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# Water-related fatalities in children and young people under 25 years of age, Wales, 2013-2022

Version 1.0



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accidents don't have to happen

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## Main Points: non-intentional water-related fatalities

1. There were 62 non-intentional water-related fatalities in Wales in children and young people under 25 years of age between 2013 and 2022.
2. Almost half of all fatalities occurred during June, July and August, and Sunday was the most common day.
3. 79% of the children and young people were male.
4. Over half of the fatalities occurred in the 18-24 years age group; this age group were overrepresented compared with the size of the population.
5. The presence of drugs or alcohol was noted in almost half of fatalities in the 18-24 years age group.
6. Almost half of the children and young people were taking part in activities where they had not intended entering the water when the fatal incident occurred.
7. A third of fatalities occurred in a river and a third occurred at the coast, shore, or beach.
8. Over half of the fatalities occurred in five out of 22 local authorities.
9. In fatalities involving the under 18 years age group who were Welsh residents, the majority (94%) resided in the same local authority in which the incident occurred.

## Background

The aim of this report is to help inform the work of water safety professionals in Wales to prevent future deaths of children and young people from water-related fatalities.

The death of a child or young person has devastating and life changing impacts on families and the wider community. Drowning is the second most common cause of non-intentional injury fatalities in children under 18 years of age in Wales, after transport related fatalities<sup>1</sup>. The Child Death Review Programme, [Water Safety Wales](#) and The Royal Society for the Prevention of Accidents (RoSPA) noted five deaths of children under 18 years of age from drowning in 2022. This was higher than in previous years, which led to them working in partnership to produce this report.

The Child Death Review Programme published the [Thematic review of deaths of children and young people through drowning](#) in 2016 and made a series of recommendations. Good progress has been made towards many of the recommendations including the establishment of an all-Wales forum for water safety. An existing Water Safety group expanded into Water Safety Wales which consists of around 40 organisations. Water Safety Wales developed the [Wales Drowning Prevention Strategy \(2020-2026\)](#) and there are numerous examples of drowning prevention and water safety activities aimed at children and young people in Wales (Appendix A).

## Parent Story

Carli Newell lost her 11-year-old son Zac Thompson in summer 2022. Carli said:

'As a 36-year-old mother of two boys, I have resided in Pembrokeshire, West Wales, my entire life and currently hold the position of a journalist for a local newspaper.

On the evening of 1st July 2022, Zac, along with his elder brother, cousin, and another local boy, were playing at the football field in Angle. Upon walking their friend home, who resides adjacent to the beach, the boys decided to perch upon the rocks and observe the sunset. With no intention of entering the water, they neglected to inform anyone before venturing to the beach. Shortly after 9pm, an unexpected wave forcefully swept Zac, his brother, and cousin into the water.

Fortunately, his brother and cousin managed to clamber onto nearby rocks. Sensing Zac's struggle, his elder brother advised the cousin to run to the beach and seek assistance. Without hesitation, his brother plunged back into the water, swimming towards Zac and instructing him to grasp his foot. Together, they swam towards the rocks until, just as his brother reached for a rock, another powerful wave separated them, dragging Zac farther out into the water where he became trapped in a whirlpool. Despite the combined efforts of numerous medical professionals, members of the public and a significant presence of emergency services, Zac never regained consciousness and succumbed to his injuries in the hospital on 2nd July.

Zac's tragic and abrupt passing has inflicted indescribable devastation upon our family, tearing the very core of those who knew and loved him. Following news of Zac's passing, the entire community was consumed by grief. A year on, the impact of Zac's death is still palpable within our community.

Zac possessed an infectious personality; funny, cheeky, intelligent, kind, and extremely courageous. Despite his small stature, he emanated a larger-than-life aura, drawing people towards him.



**A charity has been established in his honour called [Forever 11](#), which is dedicated to imparting water safety awareness to children and young individuals. Zac remains affectionately remembered by all who knew him, with several memorial matches held in the sports he adored, a tradition that will endure for years to come.**

In a nation blessed with fantastic beaches, bays, harbours, lagoons and inland waters, the significance of water safety and education regarding appropriate actions during emergencies cannot be overstated.



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The latest statistics concerning accidental drownings in Wales paint a bleak picture, particularly for children and young individuals, especially boys. It is heart-wrenching to witness the number of water-related fatalities in children and young people in Wales in recent years. Clearly, more can be done to decrease these rates and safeguard our children as they revel in and respect the water. I support this report and urge everyone to read its evidence carefully and consider what more they can do to help children and young people enjoy the water safely.'

## Measuring the data

### Data sources

Data were obtained from the Water Incident Database (WAID) and the Child Death Review Programme (CDRP). WAID is web-based data collection, gathering water-related incident data from a wide range of sources within the UK search and rescue region for all ages. A more detailed description of the system can be found at [www.nationalwatersafety.org.uk/waid](http://www.nationalwatersafety.org.uk/waid). CDRP collects information on deaths of children under 18 years of age, it includes all deaths (or events that lead to death) that occur in Wales, and deaths of Welsh-resident children who die outside of Wales. A more detailed description can be found at <https://phw.nhs.wales/services-and-teams/child-death-review>. Data between the WAID and CDRP databases were cross referenced and cleaned for children under 18 years of age.

### Data analysis

Inclusion criteria: water-related fatalities in children and people under 25 years of age between 1 January 2013 and 31 December 2022 where the event leading to death occurred in Wales (or occurred outside of Wales in children under 18 years of age).

The main analysis of data in this report was based on non-intentional ('accidental' or natural causes) water-related fatalities that occurred in Wales from 2013 to 2022 and described the characteristics in terms of time, person, and place. Where appropriate, the mean (average) number of cases and standard deviation were calculated. It is expected that a number is within one standard deviation above or below the mean two thirds of the time. This gives a measure of whether there are counts or trends of concern.

It was not possible to calculate rates as the denominator was unknown as some of the children and young people were non-Welsh residents. The average annual population for comparison of the proportion of fatalities in each age group compared with the proportion of children and young people in each group in the population used Welsh population data as a proxy measure, even though it is noted that not all the fatalities were Welsh residents.

Intentional water-related fatalities, and fatalities of Welsh resident children that occurred outside Wales were briefly described.

### Strengths and limitations

#### Strengths

- Data from two different sources, CDRP and WAID, were used for fatalities under 18 years of age, which enabled cross referencing of data and cleaning of data for this age group.
- Both CDRP and WAID are national level population-based registries.

## Limitations

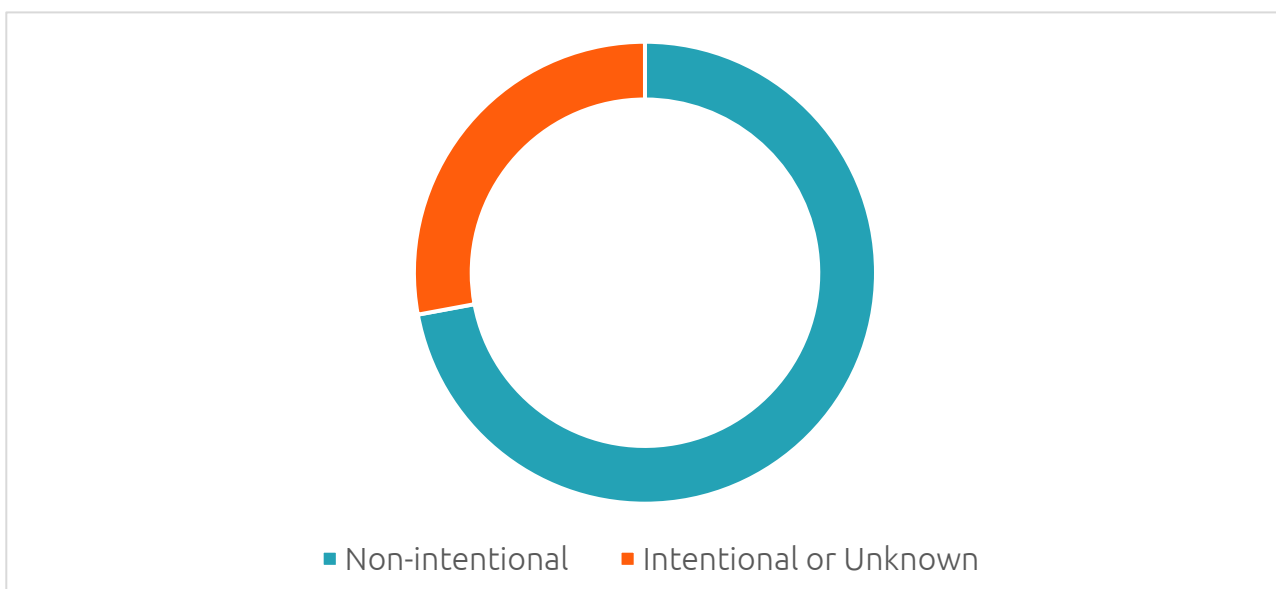
- CDRP does not include data on children and young people 18 or over, so it was not possible to cross reference the data for the 18-24 years age group.
- Data on ethnic group was only available for children under 18 years of age (via CDRP) but was around 50% incomplete therefore it was not possible to include in this report.
- Data on area of residence was not available for the 18-24 years age group.
- It was not possible to calculate the rate of water-related fatalities.
- There were a relatively small number of fatalities, so caution needs to be exercised when drawing conclusions from the data. Changes in small numbers due to natural variation can lead to large percentage changes so may appear to be more significant than they are.

## Findings

There were 86 water related fatalities in children and young people under 25 years of age that occurred in Wales between 2013 and 2022. 62 deaths were non-intentional ('accidental' or natural causes) and 24 were either intentional (suspected suicide or deliberately inflicted) or unknown. Less than five non-intentional water-related fatalities of Welsh-resident children under 18 years of age occurred outside of Wales during the same ten-year period. This figure is unknown for the 18–24-year age group.

This report will focus on the 62 non-intentional water-related fatalities in children and young people that occurred in Wales, with findings presented by time, person, and place.

Fig 1. Count of non-intentional ('accidental' or natural causes), intentional (suspected suicide or deliberately inflicted) and unknown water-related fatalities in children and young people, Wales, 2013-22. (Produced by CDRP, using CDRP and WAID data).



## Findings: Time

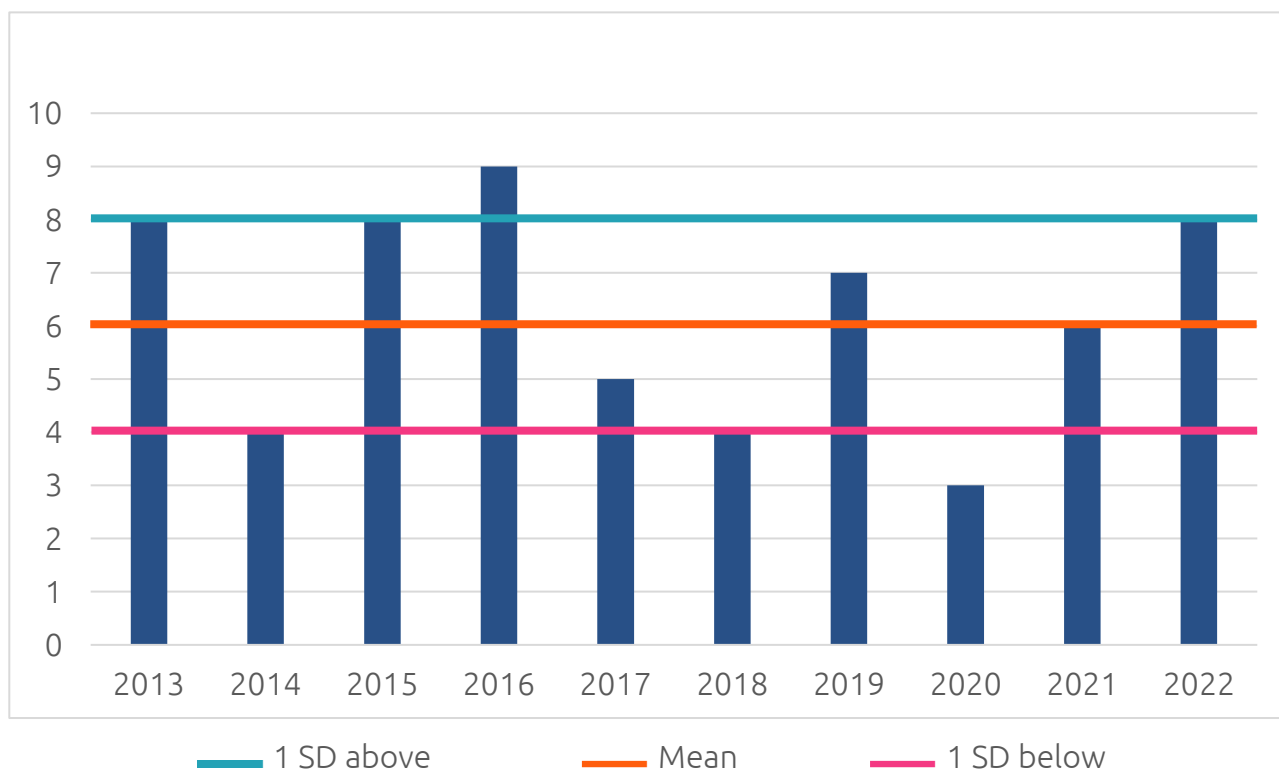
### Non-intentional water-related fatalities by year, season, and day of incident

#### Year

There were between three and nine fatalities per year during the 10-year period in children and young people under 25 years (fig 2). The lowest number of fatalities occurred in 2020 when there were three, and the highest number of fatalities occurred in 2016 when there were nine. The number of water-related fatalities recorded each year is small and the data can fluctuate over time, therefore any year-on-year changes should be interpreted with caution.

For children under 18 years of age (not shown separately), there were between one and five fatalities per year during the 10-year period. The lowest number of fatalities occurred in 2017 when there was one, and the highest number of fatalities occurred in 2022 when there were five.

Fig 2. Count of non-intentional water-related fatalities in children and young people, Wales, 2013-22, by year of incident. (Produced by CDRP, using CDRP and WAID data).



Mean and standard deviation: The mean number of fatalities per year over the 10-year period in children and young people under 25 years of age was six, and the standard deviation was two. The three fatalities in 2020 were outside of one standard deviation below the mean.

The nine fatalities in 2016 were outside one standard deviation above the mean. In every other year the number was within one standard deviation. It is expected that around one third of the time the number would be outside one standard deviation of the mean, so the variation in numbers is what



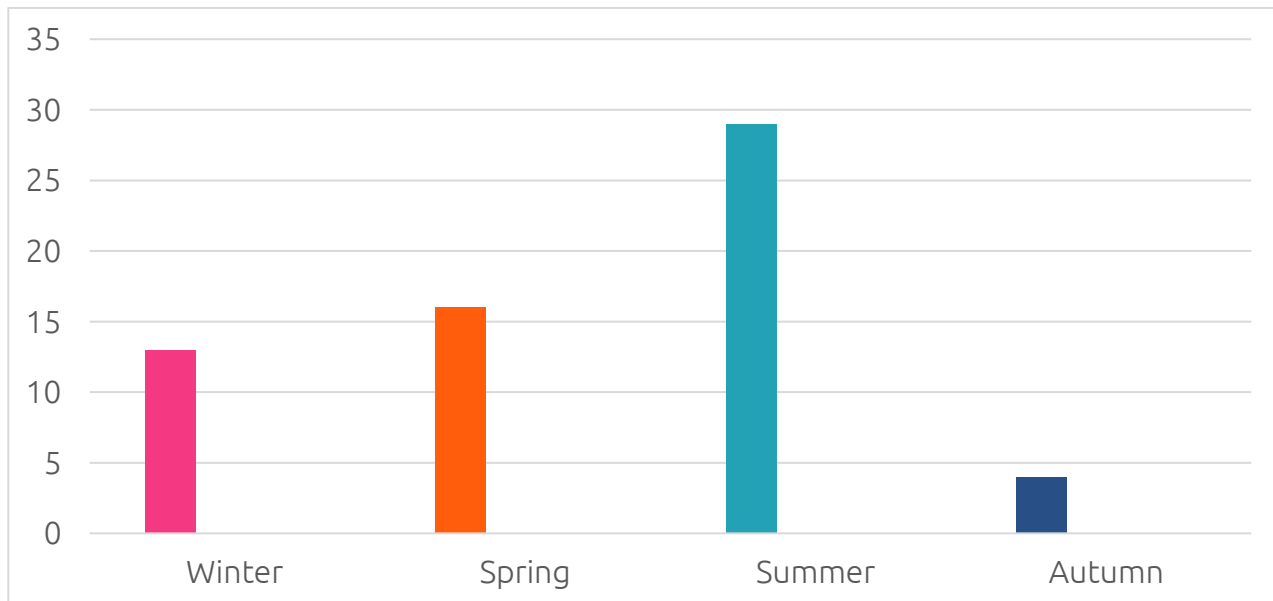
would be expected.

The mean number of fatalities per year over the 10-year period in children under 18 years of age was three per year, and the standard deviation was one. The one fatality in 2017 was outside of one standard deviation below the mean. The five fatalities in 2022 were outside one standard deviation above the mean. Although it would be expected that around one third of the time the number would be outside one standard deviation of the mean, it will still be important to monitor this in the future to determine whether there is an upward trend.

### Season

Almost half (29 out of 62, 47%) of all fatalities occurred during the summer months (June to August) (fig 3).

Fig 3. Count of non-intentional water-related fatalities in children and young people, Wales, 2013-22, by season of incident. (Produced by CDRP, using CDRP and WAID data).

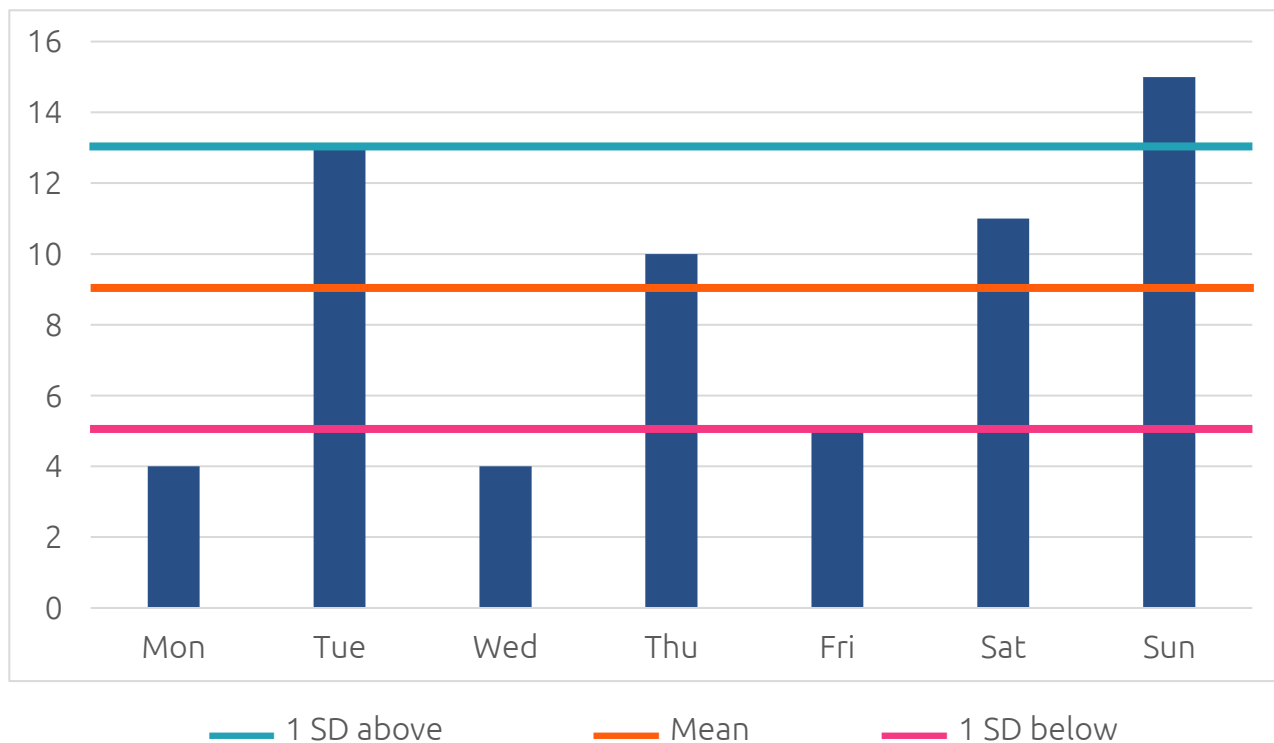


## Day

Fatalities most commonly occurred on a Sunday (fig 4).

Mean and standard deviation: The mean number of fatalities per day was nine. Three out of seven weekdays were outside one standard variation of the mean which is more than would be expected. Sunday was outside of one standard deviation above the mean. However, a peak at the weekend would be expected.

Fig 4. Count of non-intentional water-related fatalities in children and young people, Wales, 2013-22, by day of incident. (Produced by CDRP, using CDRP and WAID data).



## Findings: Person

### Non-intentional water-related fatalities by age and sex

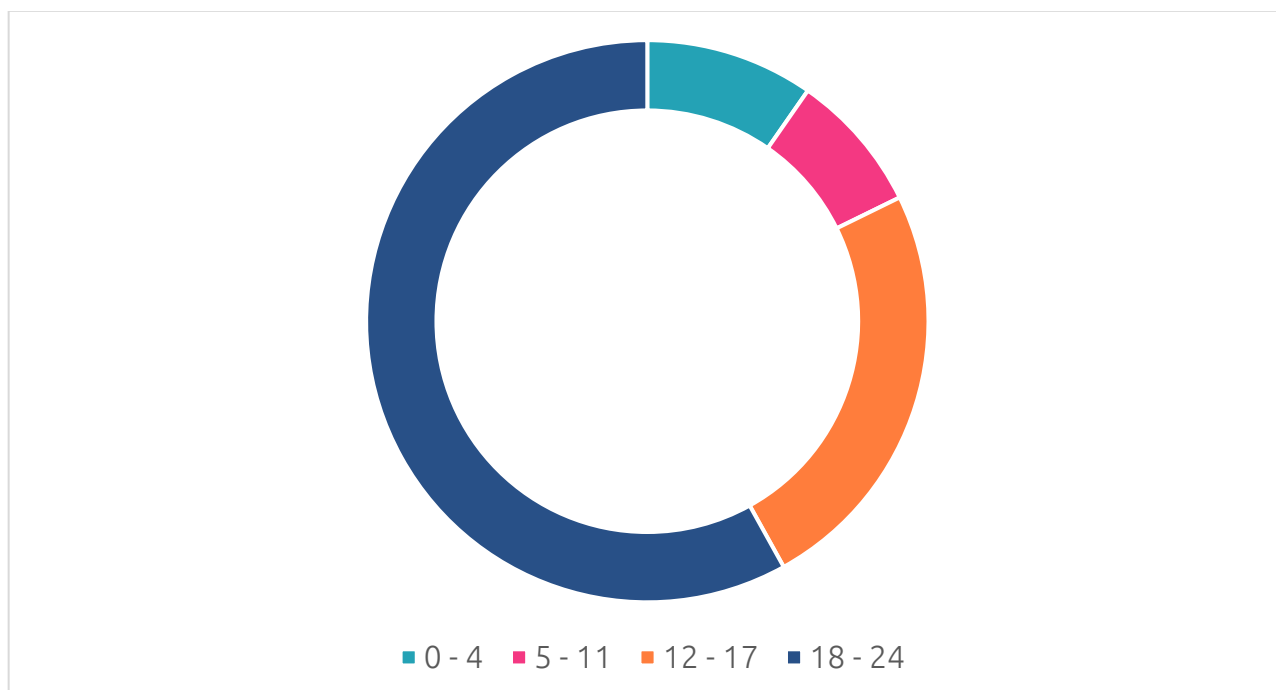
The majority of the 62 fatalities occurred in males, who accounted for 49 (79%) fatalities.

Over half (36 out of 62, 58%) (fig 5) of the children and young people were in the 18-24 years age group, even though the proportion of young people in this age group accounted for less than one third of the average annual population (2013-22) of children and young people aged 0-24 years of age<sup>2</sup>. If it is expected that the proportion of fatalities in each age group was similar to the proportion of children and young people in each age group in the average annual population, the 18-24 years age group were overrepresented.

Nearly a quarter (15 out of 62, 24%) were in the 12-17 years age group. This would be expected if the proportion of fatalities in this age group was similar to the proportion in the average annual population, as this age group accounted for nearly one quarter of the annual average population (2013-22) of children and young people aged 0-24 years of age.<sup>2</sup>

Children in the 0-4 years age group and 5-11 years age group were underrepresented as both groups represented less than 20% of the deaths but accounted for nearly half the average annual population (2023-22)<sup>2</sup>.

Fig 5. Proportion of non-intentional water-related fatalities in children and young people, Wales, 2013-22, by age group. (Produced by CDRP, using CDRP and WAID data).



### Non-intentional water-related fatalities and involvement of alcohol and drugs

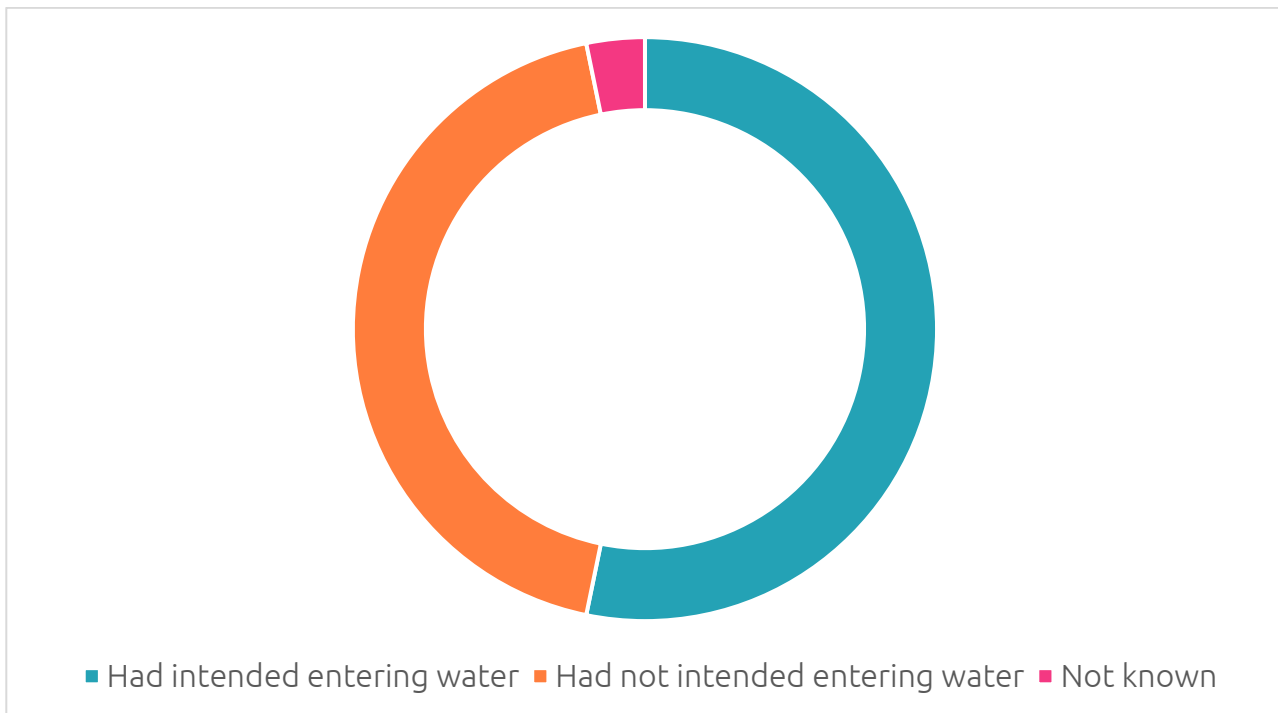
The presence of alcohol, drugs or a combination of alcohol and drugs were noted in 17 out of 62 children and young people. All were in the 18-24 years age group (17 out of 36, 47%) and none were noted in children under 18 years of age. The presence of alcohol or drugs was not noted by any supervisors of young children. It was not possible to determine the degree to which alcohol and drugs contributed to the fatalities in which alcohol and/or drugs were noted.

### Non-intentional water-related fatalities and type of activity during the incident

There were several different types of activity which were grouped into whether the child or young person intended to enter the water during the fatal incident. Activities where children and young

people intended entering the water included water play, swimming, and bathing. Activities where the child or young person had not intended entering the water included incidents involving boats or other vehicles and falls into or near water. Almost half (27 out of 62, 44%) (fig 6) of the children and young people had not intended entering the water during the fatal incident.

Fig 6. Count of intentional, non-intentional and unknown water-related fatalities in children and young people, Wales, 2013-22. (Produced by CDRP, using CDRP and WAID data).



## Findings: Place

### Non-intentional water-related fatalities by location of incident and location of residence

Over half (33 of 62, 53%) of the non-intentional water-related fatality incidents occurred in five local authority areas: Pembrokeshire (10), Gwynedd (seven), Conwy (six) Powys (five) and Vale of Glamorgan (five). There were fewer than five fatality incidents in each of the 17 other local authority areas in Wales.

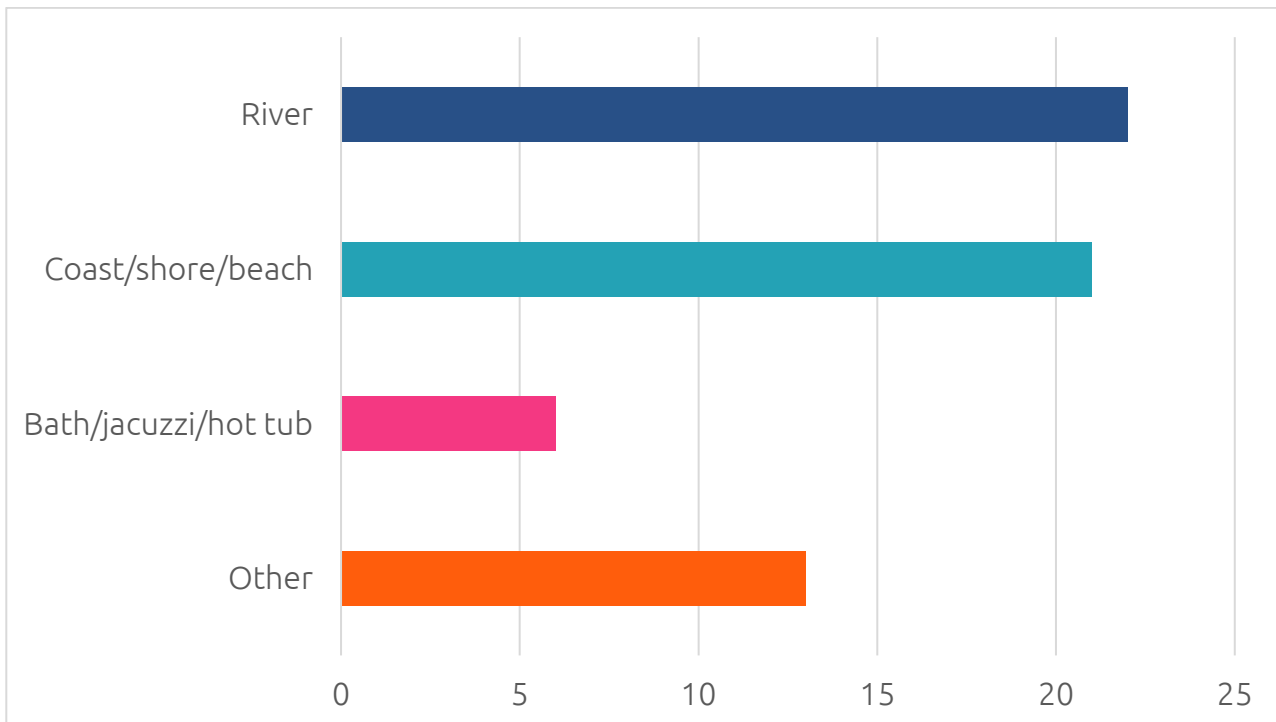
Location of residence was only available for children under 18 years of age. Eight out of 26 children under 18 years of age (31%) were residents outside of Wales. The majority (94%) of the 18 Welsh resident children resided in the same local authority in which the incident occurred.

### Non-intentional water-related fatalities by location type

Over a third of the non-intentional water-related fatalities occurred in a river (22 of 62), a third occurred at the coast, shore, or beach (21 of 62), and one in 10 occurred in a bath, jacuzzi or hot-tub

(six of 62) (fig 7). 13 fatalities occurred in other locations, including ponds, lakes, reservoirs, quarries, docks, pools or at sea.

Fig 7. Count of non-intentional water-related fatalities in children and young people, Wales, 2013-22, by location type. (Produced by CDRP, using CDRP and WAID data).



## Conclusions

There were 86 water-related fatalities in Wales in children and young people under 25 years of age between 2013 and 2022; 62 were non-intentional. For the non-intentional fatalities, almost half (47%) of the fatalities occurred during June, July and August, and Sunday was the most common day of occurrence. Seventy-nine percent of the children and young people were male. Over half (58%) of the fatalities occurred in the 18-24 years age group, even though the proportion of young people in this age group accounted for less than one third of the population of children and young people aged 0-24 years of age, therefore this age group was overrepresented. The presence of drugs or alcohol was noted in almost half (47%) of fatalities in the 18-24 years age group. Almost half of the children and young people (44%) were taking part in activities where they had not intended entering the water when the fatal incident occurred. A third of fatalities occurred in a river and a third occurred at the coast, shore, or beach and over half of the fatalities occurred in five out of 22 local authorities.

This information will be useful for water safety professionals to inform their prevention work in order to reduce the number of water-related fatalities in children and young people.



## Glossary

**Non-intentional** – refers to ‘accidental’ or natural cause fatalities.

**Intentional** – refers to deliberately inflicted or suspected suicide.

**Water-related fatality** – A water-related fatality refers to all deaths in, on or near to water. This includes drowning and falls into or near water.

**Seasons** – Summer (June, July, August), Spring (March, April, May), Autumn (September, October, November), Winter (December, January, February)

**Mean** – average of the data set.

**Standard deviation** – a summary measure of the amount of variation of a set of values from the mean.

**Average annual population** – the number of children and young people in the Welsh population in each age group between 2013 and 2022 (2022 figure used 2021 as a proxy) divided by ten.

## References

1. Public Health Wales. *Patterns and trends of child deaths in Wales, 2011-2020*. 2022 [accessed 16 June 2023]. Available at: [phw.nhs.wales/publications/publications1/patterns-and-trends-of-child-deaths-in-wales-2011-2020/](http://phw.nhs.wales/publications/publications1/patterns-and-trends-of-child-deaths-in-wales-2011-2020/)
2. Office for National Statistics. *Nomis – Official census and labour market statistics* [accessed 26 June 2023]. Available at: <https://www.nomisweb.co.uk>

## **Appendix A: Water Safety Wales: Examples of drowning prevention and water safety activities aimed at children and young people in Wales**

### **Swim Wales – Nofio Ysgol and Learn to Swim**

Learn to Swim Wales is a progressive seamless pathway beginning with a baby's first experience in the water through to competent swimmers who are fully equipped to enjoy aquatic activities for life and resulting in a healthier nation. Physical literacy and skills of water competence are the foundation of Learn to Swim Wales, with skills progressing as a participant moves through the Waves. There are also complementary Water Competence Cymru Awards, a series of awards focussing on water safety awareness, survival techniques and self-rescue. Approximately 55,000 children participate in swimming lessons each week in Wales (this figure fluctuates throughout the year).

Nofio Ysgol formalises national standards and methodology for the teaching of swimming to children throughout Wales. Learning skills of water competence, water safety, 'Learning through Play' and developing Physical Literacy in the aquatic environment are the foundations of Nofio Ysgol. Lessons should include fun activities and games in the pool, and should be adapted to help all children achieve their potential. Approximately 37,000 children attended school swimming sessions in the 2021/22 academic year.

### **Annual water safety letter to headteachers**

Each year Swim Wales, Water Safety Wales and RNLI send a letter to around 2,000 schools and headteachers in Wales prior to the summer holidays stressing the importance of sharing water safety education with their pupils and signposting them to information and resources available.

### **Water Safety Code**

A simple set of agreed water safety messaging for the youth audience focussing on four lifesaving points:

- Stop and think: Is it a safe place to swim and do you know the dangers?
- Stay together: Always go with someone else
- Float: If you get into trouble in the water, float to live until you feel calm
- Call 999 or 112: If you see someone else in trouble in the water

These messages form the core of water safety education sessions delivered to thousands of children and young people in schools and youth settings across Wales every year.

### **Scouting Cymru Water Safety Badge**

A five-week education programme for Scouts which incorporates all the Water Safety Code and is

delivered by scout leaders or in conjunction with volunteers from the Royal National Lifeboat Institution. Once the programme has been passed children will get an official RNLI/Scout Cymru Water Safety Badge.

### **Staywise Cymru**

StayWiseCymru is a free bilingual learning platform aimed at pupils aged 3 -18 years old. StayWiseCymru brings together educational resources of emergency services and blue light organisations which have been designed to complement the new curriculum in Wales. The site offers free lesson plans, videos, and activity sheets to help educators teach young people about potentially lifesaving advice within the curriculum areas of learning and experience. Teachers can also set work from the site as part of a remote learning plan for parents and carers to follow. StayWiseCymru also offers resources for households to use.

### **Swim Safe Cymru**

Swim Safe is a fun and free water safety activity for children created by Swim England and the RNLI. Delivery in collaboration with Swim Wales takes place in the summer at locations in Wales. Children get to enjoy a fun, structured swimming session at a choice of open water locations – and learn all about how to stay safe.

The 60-minute sessions are run by qualified lifeguards and instructors and includes water safety advice provided by qualified lifeguards on land, up to 30 minutes in-water tuition with qualified instructors and all the right kit for swimming outdoors.

### **Surf Lifesaving Association of Wales – nipper and youth programmes**

Surf Lifesaving Association of Wales (SLSAW) promotes water safety education, wellbeing and healthy lifestyle through beach and water sport in Wales. A voluntary association of 33 clubs and 3,500 members across Wales, members range from age seven to 97.

SLSAW provides water safety education through a range of awards for young people – nippers aged seven right through to the National Vocational Beach Lifeguard Qualification for those over 16. Water safety, beach awareness, first aid and life support is taught across all age groups. This is provided by 120 trainer-assessors and over 800 volunteer helpers.

### **Forever11 charity**

Families affected by drowning carry out fantastic water safety work across Wales. The Forever11 charity in Pembrokeshire was established following the sad death of Zac Thompson, 11, in Pembrokeshire in July 2022. The charity's vision is to eliminate drowning by educating people about water safety, promoting lifesaving by providing information advice and workshops and providing grants to organisations who work on water safety.

### **Water Safety Wales Education Subgroup**

The Water Safety Wales Education Subgroup, which has members from Royal Lifesaving Society, Royal National Lifeboat Institution, Swim Wales and Mid and West Wales Fire and Rescue Service, is



working to create a suite of consistent education assets, including a primary school assembly presentation (infants and juniors) to be used by all Water Safety Wales members and the wider public. The group is also creating a progression pathway and accompanying resource for Curriculum for Excellence and supporting advocacy and lobbying of Welsh Government regarding the importance of school swimming and water safety education. The group also promotes the importance of experiencing water safety education in outdoor environments.



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