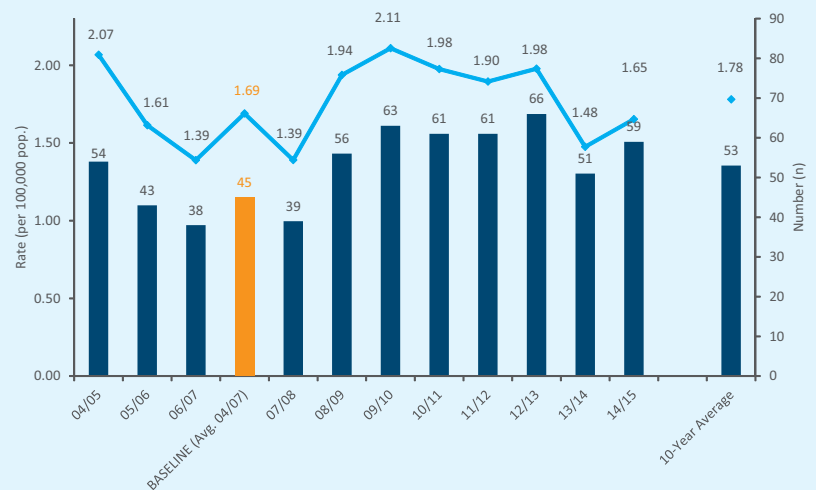


Figure 12: Drowning deaths among people aged 65 years and over, number and rate per 100,000 population, Australia (2004/05 to 2014/15), 10-year average



Descriptor	Risk Factors	Prevention
Active, in employment	<ul style="list-style-type: none"> Undertaking a range of aquatic activities Risk-taking Combining alcohol and aquatic activity 	<ul style="list-style-type: none"> Ensure safe practices such as using lifejackets Avoid risk-taking behaviours Avoid alcohol
Active, in retirement	<ul style="list-style-type: none"> Increased participation in aquatic activities after a long break in activity Consuming alcohol when recreating around water 	<ul style="list-style-type: none"> Testing skills and fitness in controlled environment prior to recreating in open waterways Avoid alcohol
Restricted mobility	<ul style="list-style-type: none"> Frailty and lack of mobility in older age can increase risk of falls Frailty, multiple medications and lack of mobility in older people can make it difficult to exit the water should the person fall into water 	<ul style="list-style-type: none"> Increase awareness of the risk factors for falls Ensure older people do not recreate in or around water on their own Consider engineering options such as ramps to enable easier entry and exit from aquatic locations
Pre-existing medical conditions	<ul style="list-style-type: none"> High-risk medical conditions, such as cardiac conditions, can increase likelihood of drowning in water Other conditions known to increase risk of drowning include dementia and Parkinson's disease among others Combining medications and mixing medications with alcohol can also increase the risk of drowning 	<ul style="list-style-type: none"> Regular medical checks and education through the health system Educate health professionals and raise awareness of drowning among older adults Engaging in aquatic activities at controlled environments such as public swimming pools Awareness of risks of multiple medications and combining medications and alcohol when undertaking aquatic activity

Figure 13: Segmentation, risk factors and prevention in people aged 65 years and over

KEY OBJECTIVES

i. Focus attention on greater segmentation within this broad age group to gain a greater understanding of the needs and risk factors

The previous AWSS 2012-2015 prioritised the reduction of drowning among those aged 55 years and over.⁸ With an ageing population, many of whom are fit and active long into retirement, this goal has been reframed to focus on those aged 65 years and over, with a specific focus on issues such as pre-existing medical conditions and the role multiple medications may play in drowning risk.

ii. Create, implement and evaluate targeted public awareness campaigns that seek to reduce drowning in people aged 65 years and over

Public awareness campaigns that educate people on the risks of drowning and strategies for prevention can have a positive impact on behaviour change. Campaigns aimed at reducing drowning deaths among people aged 65 years and over must touch on risk factors already identified through research such as the role of pre-existing medical conditions (particularly cardiac conditions), skill and fitness degradation that comes with age, the use of multiple medications and the effect that combining alcohol and medications can have on drowning risk.¹⁵

iii. Strengthen drowning prevention and healthy activity programs targeting people aged 65 and over including promoting workforce development and infrastructure planning

Ensuring awareness of risk factors for drowning while encouraging aquatic activities as a form of health and fitness for older people is a delicate balance. Aquatic activity is an excellent low-impact exercise for older people. Controlled and supervised aquatic locations, such as public swimming pools, represent low-risk environments for older people to test their skills and fitness prior to using other aquatic locations. Infrastructure that is planned and built with patrons aged 65 years and over in mind should be prioritised.

iv. Examine the role of the health system in screening and advising older Australians of the risks of pre-existing medical conditions and falls into water

Research has shown that pre-existing medical conditions were present in 68.5% of people aged 65 years and over who drowned between 2002-02 and 2011-12.¹⁵ Any drowning prevention initiative that aims to target this life stage must feature information on the risks of pre-existing medical conditions. The AWSC and broader drowning prevention sector should explore the role of the health system in assisting in drowning prevention strategies and initiatives through patient education on pre-existing medical conditions and the role of some medications, and the interaction between medications, in increasing drowning risk.

v. Review evidence across research, policy and practice and increase partnerships with the falls prevention and healthy ageing sectors

Any interventions aimed at people aged 65 years and over must draw on existing evidence across research, policy and practice within the drowning prevention sector. Cross-sector partnerships should be explored including broader injury prevention initiatives aimed at older people. Aquatic skills and fitness programs may have a dual benefit assisting in the prevention of falls as well as broader social inclusion and community engagement through the local swimming pool and community groups.^{15,16}



PRIORITY AREA TWO

TARGETING HIGH-RISK LOCATIONS

The AWSS 2016-20 continues to reflect the need for drowning reduction strategies at high-risk locations, such as inland waterways and coastal environments. Reductions in drowning deaths at these locations are vital to achieving a 50% reduction in all drowning deaths by the year 2020.

Coastal locations such as beaches and ocean / harbour environments have accounted for 38% of drowning deaths since 2002/03. Inland waterways (rivers, creeks, streams, lakes, dams and lagoons) accounted for a further 37% of all drowning deaths across Australia in the same period.

Strengthening the Australian aquatic industry has been included in priority area two. Although the monitoring of safety standards at aquatic facilities is a long-standing process, the inclusion of this goal recognises the contribution the Australian aquatic industry makes to ensuring people safely participate in aquatic recreational activities.

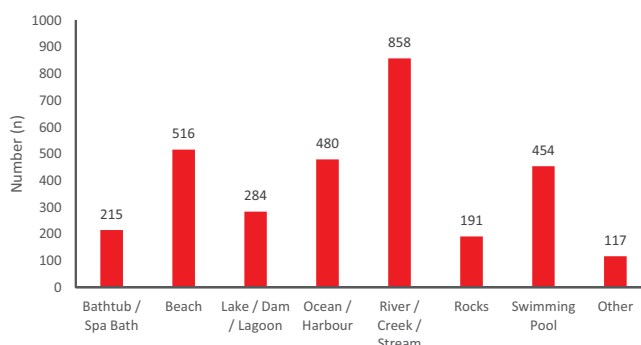


Figure 14: Drowning deaths by location, Australia (2004/05 to 2014/15)

Drowning Prevention Pillars	Description
1. Advocacy	Advocacy for high-risk drowning locations may include raising awareness of the hazards and risks that particular aquatic locations pose to locals as well as visitors to such locations. Special consideration should be given to conducting advocacy with overseas tourists about safety considerations in Australian waterways.
2. Research	Research within this goal area begins with identifying the burden of drowning and risk factors for fatal drowning at high-risk aquatic locations. Advances in research must consider the burden of non-fatal drowning and aquatic injuries as well as gather visitation data to enhance understanding of exposure. ¹⁸
3. Collaboration	Collaboration across the multiple stakeholders that manage and visit high-risk locations is vital to ensuring reductions in drowning deaths are achieved through well-implemented drowning prevention strategies. Locations such as inland waterways may have multiple stakeholders with an interest in and responsibility for ensuring safety and identifying and engaging all stakeholders is key.
4. Safe Venues	Identifying the hazards and risks that high-risk locations pose to drowning is the first step in implementing effective prevention strategies and links to other cross-cutting themes such as advocacy, workforce and collaboration among others. The issue of safe venues with respect to high-risk locations may encompass signage, safety audits, risk management plans, guidelines, legislation and staff training among other issues.
5. Workforce	The drowning prevention workforce across the high-risk locations in this strategy may take the form of lifeguards, facility staff, lifesavers and land managers, search and rescue personnel, government authorised officers including police, non-government water safety personnel and recreational surfers. Ensuring drowning prevention and water safety is embedded in the operations of the workforce at high-risk locations is vitally important.
6. Policy	Policy in the form of legislation, practice notes and guidelines contribute to drowning prevention across all high-risk locations. Policy alone is unlikely to be effective in reducing drowning at high-risk locations and must be combined with advocacy, public awareness and education, and enforcement.
7. Education	Education is vital to the reduction of drowning at high-risk locations. This includes increasing awareness of the different hazards and risks each aquatic environment can pose, the promotion of lifejacket wear, as well as promoting training in resuscitation and safe rescue skills for those recreating at aquatic locations including beaches, rivers and public swimming pools.

Figure 15: Drowning Prevention Pillars and descriptions for priority area two



GOAL 05

REDUCE DROWNING DEATHS IN INLAND WATERWAYS

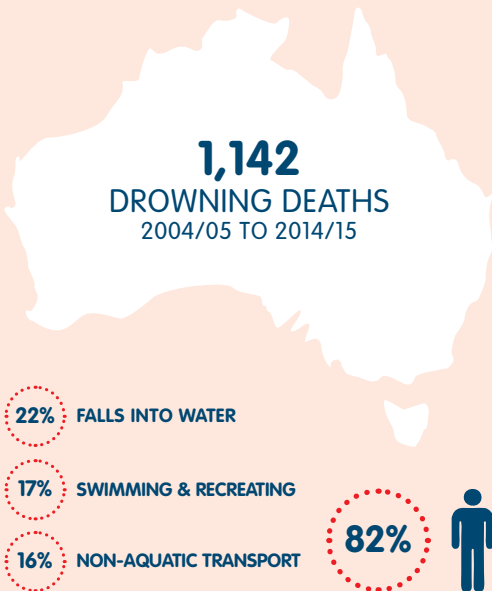
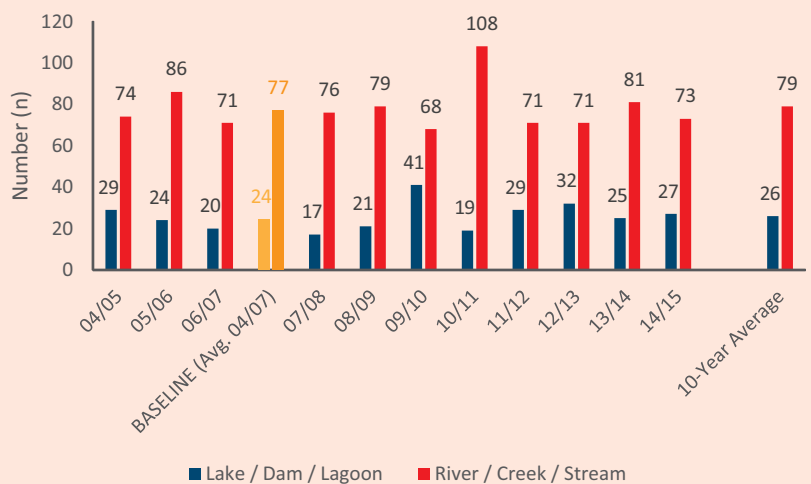


Figure 16: Drowning deaths in inland waterways by location type and financial year, Australia (2004/05 to 2014/15), 10-year average



	Murray River	Yarra River
Total drowning deaths 2002-2012¹⁴	43	29
% Boating at the time	28%	7%
% Alcohol involved	42%	48%
Time of day		
Afternoon (12:01pm to 6pm)	44%	31%
Evening (6:01pm to 12am)	37%	31%
Day of week		
Friday	21%	21%
Saturday	23%	17%
Sunday	23%	7%
Time of year		
Summer	35%	31%
Spring	28%	28%
Autumn	23%	10%
Winter	14%	31%
Residential status		
Local	35%	97%
Visitor – Intrastate	26%	0%
Visitor – Interstate	23%	3%
Visitor – Overseas	2%	0%

Figure 17: Comparison of river drowning black spots 2002-2012

KEY OBJECTIVES

In all communities

i. Develop, implement and evaluate community-focused drowning prevention plans in known inland waterway drowning black spots

Fatal and non-fatal drowning in inland waterways occur in all areas of Australia, from urban entertainment precincts to isolated communities in remote areas. Those best placed to provide insight into the types of drowning risks faced and the prevention strategies required are those living and working alongside, and recreating in, inland waterways. Working at the site of the problem and engaging with key stakeholders in the development and implementation of drowning prevention plans will give communities ownership of the issue, and hopefully provide solutions. Prevention strategies should also promote the wearing of lifejackets where appropriate.

ii. Explore partnerships that expand reach and effectiveness of flood and weather warnings

Flooding and periods of extreme rainfall can increase the risk of drowning. Flash flooding can cause conditions to change quickly, while riverine flooding can change depth and currents in rivers hundreds of kilometres downstream and weeks after the weather event. Any interventions designed to address flood-related drowning must partner with emergency response and weather organisations to ensure consistency in messaging and widespread communication.

iii. Identify, develop and implement strategies aimed at reducing alcohol-related drowning around inland waterways

Alcohol is known to be a contributing factor in inland waterway drowning, particularly along urban river environments. Young lives are lost every year due to risk-taking behaviours while under the influence of alcohol in inland waterways. Research into the top 10 river drowning black spots around the country identified the Yarra, Brisbane and Swan Rivers as urban rivers of concern,¹⁹ with coronial inquests in Victoria specifically examining the role of alcohol in river drowning in the Yarra.²⁰ Any strategies designed to reduce drowning in inland waterways must examine the role of alcohol and licensed venues in entertainment precincts around urban water.

iv. Enhance community awareness of the danger of recreating in and around flooded roads and drains, with a focus on conveying the impact of weather and rainfall on the risk

Every year lives are lost in Australia in preventable drowning tragedies involving flood waters. Community education programs and activities that raise public awareness of the dangers of recreating in and around flooded roads and drains are vital to improving safety and preventing drowning deaths. Partnering with local government to map roads and drainage systems at risk of flooding will also assist in developing and effectively targeting community education.

In rural and remote areas

v. Increase access to safety programs for people living in rural and remote areas

Local people in environments close to home comprise most cases of drowning in inland waterways. Many of these deaths occur in rural locations isolated from major services. Between 2002 and 2012, 42% of all river drowning deaths occurred in regional and remote areas.¹⁴ Programs that provide water safety skills, knowledge, CPR and first aid are even more important in rural areas due to their isolation from timely medical help in the case of a drowning emergency.

vi. Address infrastructure and human resource needs in rural and remote areas to ensure adequate coverage of aquatic instructors and safety risk management

People residing in rural and remote areas report difficulties in attracting qualified instructors and expertise in risk management.¹⁷ When working in and alongside local communities to tackle the inland waterways drowning issue, holistic strategies for ensuring water safety skills and knowledge across and throughout communities in rural and remote areas need to be prioritised.

In urban communities

vii. Increase access to information on hazards and risks in urban waterways and ensure this information is embedded in drowning prevention programs

The hazards and risks found in urban waterways can differ significantly from those in rural and remote locations. Urban waterway drowning often occurs in highly built-up environments, the water can be heavily polluted, impacted by storm water run-off and there may be multiple stakeholders. Many drowning deaths are alcohol related and occur in the late night/early morning hours. Groups at risk may also differ. Information and prevention strategies for urban waterways must be embedded in prevention efforts and may include alcohol warnings, public rescue equipment, environmental modification and legislative requirements such as the banning of the consumption of alcohol or swimming in particularly high-risk areas.



GOAL 06

**REDUCE DROWNING DEATHS
IN COASTAL WATERS**

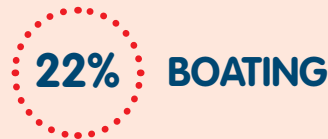
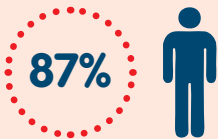
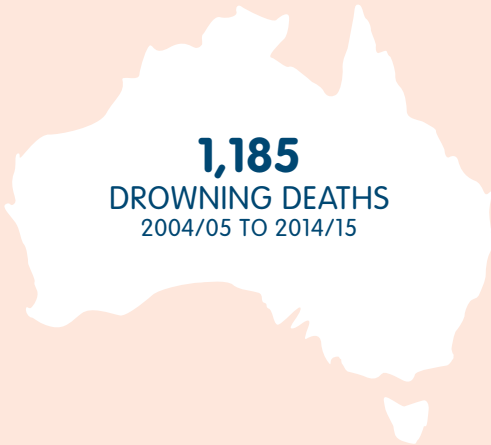
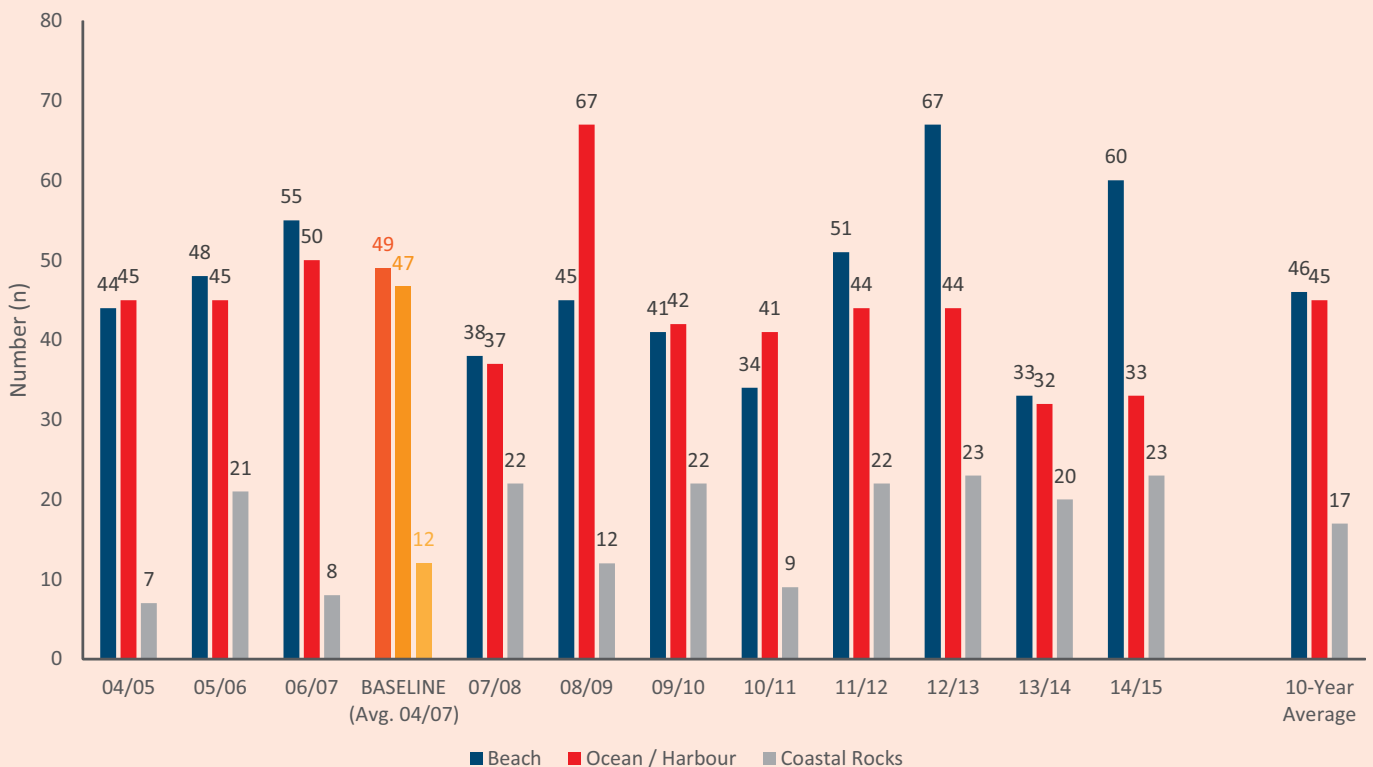


Figure 18: Coastal drowning deaths, Australia (2004/05 to 2014/15), 10-year average



KEY OBJECTIVES

i. Evaluate the issue of coastal safety in its entirety, including assessment of non-fatal drownings and critical incidents to better inform targeted interventions

The AWSC has recognised that the actual burden of drowning in the community extends far beyond drowning fatalities. Non-fatal drownings often result in lifelong health, social and economic impacts. Critical incidents also provide crucial case studies of 'close calls' to inform drowning prevention interventions. Furthering understanding of these issues through research and analysis will improve the effectiveness of initiatives to meet community needs.

ii. Implement coastal safety awareness campaigns and products to address root causes of drowning that are targeted towards high-risk populations

The target market for coastal drowning prevention initiatives is not generally people who willingly follow advocates' advice. The resistant male, set in his ways and sure of his ability to overcome all obstacles, is a challenge for any public safety advocate. Recognising the behavioural characteristics of these males, and using intelligence to deliver key insights, we can develop campaigns designed to influence their perceptions and promote safer behaviours such as avoiding rip currents and the wearing of lifejackets.

iii. Increase open water survival, rescue and resuscitation skills that are critical enablers to safe participation in recreational activities

The safe participation of those that engage in a range of coastal activities such as paddling, fishing, surfing, or sailing is dependent on an individual's ability to self-rescue or remain afloat until rescuers arrive. People drowning while attempting a rescue has remained a persistent proportion of the national drowning statistics. Promoting the basic skills required by individuals to survive, rescue and resuscitate enables greater participation in aquatic activities and healthy lifestyles, and also strengthens community resilience as more people are able to assist in a range of emergencies. This approach is consistent with the WHO and AWSC positions on community-wide CPR skills.

iv. Identify 'black spot' locations with high drowning rates and implement and evaluate evidence-based drowning prevention programs to mitigate known risk factors

Coastal public safety risk assessments and well-researched intelligence provide data for site-specific intervention strategy and program recommendations. By prioritising and implementing evidence-based recommendations that include targeted infrastructure, additional resources, services and education programs across the top 25 'black spot' locations, the AWSC will take significant steps to achieving its goal of a 50% reduction in coastal drownings by 2020.

v. Enhance surveillance and effective emergency response to critical incidents by improving technology, equipment, procedures and skills of personnel

Community need for water safety services in coastal areas remains strong with population growth combined with high domestic and international tourist visitation rates contributing to the need. Diversified participation across a broad range of coastal activities has also driven a clear need for lifesaving services beyond the traditional sandy beach patrolled environment including rescues performed by surfers and bystanders. By employing technological advancements to improve communications and surveillance capacity, as well as improved equipment and capability of personnel, expanded lifesaving services through both traditional and innovative lifesaving approaches can meet these community requirements to reduce the number of incidents and improve the outcomes of emergency response.

vi. Assess the impact and effectiveness of coastal drowning prevention initiatives

Although Australia has invested significantly in drowning prevention initiatives, there is a lack of research investigating the impact of those initiatives and assessing their effectiveness. Greater investment in pilot projects designed with independent monitoring and evaluation will contribute to the evidence both domestically and internationally. Poor performing programs should be discontinued and resources reinvested into scaling up successful initiatives.



GOAL 07

REDUCE DROWNING DEATHS BY STRENGTHENING THE AQUATIC INDUSTRY

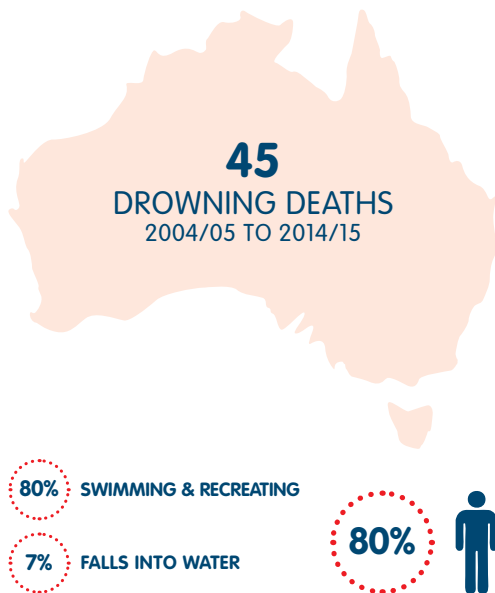
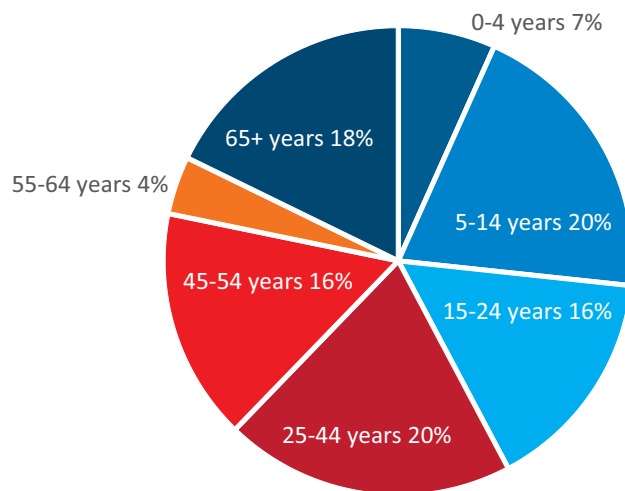


Figure 19: Drowning deaths at public swimming pools by age group, Australia (2004/05 to 2014/15)



KEY OBJECTIVES

i. Implement programs that improve management standards and practices and that minimise risk in aquatic recreational environments

Public swimming pools are promoted as safe places for people to enjoy the water. The reputation of the industry is built on safety; that includes management standards and practices that take a risk management approach. Improvement in standards should be informed by coronial recommendations, the needs of increasingly diverse user groups, and be carefully balanced with the commercial viability of a facility for the provision of a safe environment.

ii. Research and advocate for the role and contribution that safe, effectively managed venues make to drowning prevention and healthy communities in Australia

Research should be undertaken to examine the contribution of public swimming pools to communities around the country, including as places for safe aquatic recreation, socialisation and fitness, as well as a place of employment for lifeguards and swimming and water safety teachers. These findings, and other known benefits, should be advocated regularly to the public.

iii. Support national accreditation structures to ensure high-quality education, training and professional development of qualified swimming and water safety teachers, lifeguards and lifesavers

Lifeguards and swimming and water safety teachers should be accredited and professional to ensure a high standard of safety and instruction. Industry-based standards and ongoing professional development can further add to the role facilities play in drowning prevention. National accreditation structures also provide entry-level pathways into employment.

iv. Strengthen the skills, standards and recognition of paid and volunteer drowning prevention workforce

Workforce development strategies must be developed for both paid and volunteer staff to strengthen skills in risk management, facility safety and drowning prevention to further enhance safety. This should be prioritised in rural and remote communities where the need is greatest. As an example, it should be ensured that teachers of swimming and water safety have the skills to teach survival and lifesaving skills, with a focus on personal survival skills as the key component of every swimming lesson.





PRIORITY AREA THREE

FOCUSING ON KEY DROWNING CHALLENGES

Focusing on key drowning challenges will require a range of drowning prevention strategies addressing diverse issues. This section does not repeat issues identified previously in this strategy. It seeks to pinpoint drowning challenges that will require a different approach, as well as those where there is a need for further research to clarify the issues and guide the development of effective prevention strategies.

Community safety has been a long-standing aim of lifesaving agencies. In accordance with this aim, the goals within this priority area specifically address the need to reduce drowning deaths that can be attributed to:

- Alcohol and drugs
- Boating, watercraft and recreational aquatic activities
- High-risk populations
- Disaster and extreme weather

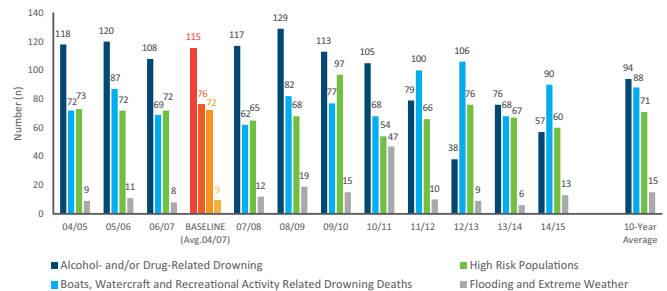


Figure 20: Alcohol- and drug-related drownings, boating, watercraft and recreational activity related drowning deaths, drowning deaths in high-risk populations and drowning as a result of flooding and extreme weather, Australia (2004/05 to 2014/15), 10-year average

Drowning Prevention Pillars	Description
1. Advocacy	Advocacy considerations within the key drowning challenges identified in the strategy could include utilising innovative means of communicating the risk of alcohol and drugs with respect to drowning, particularly targeting the male population. It should also explore alternative communication channels for messages aimed at high-risk communities. Advocacy is also key to enhancing awareness of legislation, the importance of lifejackets when boating and rock fishing as well as the dangers of driving through floodwaters.
2. Research	Research can continue to strengthen our knowledge among these key drowning challenges. Improving the quality of data collected can enhance our understanding of risk factors for drowning among this priority area as well as inform evidence-based strategies for prevention.
3. Collaboration	Collaboration with other agencies, organisations and individuals working with these target communities and on these key drowning issues will further enhance any initiatives undertaken in this challenging sphere of drowning prevention. Collaboration may mean access to previously hard-to-reach communities, further expertise in the area of flood safety and/or access to additional resources through partnership.
4. Safe Venues	Safe venues have a role to play in reducing drowning deaths. Public swimming pools can be promoted as safe venues for international tourists and students to socialise at; community evacuation centres can prove to be safe venues in times of flooding; and collaboration with hoteliers and pubs close to rivers and waterfronts may be an innovative partnership for reducing alcohol-related drownings.
5. Workforce	The drowning prevention workforce relevant to this priority area are diverse and may range from community health workers operating in Aboriginal and Torres Strait Islander communities, to swift water rescue practitioners and those working on injury prevention related to alcohol and drug abuse. By collaborating with those with expertise outside of drowning prevention, resources and expertise can be leveraged to better effect.
6. Policy	Policy can play a role in addressing drowning within at-risk populations. Enforcement of traffic signage forbidding people from driving across floodwaters may be part of a broader strategy to reduce flood-related drowning, as may be increasing the wearing of lifejackets when boating or rock fishing in coastal and inland environments. A policy of basic swimming and water safety education within the state and territory education systems may ensure all children, regardless of cultural or socio-economic background, receive skills that may save their life or someone else's.
7. Education	Education (and training) considerations within this priority area are vital to reducing drowning and may include education on the importance of lifejackets and public awareness messages and training delivered in diverse languages and culturally appropriate means. Education and training must be based on available best practice and advances in drowning prevention research.

Figure 21: Drowning Prevention Pillars for priority area three



GOAL 08

REDUCE ALCOHOL- AND DRUG-RELATED DROWNING DEATHS



- 23% SWIMMING & RECREATING
- 18% FALLS INTO WATER
- 17% BOATING

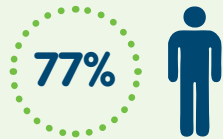
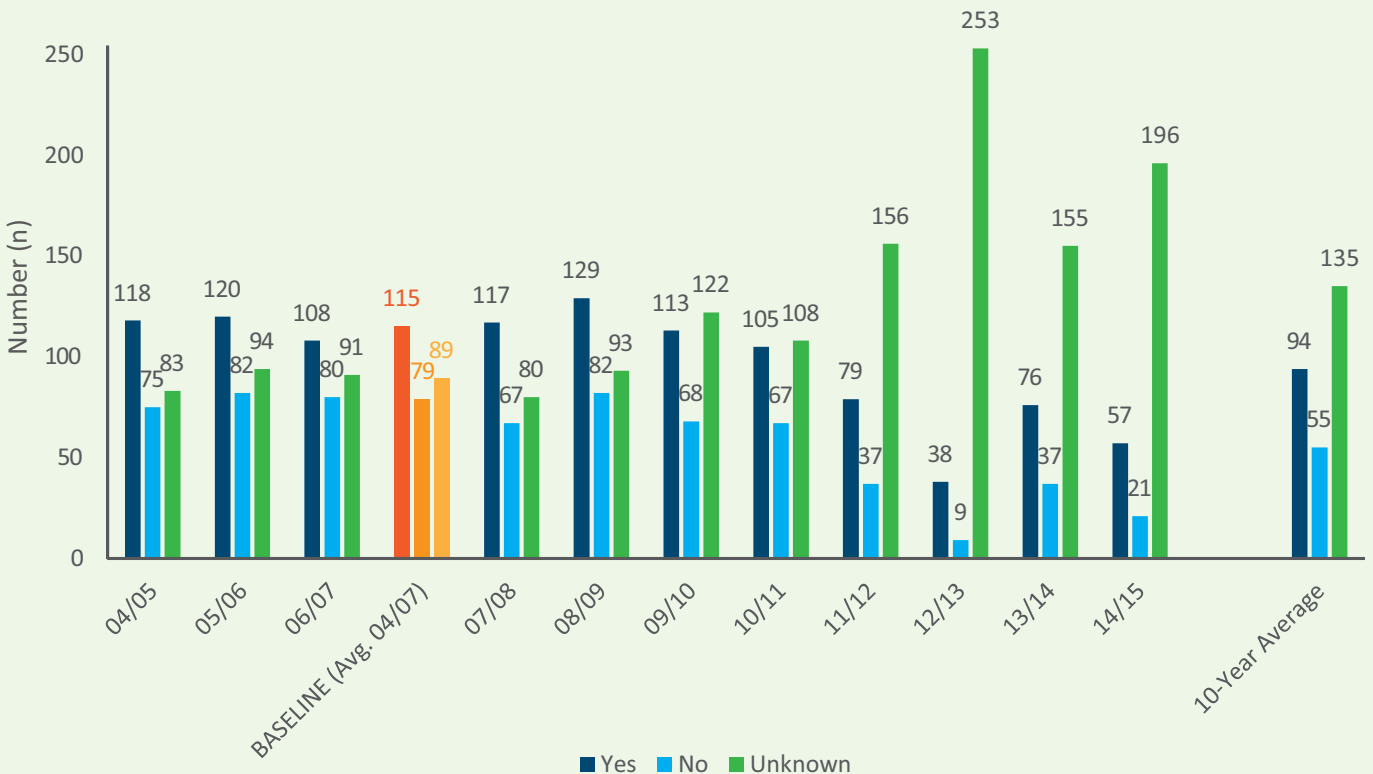


Figure 22: Drowning deaths known to involve alcohol and/or drugs, Australia (2004/05 to 2014/15), 10-year average



KEY OBJECTIVES

i. Develop a coordinated approach with consistent messages to highlight risks of alcohol and aquatic activity

A coordinated approach to reduce the prevalence of alcohol-related drowning deaths is urgently needed across the drowning prevention sector and must expressly target males through the use of innovative, but consistent messaging.

ii. Partner with recreational boating and fishing groups, alcohol-related advocacy groups and government to build effective interventions in this area

Alcohol use while boating is of serious concern to drowning prevention advocates. Research into river drowning deaths identified alcohol as being involved in 40% of drowning deaths as a result of boating and watercraft accidents.¹⁴ Given that the rules governing the consumption of alcohol when boating are the same when operating a motor vehicle, it is concerning to see the high proportion of cases involving alcohol. It is vital that any interventions designed to reduce drowning deaths as a result of boating and watercraft accidents where alcohol is involved partner with recreational boating and fishing groups as well as link with existing alcohol and injury prevention interventions.

iii. Partner with government(s) and advocacy groups to enhance enforcement of alcohol and watercraft use, particularly in regional areas

The large proportion of alcohol-related watercraft accidents is alarming despite legislation prohibiting this unsafe behaviour. Further public awareness and education around the legislative requirements as well as the dangers of boating under the influence of alcohol needs to be conducted. Legislation and public education must also be coupled with enhanced enforcement of boating and alcohol legislation, in particular targeting in rural and remote locations where the activity may be more prevalent due to assumptions around likelihood of enforcement.

iv. Investigate the role of alcohol in drowning, including social and cultural factors, and develop programs that aim to reduce drowning

Alcohol consumption is intrinsically linked to the Australian culture. Unfortunately this link often results in binge drinking and large amounts of alcohol being consumed, particularly around aquatic locations, which can dramatically increase drowning risk. Public awareness and education strategies that outline the role alcohol plays in elevating drowning risk must be realistic about the culture within which they are being implemented. Any campaign development should look to broader alcohol and injury prevention campaigns in other areas such as road traffic and falls prevention.

v. Conduct further research into the role of drugs (both prescription and illegal drugs) in drowning including identifying at-risk age groups, locations and activities

While research is increasingly examining the role of alcohol in drowning, there has been little work to date on the role of drugs in drowning in Australia. Research should be conducted into both the role of illegal drugs and prescription medication in drowning. Any work into the role of drugs in drowning must also examine the link between alcohol consumption and drug use in drowning, to enhance the profile of those at-risk and assist in the development of evidence-based strategies for prevention.



GOAL 09

REDUCE BOATING, WATERCRAFT AND RECREATIONAL ACTIVITY RELATED DROWNINGS



OCEAN/HARBOUR

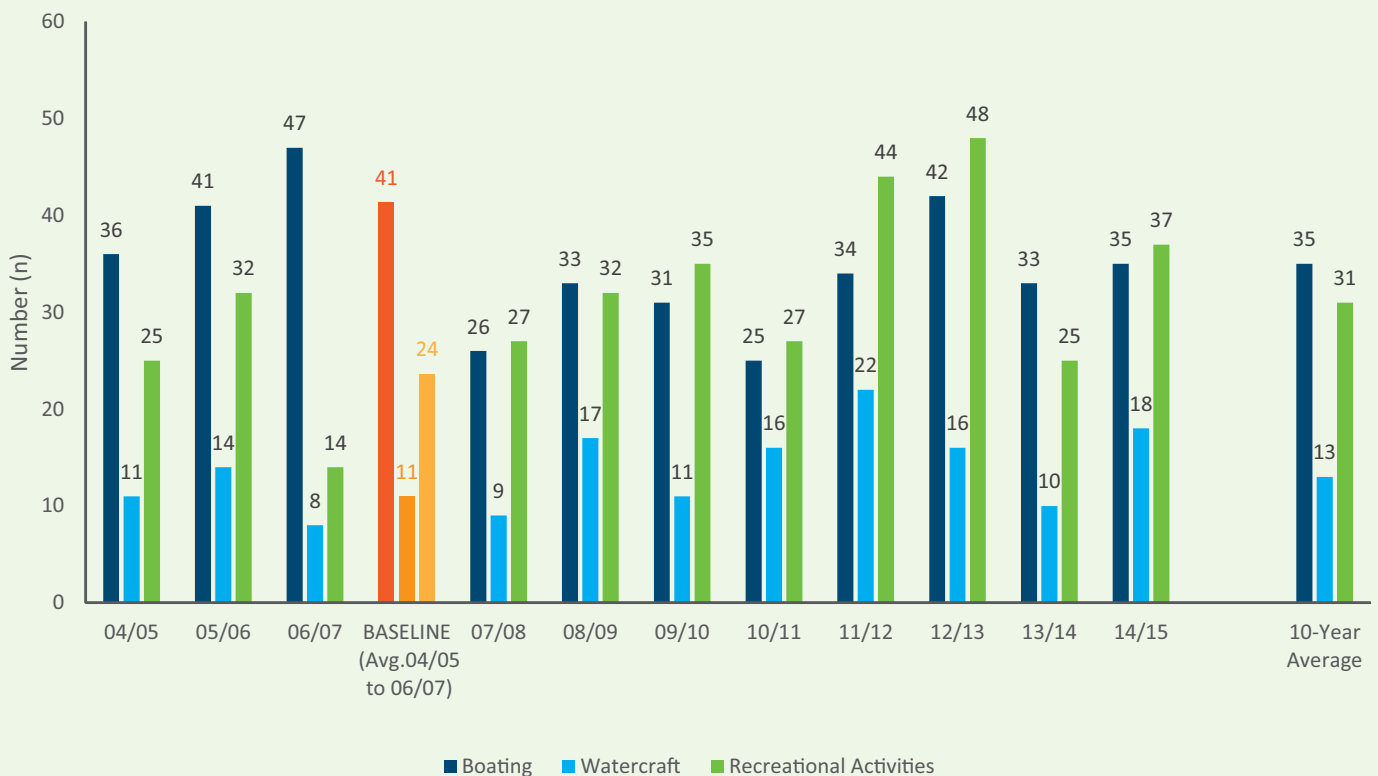


RIVER/CREEK/STREAM



ROCKS

Figure 23: Drowning deaths as a result of boating, watercraft and recreational activities, Australia (2004/05 to 2014/15), 10-year average



KEY OBJECTIVES

Boating and watercraft-related drownings

i. Increase access to drowning prevention education and skills for recreational boaters and watercraft users

A total of 535 people drowned as a result of incidents involving boats and watercraft in Australian waterways between 2004/05 and 2014/15.³ It is vital that boating and watercraft-related drowning prevention education and skills are targeted at those most at risk, particularly recreational users. The AWSC recommends organisations within the drowning prevention sector look to partner with state and territory departments of transport to collaborate on vessel safety within their jurisdiction and to ensure targeted messaging that is consistent with work already being done in the space.

ii. Advocate for best practice in policy, legislation, enforcement and promotion of lifejacket use

In NSW, it is estimated that nine out of 10 people who drowned while boating were not wearing a lifejacket.²¹ With new innovations in lifejacket design, they are easier to wear and could greatly enhance the chances of survival should an individual unexpectedly end up in the water. The AWSC recommends the strengthening and streamlining of legislation relevant to lifejacket wear at a state and territory level, coupled with national awareness and public education campaigns to improve the rates of lifejacket wear. This includes increasing the wearing of lifejackets in small craft (ie. under 6m) especially where there is heightened risk e.g. boating alone, at night, in difficult conditions and by young people (under 12 years).

iii. Conduct research into boating and watercraft-related drowning incidents which assists in the identification of risk factors and prevention strategies for such drowning deaths

Given the large numbers of boating and watercraft-related fatalities occurring every year in both coastal and inland environments, detailed research is required into the causal factors for such incidents. Research should partner with state and territory government agencies involved in boating and watercraft safety to build profiles for those most at risk of drowning as a result of such drowning incidents. Enhanced understanding of the causal factors leading to drowning as a result of boating and watercraft-related incidents will further strengthen strategies geared at drowning prevention. Research should also link to partnerships with police and maritime organisations to enhance and collate data on lifejacket wear rates.

Fishing

iv. Increase access to drowning prevention education and skills for recreational fishers

Every year recreational fishers are over-represented in drowning statistics. Between 2004/05 and 2014/15, recreational fishers accounted for 42% of drowning deaths as a result of incidents involving powered and unpowered vessels.³ Although boaters might be obvious targets for vessel-related drowning prevention education and skills development programs, the statistics show these programs need to be expanded to include recreational fishers. The AWSC should partner, where possible, with state and territory government agencies responsible for boating and fishing safety to further promote prevention efforts among this group.

v. Increase access to drowning prevention education and skills for rock fishers, particularly promoting lifejackets and targeting those communities commonly involved in the activity regardless of residential location

Rock fishing remains Australia's most dangerous sport, accounting for the deaths of 12 people on average every year for the past 11 years (2004/05 to 2014/15).³ The provision of education programs for rock fishers, particularly those that promote lifejackets, are urgently needed. Programs must target communities commonly involved in the rock fishing, regardless of residential location. Specific interventions must define rock fishing blackspots, both the specific locations where rock fishing drowning deaths commonly occur and the communities at risk.

Diving and Snorkelling

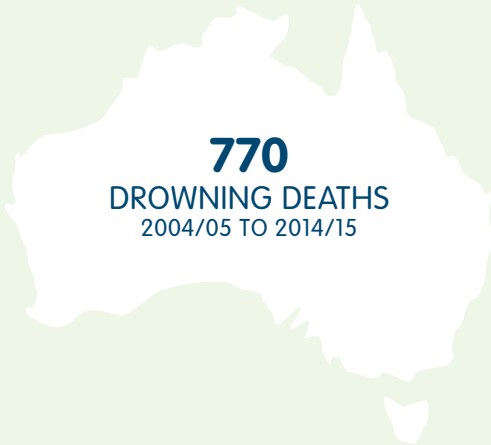
vi. Explore the development of an appropriate National Code of Practice (NCP) for recreational scuba divers, snorkelers and dive professionals

Australia's coastal environment continues to be an ideal location for snorkelling and scuba diving both for residents and domestic and international tourists. Safety is vital to ensuring the reputation of Australia as a quality location for diving and snorkelling and prevention of injuries and deaths as a result of accidents. The AWSC encourages the investigation of an appropriate NCP for the diving and snorkelling industry and workforce. This NCP needs to enhance safety and reduce the risk of drowning and serious injury for residents and tourists alike across all states and territories.



GOAL 10

REDUCE DROWNING DEATHS IN HIGH-RISK POPULATIONS



HIGH

NUMBERS OF DROWNINGS AMONG CHINESE, INDIAN, SOUTH KOREAN AND MALAYSIAN COMMUNITIES

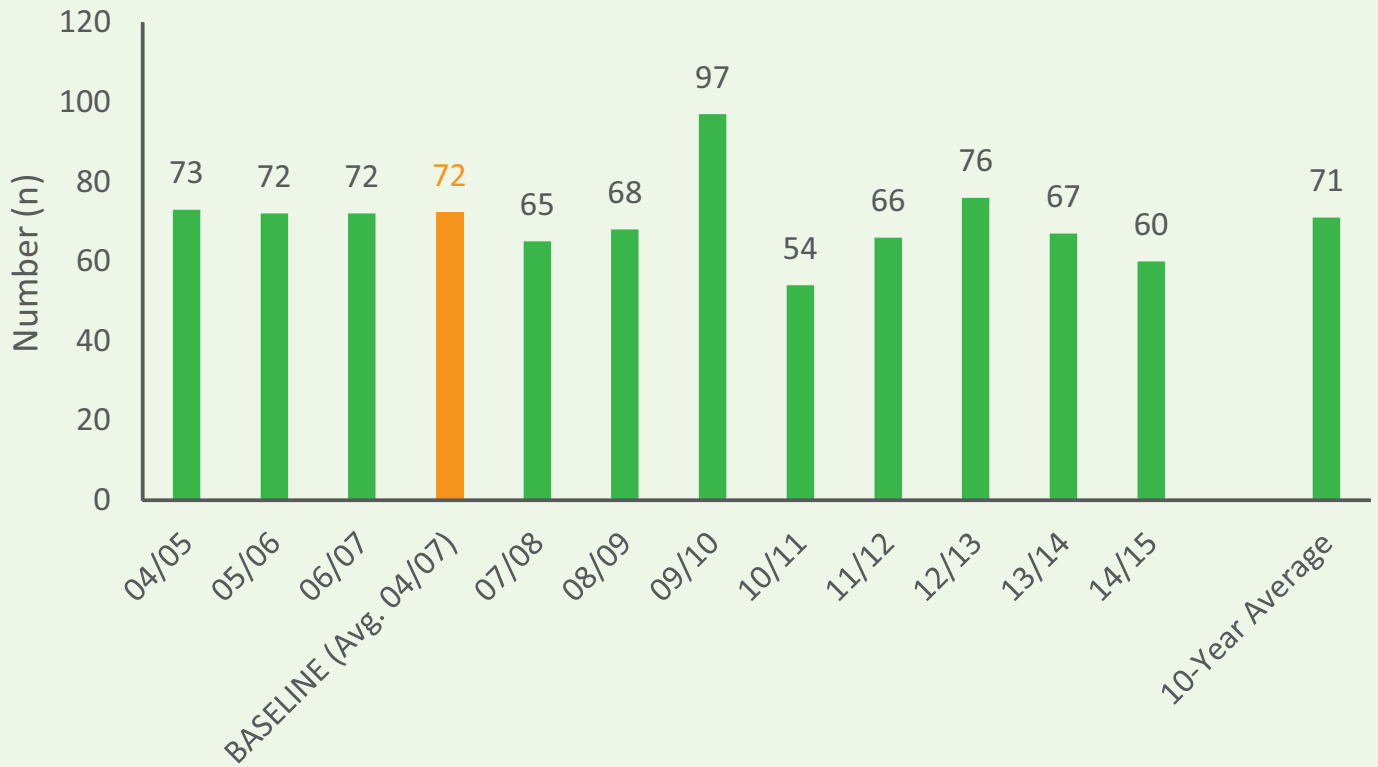
ACCESS

TO QUALITY DATA ON CULTURALLY AND LINGUISTICALLY DIVERSE AND ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE REMAINS A CHALLENGE

BUILD

CAPACITY OF THE INDIGENOUS WORKFORCE THROUGH GREATER ACCESS TO DEVELOPMENT AND TRAINING OPPORTUNITIES

Figure 24: Drowning deaths in high-risk populations, Australia (2004/05 to 2014/15), 10-year average



KEY OBJECTIVES

i. Monitor and expand strategies to reduce drowning in Aboriginal and Torres Strait Islander people

Aboriginal and Torres Strait Islander people continue to be over-represented in drowning statistics, accounting for 6% of all drowning deaths in the 11 financial years between 2004/05 and 2014/15,³ despite accounting for an estimated 3% of the Australian population.²² Focused drowning prevention strategies for Aboriginal and Torres Strait Islander people are urgently required. Any interventions should take into account the diverse population, including urban and rural dwelling Aboriginal and Torres Strait Islander people and be guided by Aboriginal and Torres Strait Islander people themselves.

ii. Continue and expand a community development approach to working with Culturally and Linguistically Diverse (CALD) communities including a skill building approach and workforce development

Although accessing quality data on Culturally and Linguistically Diverse (CALD) people within national drowning statistics continues to be a challenge, people from CALD backgrounds are believed to be at an increased risk of drowning. Intervention strategies including workforce development, such as attracting and retaining CALD lifeguards and swimming and water safety teachers, have proven successful and should be continued and expanded. Other interventions to minimise drowning risk in CALD communities should include advocacy and skills building, such as the provision of swimming and water safety lessons for CALD children who are at risk of otherwise missing out on these vital safety skills.

iii. Expand interventions targeted at reducing drowning among international tourists

International tourists may be at an increased risk of drowning due to unfamiliarity with the hazards and risks Australian aquatic locations pose. Between 2004/05 and 2014/15, 145 international tourists drowned in Australian waters.³ Although beaches are the location where the largest number of international tourists drown, there are a wide variety of locations where this population is at risk of drowning including inland waterways and swimming pools.²³ It is vital that interventions aimed at preventing drowning among this group are expanded to include other aquatic locations and activities.

iv. Develop and expand interventions aimed at reducing drowning risk among international students

There have been several cases in recent years of international students who have drowned while studying in Australia. Similar to international tourists, international students can also be at an increased risk of drowning due to poor swimming skills or differences in perception of ability, and different types of aquatic locations in Australia compared to their country of origin. The AWSC recommends that drowning prevention organisations partner with universities in developing and expanding interventions that raise awareness of the dangers aquatic locations in Australia can pose and ways to recreate safely while living and studying in Australia.

v. Ensure messages are communicated consistently and in relevant languages and culturally appropriate ways

Messaging around drowning risk and prevention strategies for high-risk communities must be done in culturally appropriate ways in order to be effective. This means communicating safety messages and drowning prevention strategies using consistent and easy-to-understand language to avoid confusion. Wherever possible, messages should be translated into the languages of the communities most at-risk and harness alternative communication channels, such as partnering with community, student and Aboriginal and Torres Strait Islander radio, print and television to effectively convey drowning prevention messaging to at-risk groups.

vi. Improve data collection to more accurately describe the burden of drowning in high-risk populations

Access to quality data, particularly around country of birth and Aboriginal and Torres Strait Islander status within the coronial system continues to be a challenge. Although the quality of data has improved in recent years, it varies between state and territory jurisdictions. It is therefore likely that the statistics around fatal drowning within these high-risk populations under-estimate the size of the problem. Researchers should form partnerships with agencies collecting data of relevance to drowning prevention and use multiple data sources to decrease gaps in the available data.



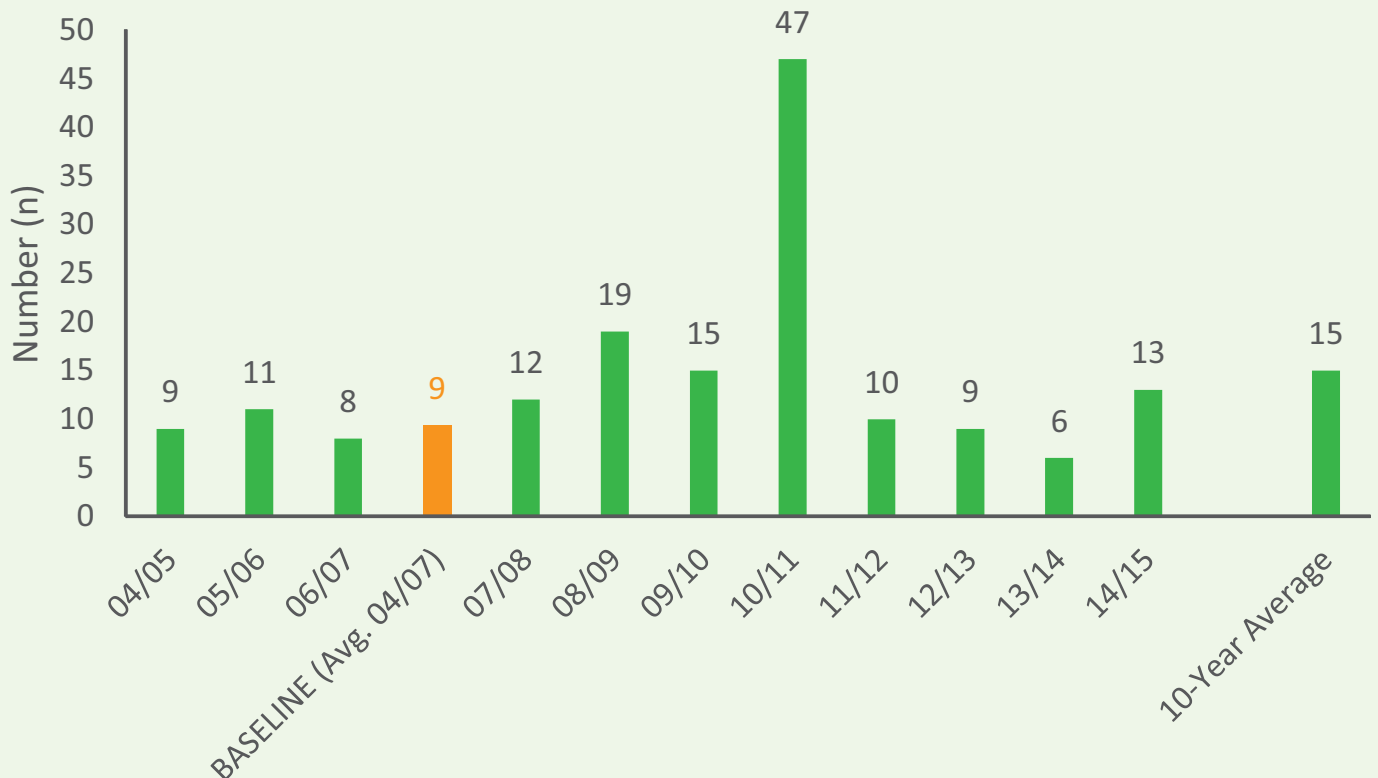
GOAL 11

REDUCE THE IMPACT OF DISASTER AND EXTREME WEATHER ON DROWNING DEATHS



DRIVING THROUGH FLOODWATERS

Figure 25: Drowning deaths known to be as a result of flooding, Australia (2004/05 to 2014/15), 10-year average



KEY OBJECTIVES

i. Forge greater links and recognition of drowning prevention in national, regional and community-level resilience building programs

Drowning is the leading cause of death during times of flood.²⁴ It is therefore vital that drowning prevention is a consideration in resilience building programs at all levels, be it national, regional or community level. Strengthening community resilience must consider early warning systems, including effective evacuation, as well as a public awareness and education components that prompt appropriate response to the risks that flood waters can pose.

ii. Implement strategies that raise community resilience that prevents drowning during floods, particularly as a result of driving through floodwaters

Floods are one of the most common natural disasters worldwide. In Australia they are known to have claimed the lives of 159 people between 2004/05 and 2014/15.³ Intentionally entering floodwaters, most commonly by driving through floodwaters or across flooded roadways, is the most common activity prior to drowning during times of flood. Therefore strategies that encourage appropriate response among the community before entering floodwaters are of vital importance.

iii. Collaboration is expanded with emergency response agencies to strengthen skills and awareness of aquatic rescue strategies

There are many agencies and organisations involved in flood response and rescue in Australia. The AWSC recommends that drowning prevention advocates collaborate with relevant organisations in their jurisdiction, such as the State Emergency Service (SES), search and rescue, police and emergency services among others, to ensure current action is leveraged and messaging is consistent.

iv. Enhance early warning systems to provide practical advice prior to the onset of dangerous surf, flood, storm surge and tsunami, particularly in vulnerable areas to minimise exposure to hazardous conditions.

Collaborative work between emergency services, researchers and statutory agencies including the Bureau of Meteorology (BoM) has delivered early warning systems and frameworks for a range of hazards. The integration of high resolution probabilistic modelling and next generation computing capacity provides further scope for the enhancement of these systems to provide better warnings. Extending this work with social researchers to enhance the effectiveness of warnings could further improve community response.





ACT

21
DROWNING DEATHS
2004/05 TO 2014/15

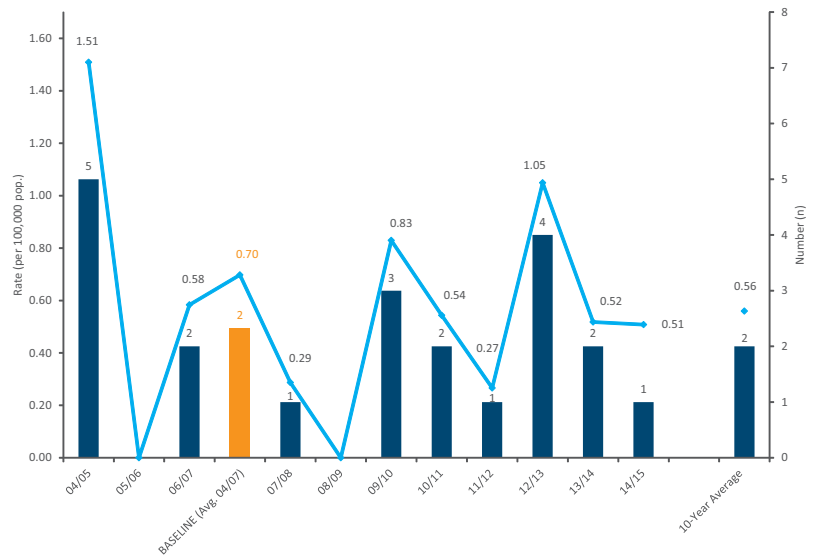
81%

- 24%** SWIMMING & RECREATING
- 24%** FALLS INTO WATER
- 19%** BATHING
- 29%** LAKE/DAM/LAGOON
- 24%** SWIMMING POOL
- 19%** BATHTUB/SPA BATH
- 19%** RIVER/CREEK/STREAM

STATE & TERRITORY FATAL DROWNING PROFILES

AUSTRALIAN CAPITAL TERRITORY (ACT)

Figure 26: Drowning deaths and rates per 100,000 population, Australian Capital Territory, (2004/05 to 2014/15), 10-year average



NSW

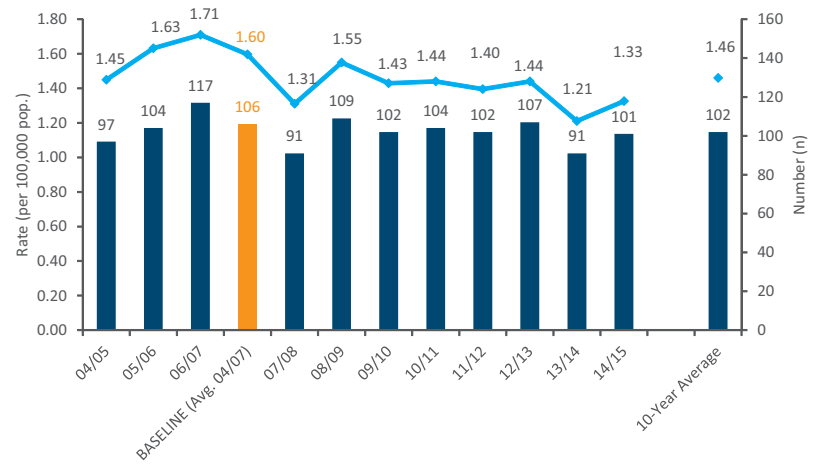
1,125
DROWNING DEATHS
2004/05 TO 2014/15

78%

- 20%** SWIMMING & RECREATING
- 18%** FALLS INTO WATER
- 14%** UNKNOWN
- 28%** RIVER/CREEK/STREAM
- 20%** BEACH
- 14%** SWIMMING POOL

NEW SOUTH WALES (NSW)

Figure 27: Drowning deaths and rates per 100,000 population, New South Wales (2004/05 to 2014/15), 10-year average





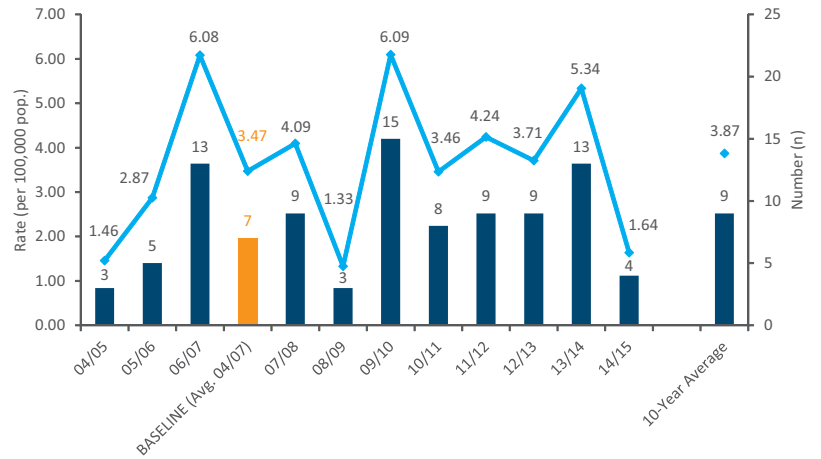
91
DROWNING DEATHS
2004/05 TO 2014/15

NORTHERN TERRITORY (NT)

Figure 28: Drowning deaths and rate per 100,000 population, Northern Territory (2004/05 to 2014/15), 10-year average

85%

- 34%** SWIMMING & RECREATING
- 20%** FALLS INTO WATER
- 12%** UNKNOWN
- 42%** RIVER/CREEK/STREAM
- 16%** SWIMMING POOL
- 14%** OCEAN/HARBOUR



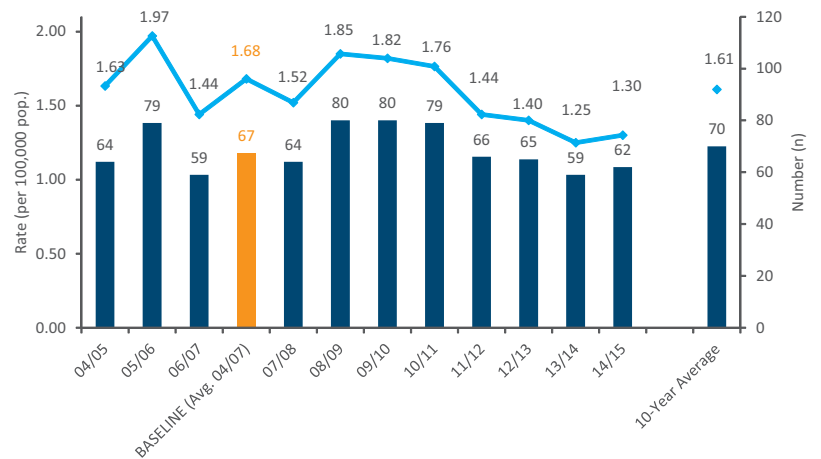
757
DROWNING DEATHS
2004/05 TO 2014/15

QUEENSLAND (QLD)

Figure 29: Drowning deaths and rate per 100,000 population, Queensland (2004/05 to 2014/15), 10-year average

87%

- 24%** FALLS INTO WATER
- 23%** SWIMMING & RECREATING
- 13%** BOATING
- 34%** RIVER/CREEK/STREAM
- 18%** SWIMMING POOL
- 17%** OCEAN/HARBOUR





179
DROWNING DEATHS
2004/05 TO 2014/15

SOUTH AUSTRALIA (SA)

Figure 30: Drowning deaths and rate per 100,000 population, South Australia (2004/05 to 2014/15), 10-year average

74%

25% SWIMMING & RECREATING

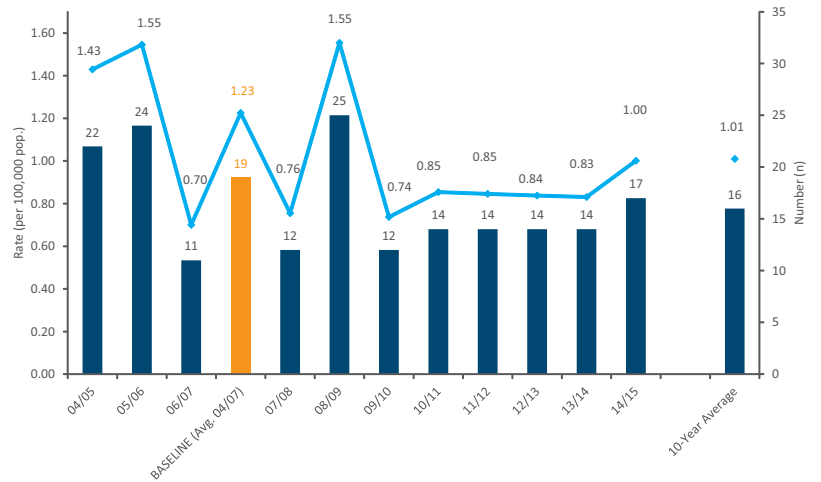
18% FALLS INTO WATER

22% UNKNOWN

22% BEACH

22% OCEAN/HARBOUR

20% RIVER/CREEK/STREAM



120
DROWNING DEATHS
2004/05 TO 2014/15

TASMANIA (TAS)

Figure 31: Drowning deaths and rate per 100,000 population, Tasmania (2004/05 to 2014/15), 10-year average

83%

25% BOATING

20% FALLS INTO WATER

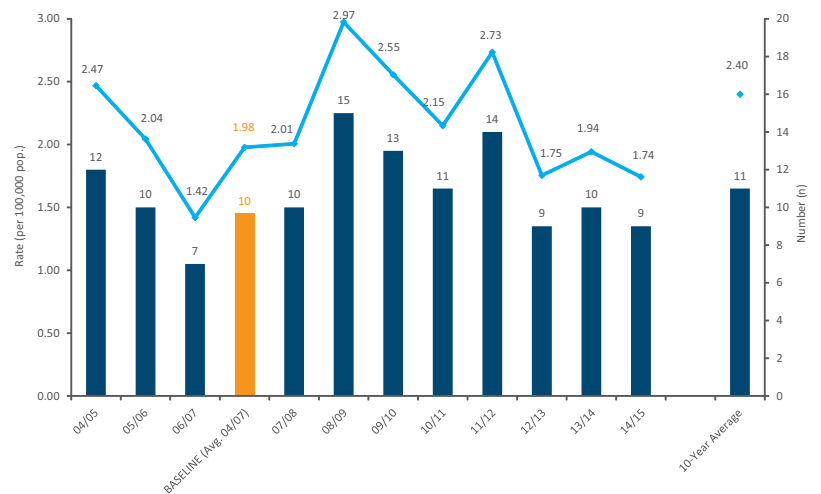
9% SWIMMING & RECREATING

31% RIVER/CREEK/STREAM

29% OCEAN/HARBOUR

11% BATHTUB/SPA BATH

11% BEACH





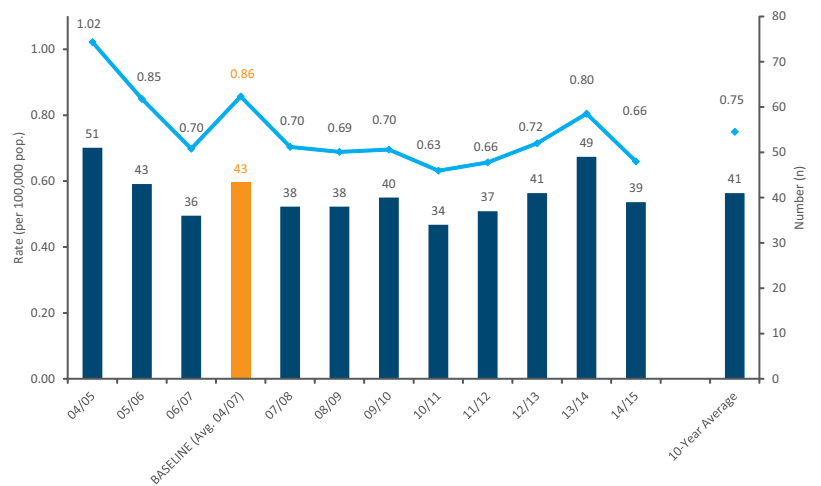
446
DROWNING DEATHS
2004/05 TO 2014/15

VICTORIA (VIC)

Figure 32: Drowning deaths and rate per 100,000 population, Victoria (2004/05 to 2014/15), 10-year average

78%

- 20% FALLS INTO WATER
- 19% SWIMMING & RECREATING
- 16% UNKNOWN
- 24% RIVER/CREEK/STREAM
- 17% BEACH
- 16% OCEAN/HARBOUR



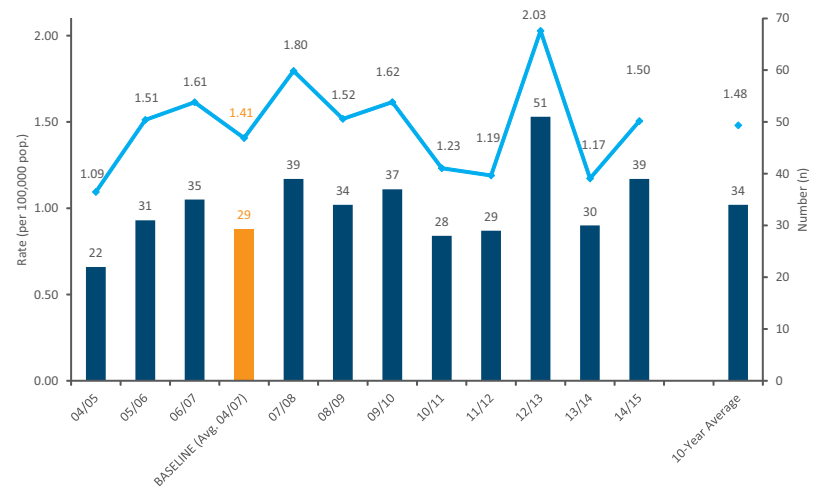
375
DROWNING DEATHS
2004/05 TO 2014/15

WESTERN AUSTRALIA (WA)

Figure 33: Drowning deaths and rate per 100,000 population, Western Australia (2004/05 to 2014/15), 10-year average

81%

- 21% SWIMMING & RECREATING
- 19% FALLS INTO WATER
- 12% BOATING
- 20% OCEAN/HARBOUR
- 18% BEACH
- 17% RIVER/CREEK/STREAM
- 17% SWIMMING POOL



Drowning Data Methodology

The data presented in the Australian Water Safety Strategy 2016-20 is drawn from the Royal Life Saving Society - Australia National Fatal Drowning Database (the database). The database details information about all unintentional fatal drowning in Australia since 1 July 2002. The database currently has 13 financial years of drowning data to 30 June 2015.

Information within the database is primarily sourced through ethical access to the Australian National Coronial Information System (NCIS), with data supplemented through State and Territory Coronial Offices, police reports, data corroboration with Surf Life Saving Australia and the Queensland Family and Child Commission and media reports.

All care is taken to ensure that the information in this report is as accurate as possible. Please note however that figures may change depending upon the outcomes of ongoing coronial investigations. It is more likely to affect recent years of data where investigations are likely to still be underway.

Data presented in the Australian Water Safety Strategy 2016-20 is correct as at 27 January 2016, in accordance with Royal Life Saving's ongoing data quality assurance policy. All cases in the database are checked against the NCIS on a regular basis and figures updated in subsequent strategies.

The baseline year of data, used in most figures displaying drowning data throughout this document, is a three-year average calculated from the 2004/05 to 2006/07 financial years. The ten-year averages are calculated using data from 2004/05 to 2013/14 (inclusive).

Drowning rates per 100,000 people are calculated using population data from the Australian Bureau of Statistics (ABS) publication 'Australian Demographic Statistics' (Cat 3101.0)²⁵. Percentages and averages are presented as whole numbers and have been rounded up or down accordingly.

The data in this document excludes 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 was known to be a factor.

The category of 'Non-aquatic transport' relates to drowning deaths involving means of transport not primarily designed or intended to for aquatic use such as cars, motorbikes, bicycles and machinery among others. Means of transport primarily used for aquatic purposes are defined under the 'boats' and 'watercraft' as per the Glossary of Key Terms and Acronyms.

The alcohol- and drug-related drowning section of the strategy relates to drowning deaths where alcohol and/or drugs (both prescription and/or illicit) were known to be involved. The high-risk populations referred to in this strategy relate to any and all of the following: Aboriginal and Torres Strait Islanders, people from culturally and linguistically diverse (CALD) backgrounds, international tourists and international students.

Activities included in Goal 9 of this strategy – Reduce boating, watercraft and recreational activity related drownings – include drowning deaths as a result of incidents involving boats and watercraft, rock fishing, fishing and diving.

The category of 'swimming pool' includes home swimming pools, public swimming pools, hotel and motel pools and portable swimming pools, among others.

Glossary of Key Terms and Acronyms

The following is a glossary of key terms and acronyms used in the Australian Water Safety Strategy 2016-20.

Aquatic Industry: The workforce charged with all facets of water safety and drowning prevention. Examples include pool lifeguards, beach lifesavers, swim instructors etc.

AUSTSWIM: The Australasian Council for the Teaching of Swimming and Water Safety

AWSC: Australian Water Safety Council

AWSS: Australian Water Safety Strategy

Boats: Water-based wind or motor powered vessels, boats, ships and personal watercraft (e.g. boats, jet skis, sail boats, yachts, catamarans).

Coastal: A location that relates to coastal areas such as foreshore, beach, harbour, coastal waters (oceans) and coastal rocks. Coastal waters are inclusive to 12nm offshore.

Disaster: A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. ²⁶

Drowning: The process of experiencing respiratory impairment from submersion/immersion in liquid. ¹

Extreme weather: Weather at the extremes of the historical distribution, including unusual, severe or unseasonal weather. ²⁷

Flood: A general or temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waters from the unusual and rapid accumulation or runoff of surface waters from any source. ²⁸

Inland: A location that relates to inland areas such as rivers, creeks, streams, lakes, dams and lagoons. These may vary in width, depth and water flow depending on environmental conditions such as drought or flood.

International Tourist: An international tourist is defined as someone who does not ordinarily reside in Australia, that is, has a residential address in a country other than Australia. This is commonly indicated on the National Coronial Information System for those who drown in Australia as a residential postcode of 7777. ²⁹

NCP: National Code of Practice

Non-Fatal Drowning: The outcome of respiratory impairment from submersion/immersion in liquid where the outcome is not initially fatal (i.e. the victim remained alive after the acute event). Someone who experiences a non-fatal drowning may experience morbidity (injury) or no morbidity. ¹

RLSSA: Royal Life Saving Society - Australia

SLSA: Surf Life Saving Australia

Survival swimming: Basic level of swimming skills coupled with a basic level of water safety knowledge. These basic swimming skills are defined as the ability to swim a distance no less than 25m, flotation for a duration of one minute and performance of basic rescue techniques. ³⁰

Watercraft: Water-based non-powered recreational equipment such as those that are rowed or paddled (e.g. rowboats, surfboards, kayaks, canoes, stand up paddle boards, boogie boards, windsurfers, inflatable rafts and inflatable boats without motors). ³¹

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Appendix One: Developing the Strategy 2016-2020

This consultation draft of the Australian Water Safety Strategy 2016-2020 (AWSS 2016-20) builds upon previous Australian water safety plans and strategies. It was developed by the Australian Water Safety Council (AWSC) in collaboration with water safety agencies, government and other groups with an interest in preventing drowning.

There are six phases to the AWSS 2016-20 development process:

- National Drowning Prevention Summit – August 2014
- AWSC consideration of recommendations arising from the summit (September 2014 to March 2015)
- Development of the consultation draft (April-May 2015)
- Request for feedback, workshops and review meetings (July – September 2015)
- Confirmation of the AWSS 2016-20 (November 2015)
- Launch of the AWSS 2016-20 (March 2016)

Since 1998 there have been four successive Australian Water Safety Strategies, each developed under the auspices of the Australian Water Safety Council (Figure 35: Four Australian Water Safety Strategies). The basis for each revision has been consideration of the changing patterns of drowning, followed by consultation with a diverse range of stakeholders.

This draft provides a basis for drowning prevention programs in order to have the greatest chance of achieving a 50% reduction in drowning in Australia by the year 2020. Based on consultation with a range of stakeholders including state and territory water safety councils this document will be amended prior to release. This process will ensure that the final strategy reflects the concerns at a state and territory level as well as nationally.

Four Australian Water Safety Strategies

The First National Water Safety Plan 1998

Subtitled - Fostering Cooperation and Commitment in the Fight Against Drowning, this plan identified 24 recommendations under four key result areas. The plan identified the three highest-risk groups as: children in the 0-5 age group; males 16-35 years - the traditional risk-taking group; and the rural community.

The National Water Safety Plan 2004-2007

Subtitled - Continuing Cooperation and Commitment in the Fight Against Drowning, this plan identified four key result areas: water safety education; water safety research; aquatic locations; and targeting key at-risk demographics. Its ultimate goals remained “zero drowning deaths and the establishment of a water safety culture”.

Australian Water Safety Strategy 2008-2011

Subtitled – Reducing Drowning Deaths by 50% by 2020, this strategy identified three key drivers, which in combination with efforts to leverage the Drowning Prevention Pillars, would achieve the reduction in deaths aimed for in the strategy. Taking a life stages approach, targeting high-risk locations and meeting several significant drowning challenges formed the basis of this ambitious goal.

Australian Water Safety Strategy 2012-2015

Subtitled – Towards a Nation Free from Drowning, this strategy built upon previous Australian water safety plans and strategies and identified three key priority areas and 10 goals that, if achieved, would contribute to a significant reduction in drowning in Australia.

Figure 34: Four Australian Water Safety Strategies

Appendix Two: Australian Water Safety Strategy Framework

Priority Areas and Goals

After considerable feedback, consultation and reflection on the previous goals outlined in the AWSS 2012-15, significant changes were made to address future needs in the AWSS 2016-20. Figure 36 outlines where adjustments were made as a result of deliberations at the National Drowning Prevention Summit and in consultation with the AWSC and state and territory water safety councils.

Addressing the large burden of male drowning between the ages of 25 and 44 years has been elevated to a goal in the AWSS 2016-20. In this age group, men account for 84% of drowning deaths.

AWSS 2012-15	AWSS 2016-20
Priority Area One: Taking a Life Stages Approach	
1. Reduce drowning deaths in children aged 0-14	1.Reduce drowning deaths in children aged 0-14
2. Reduce drowning deaths in young people aged 15-24	2. Reduce drowning deaths in young people aged 15-24
3. Reduce drowning deaths in older people aged 55+	3.Reduce drowning deaths in males aged 25-64
	4. Reduce drowning deaths in people aged 65+
Priority Area Two: Targeting High-Risk Locations	
4. Reduce drowning deaths at inland waterways	5. Reduce drowning deaths at inland waterways
5. Reduce surf beach drowning deaths	6. Reduce drowning deaths in coastal waters
6. Reduce drowning deaths by strengthening the aquatic industry	7. Reduce drowning deaths by strengthening the aquatic industry
Priority Area Three: Focusing on Key Drowning Challenges	
7. Reduce alcohol and drug related drowning deaths	8. Reduce alcohol- and drug-related drowning deaths
8. Reduce drowning deaths attributed to watercraft and recreational aquatic activities	9. Reduce boating, watercraft and recreational activity related drownings
9. Reduce drowning deaths in high-risk populations	10. Reduce drowning deaths in high-risk populations
10. Reduce the impact of disaster and extreme weather on drowning deaths	11. Reduce the impact of disaster and extreme weather on drowning deaths

Figure 35: Comparison of goals between the AWSS 2012-15 and the AWSS 2016-20

Appendix Three: National Water Safety Education Competency Framework

In the first National Water Safety Plan released in July 1998, the Australian Water Safety Council proposed the concept of 'water safety competency targets' and stated they were to be established at appropriate age and developmental levels. These competencies were further refined in subsequent strategies to the competencies that you see in the table below ³². The framework allows for the definition of minimum competencies and for achievement to be benchmarked against those competencies to ensure all children have a basic level of swimming and water safety skill and knowledge prior to leaving primary school. These skills are important throughout the life span to reduce the risk of drowning.

School Level	Competency framework	Minimum competencies	% Target Population
(I) Infant And Pre-School	Experience in skill competencies for safe water entries & exits, floating & sculling, breathing, movement & swimming strokes, survival & underwater skills, water safety education & parent education	<ul style="list-style-type: none"> Participation in the program 	100%
(II) Primary School	Personal Aquatic Survival section of the National Swimming and Water Safety Framework <ul style="list-style-type: none"> Competencies to be achieved by the completion of Primary School education 	<ul style="list-style-type: none"> Equivalent to Swim and Survive Level 4 (and Surf Ed where available) 	100%
		<ul style="list-style-type: none"> Level 5 Swim and Survive (and Surf Ed where available) 	75%
		<ul style="list-style-type: none"> Level 6 Swim and Survive (and Surf Ed where available) 	50%
(III) Secondary School	Life Saving section of the National Water Safety Framework – including exposure to Basic First Aid & Resuscitation Training <ul style="list-style-type: none"> Competencies to be achieved by the completion of Year 10 	<ul style="list-style-type: none"> Equivalent to RLSSA Dry Rescue, including Resuscitation (and SLSA Surf Survival where available) 	100%
		<ul style="list-style-type: none"> RLSSA Bronze Star (and SLSA Surf Survival where available) 	75%
		<ul style="list-style-type: none"> RLSSA/SLSA Bronze Medallion 	50%

Figure 36: National Water Safety Education Competency Framework

Past Contributors

Principal contributors to the 2012-2015 document were:

Amy Peden, Justin Scarr, Rob Bradley, Peter George, Matthew Griffiths, Penny Larsen, Emily Herde, Gordon Mallet, Chris Symington, Kim Alexander and John Lippmann.

Principal contributors to the 2008-2011 document were:

Justin Scarr, Dr Richard Franklin, Peter Agnew, Ben Whibley, Rob Bradley, Brett Williamson OAM, Amy Peden and Tarina Rubin.

Acknowledgement:

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AUSTRALIAN WATER SAFETY COUNCIL

Suite 6, Level 4
173-179 Broadway (Cnr Mountain St)
Broadway NSW 2007

PO Box 558, Broadway NSW 2007

Tel: (02) 8217 3111 Fax: (02) 8217 3199

watersafety.com.au



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