



# Position Paper: Prevention of drowning among young children (0-4 years)

## Background

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The globally accepted definition of drowning is “the process of experiencing respiratory impairment from submersion/immersion in a liquid” (1). Drowning includes both fatal and non-fatal outcomes, with or without injury.

Globally, children aged 1-4 years are the group most vulnerable to drowning. The World Health Organization identifies that the rapid increases in mobility of this age group, coupled with a relative inability to get out of a water body, is the primary reason for this vulnerability (2). In high-income contexts, drowning among this age group most commonly occurs in home swimming pools (3). While in low- and middle-income contexts, natural water bodies close to the home pose the highest risk (4). It stands to reason that infants (aged 0-12 months) are equally vulnerable if exposed to water bodies, most commonly drowning in bathtubs (5).

The Australian Water Safety Strategy 2016-2020 outlines reducing “drowning deaths in children aged 0-14” as a goal (6). Specifically, five key objectives are described that 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 (structured, supervised development of aquatic skills and water confidence in a safe environment (7)) and Cardiopulmonary Resuscitation (CPR);
- ii. Increase local, and in the case of Australia, state and territory government-based, systems that ensure compliance and enforcement of four-sided pool fencing;
- iii. Promote community-wide rescue and resuscitation skills;
- iv. Focus attention on the full burden of children drowning, including non-fatal drowning and impacts on families; and
- v. Promote secure safe play areas on farms, rural residential properties and recreation parks where children have unrestricted access to water (6).

## Position of the AIPN

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The AIPN recognises that:

- The globally accepted definition of drowning is adopted.
- Children under the age of five years are the age group most at risk of drowning.
- Child drowning is a preventable public health issue in Australia and New Zealand.
- Drowning among young children happens quickly, silently, and without warning.
- While active adult supervision remains the most important prevention strategy, other complementary strategies exist to keep young children safe around water (8) (9).



- The consequences of non-fatal drowning can be lifelong loss of functional ability. Such impacts are costly to families and the economy (10).

The AIPN acknowledges that:

- 965 children (0-4 years of age) fatally drowned in Australia in the 25 years 1993/94–2017/18 (11), an average of 38.6 deaths per year. Gradual decreases have been seen in fatal drowning rates in this age group over time, with the 10-year average 2009/10–2018/2019 at 24.9 deaths per year (12).
- Between 2002/03 and 2014/15 in Australia, for every fatal drowning among 0 to 4 year olds, an additional 7.6 hospitalisations were recorded (10).
- In New Zealand, there were 212 fatal drownings among children under five years of age between 1993 and 2018. Decreases over the past 20 years have also been seen in New Zealand, with the average rate for under five fatal drownings reducing from 12 per year in 2000 to four per year in 2019 (13).
- In Australia, drowning among children aged 0-4 years most commonly occur in and around the home, from falls into backyard swimming pools, followed by bathtubs/spa bath. Drownings in this age group can also occur in rivers/creeks/streams, and lakes/dams/lagoons, albeit less frequently (11) (12).
- In New Zealand, this trend has reversed and the most common location for child drowning is outside the home.
- All child drownings are preventable.
- Lead programs in both Australia and New Zealand identify active adult supervision at all times as the best way to prevent drowning among young children (8)(9). A lack of adequate supervision is a factor in almost all drowning deaths among children under five years of age (14).
- Four-sided isolation fencing between the home and pool is effective at reducing drowning among young children in home swimming pools (15).
- Pool barrier legislation which is supported by an enforcement regime is effective at reducing the risk of drowning among young children (3).
- Fatal drowning among children aged 0-4 years costs the Australian economy \$183 million annually; therefore further investment in prevention is vital (16).

## Recommendations

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1. To prevent drowning, increase awareness of the importance of active adult supervision at all times that a young child is near – or has access to – water.
2. Support and promote water safety programs that focus on child drowning prevention.
3. Promote strategies to reduce inequities and improve outcomes for those young children at greatest risk of drowning, including: Aboriginal and Torres Strait Islander children, Māori children, multicultural children, children experiencing socio-economic disadvantage, and children living in rural and remote areas.



4. All programmes and initiatives designed to address drowning risk for Māori recognise and give effect to the principles of Te Tiriti o Waitangi, both in the development and implementation stages.
5. Support cross-sectoral collaboration between water safety organisations, child health and safety organisations, local government, research institutions, policymakers, and the community.
6. Advocate to all levels of government the importance of consistent pool barrier legislation and enforcement strategies.
7. Encourage all pool owners to regularly check and maintain their pool barriers.
8. Encourage landowners, the business community and the general public to actively and regularly assess and mitigate water hazards and the risk they pose to young children.
9. Encourage all members of the Australasian community to undertake regular cardiopulmonary resuscitation (CPR) training.
10. Advocate for improved data collection and reporting on non-fatal drowning among young children.

## Links

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Royal Life Saving Society Australia:

<https://www.royallifesaving.com.au/programs/keep-watch-toddler-drowning-prevention-program>

Water Safety New Zealand:

<https://watersafety.org.nz/Eight%20ways%20to%20keep%20babies%20and%20toddlers%20water%20safe>

## Authors / Acknowledgements

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## About the Australasian Injury Prevention Network

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The Australasian Injury Prevention Network (AIPN) is the peak body in Australia and New Zealand advocating for injury prevention and safety promotion. The AIPN represents injury researchers, policy makers and practitioners across Australia and New Zealand.

The Australasian Injury Prevention Network acknowledges and pays respects to the First Custodians of the many lands on which its work takes place.

The AIPN has been in operation since 1996.

## Disclaimer

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The author(s) declare(s) that there is no conflict of interest.

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## References

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1. *A new definition of drowning: towards documentation and prevention of a global public health problem.* van Beeck E, Branche CM, Szpilman D, et al. s.l. : Bulletin of the World Health Organization, 2005, Vols. 83: 853-856.
2. World Health Organization. *Preventing drowning: an implementation guide.* Geneva : World Health Organization, 2017.
3. Franklin RC and Peden AE. *Improving Pool fencing Legislation in Queensland, Australia: Attitudes and Impact on Child Drowning Fatalities.* International Journal of Environmental Research and Public Health, 2017, Vol. 14: 1450.
4. Rahman A, Mashreky SR, Chowdhury SM et al. *Analysis of the childhood fatal drowning situation in Bangladesh: exploring prevention measures for low income countries.* Injury Prevention , 2009, Vols. 15: 75-79.
5. Peden AE, Franklin RC, Pearn JH. *Unintentional fatal child drowning in the bath: A 12-year Australian review (2002-2014)* Journal of Paediatrics and Child Health, 2018, Vols. 54: 153-159.
6. Australian Water Safety Council. *Australian Water Safety Strategy 2016-2020.* Sydney: Australian Water Safety Council, 2016.
7. Royal Life Saving Society - Western Australia. Water Familiarisation. *Royal Life Saving Western Australia.* [Online] 2019. [Cited: 16 December 2019.] <https://royallifesavingwa.com.au/your-safety/at-home/water-familiarisation>.
8. Water Safety New Zealand. Eight ways to keep babies and toddlers water safe. *Water Safety New Zealand.* [Online] Water Safety New Zealand, 2019. [Cited: 21 October 2019.] <https://watersafety.org.nz/Eight%20ways%20to%20keep%20babies%20and%20toddlers%20water%20safe>.
9. Royal Life Saving Society - Australia. Keep Watch. *Royal Life Saving Society - Australia.* [Online] Royal Life Saving Society - Australia, 2019. [Cited: 21 October 2019.] <https://www.royallifesaving.com.au/programs/keep-watch-toddler-drowning-prevention-program>.



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10. Mahony A, Barnsley P, Peden AE, Scarr J (2017) A thirteen year national study of non-fatal drowning in Australia: Data challenges, hidden impacts and social costs, Royal Life Saving Society – Australia. Sydney
11. Peden AE, Mahoney A. *Trends in Child Drowning Over The Last 25 Years*. Sydney : Royal Life Saving Society - Australia, 2018.
12. Royal Life Saving Society - Australia. *Royal Life Saving National Drowning Report 2019*. Sydney : Royal Life Saving Society - Australia, 2019.
13. Water Safety New Zealand. Drowning Report 2018. *Water Safety New Zealand*. [Online] Water Safety New Zealand, 2018. [Cited: 21 October 2019.] <https://drowningreport.watersafety.org.nz/>.
14. Peden AE, Franklin RC *Causes of distraction leading to supervision lapses in cases of fatal drowning of children 0-4 years in Australia: A 15-year review*. *Journal of Paediatrics and Child Health*, 2020, 56: 450-456.
15. Thompson, DC., & Rivara, FP. (2006). Pool fencing for preventing drowning in children. *The Cochrane Database of Systematic Reviews* 1998, Issue 1. Art. No.: CD001047.
16. Barnsley PD, Peden AE, Scarr J *Calculating the economic burden of fatal drowning in Australia*. *Journal of Safety Research*, 2018, Vols. 67: 57-63.