

# WATER-RELATED FATALITY FACTS AT A GLANCE: CANADA 1991-2010



**CANADIAN  
RED CROSS**

## Background

Canadians enjoy an abundance of aquatic activities across thousands of waterfronts (oceans, lakes, rivers, and private pools) and recreational facilities. Tragically, hundreds of Canadians die each year in water-related incidents. Of these incidents, many of Canadians are injured or drown while engaging in activities where they never expected to enter into the water. Despite significant water safety awareness initiatives, Canadians continue to participate in unsafe behaviours around the water and continue to be at risk. Often, the risk of water-related injury and death when on or near the water is far greater than perceived.

Swimming skills combined with water safety knowledge and skills save lives.

The Canadian Red Cross is committed to preventing water-related injuries and fatalities. Part of this commitment is to provide other agencies and stakeholders in health promotion and injury prevention with research on drowning in Canada.

With the assistance of the Provincial and Territorial Coroner's offices, the Red Cross is able to look at who is drowning and in what circumstances. In addition to using this evidence-based data to build our Red Cross Swim program, this research is influential in determining Red Cross public education strategies and community initiatives, as well as identifying key messages and skills that all Canadians need to help them stay safe in, on and around the water.

Using data collected from the coroner's offices between 1991 and 2010, and opinion polling data commissioned by the Canadian Red Cross, this report will provide important information on water-related fatalities in Canada in the following areas: unexpected falls into water, boating and backyard pools.

The Canadian Red Cross is extremely concerned about Canadians' behaviour around water, and works year-round to promote water safety through awareness campaigns and skills training courses such as swimming lessons. Despite these efforts, water-related fatalities continue to take too many lives each year and more must be done to prevent future incidents.

**Swimming skills combined with water safety knowledge and skills save lives**

**The Canadian Red Cross is committed to preventing water-related injuries and fatalities**

**20 years: 10,511**

**Unexpected Falls: 1,951**

**Boating 3,324**

**Backyard Pools: 446**

## Facts at a glance

Annually on average,  
525 water-related  
fatalities

Almost 60% of  
fatalities occur in  
summer months

Children aged 1-4 and  
men 15-34 most at risk

Alcohol is a factor in  
at least 38% of water-  
related fatalities of  
individuals over 15  
years of age

## Across Canada

Every year, an average of 525 Canadians die needlessly in unintentional water-related incidents. Data compiled by the Canadian Red Cross for the period of 1991-2010 show that water-related fatalities occurred across all provinces and territories. The territories however, were at a particularly high risk with a rate of drowning several times the national average. While the Canadian Red Cross is pleased to see a decrease in the number of incidents, we continue to be concerned about the high number of annual water-related injuries and fatalities and Canadians' attitudes towards water safety.

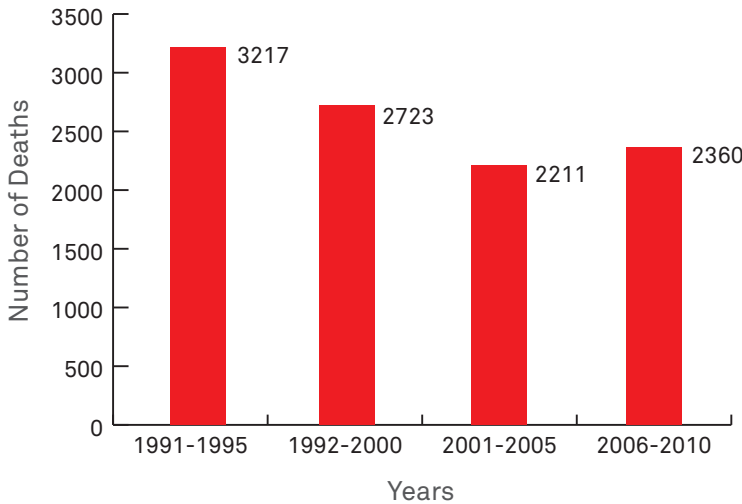
The majority of incidents, 57 per cent, occurred May 1- August 31 while Canadians engaged in recreational activities (60 per cent), on inland bodies of water such as lakes, ponds, rivers and streams (66 per cent). Among these incidents, almost 19 per cent were a result of unexpected falls meaning there was no intention of entering the water.

The data collected by the Canadian Red Cross also clearly point to the largest number of water-related fatalities for men between the ages 15-34, and men overall account for 83 per cent of all water-related fatalities. We always think to protect children around the water, ensure they are wearing lifejackets and are supervised. Adults, however, are responsible for their own safety.

Recent polling research by the Canadian Red Cross shows an alarming discrepancy between Canadians' risk of water-related injuries and their attitudes and behaviour towards water safety. For example, even though 82 per cent of Canadians believe there is a legal requirement to wear a lifejacket only 50 per cent of boat owners always wear one. In addition, for 51 per cent of Canadians, 'not allowing children under 10 to access the pool area' was their only strategy to prevent injuries related to backyard pools. Further, alcohol continues to play a contributing factor in drowning incidents with at least 26.5 per cent of fatalities being attributed to a blood alcohol level of above 80 mg% (for those over 15 years of age).

## Research Data: Trends across Canada

### Water-related fatalities Canada, 1991-2010 (n=10,511)

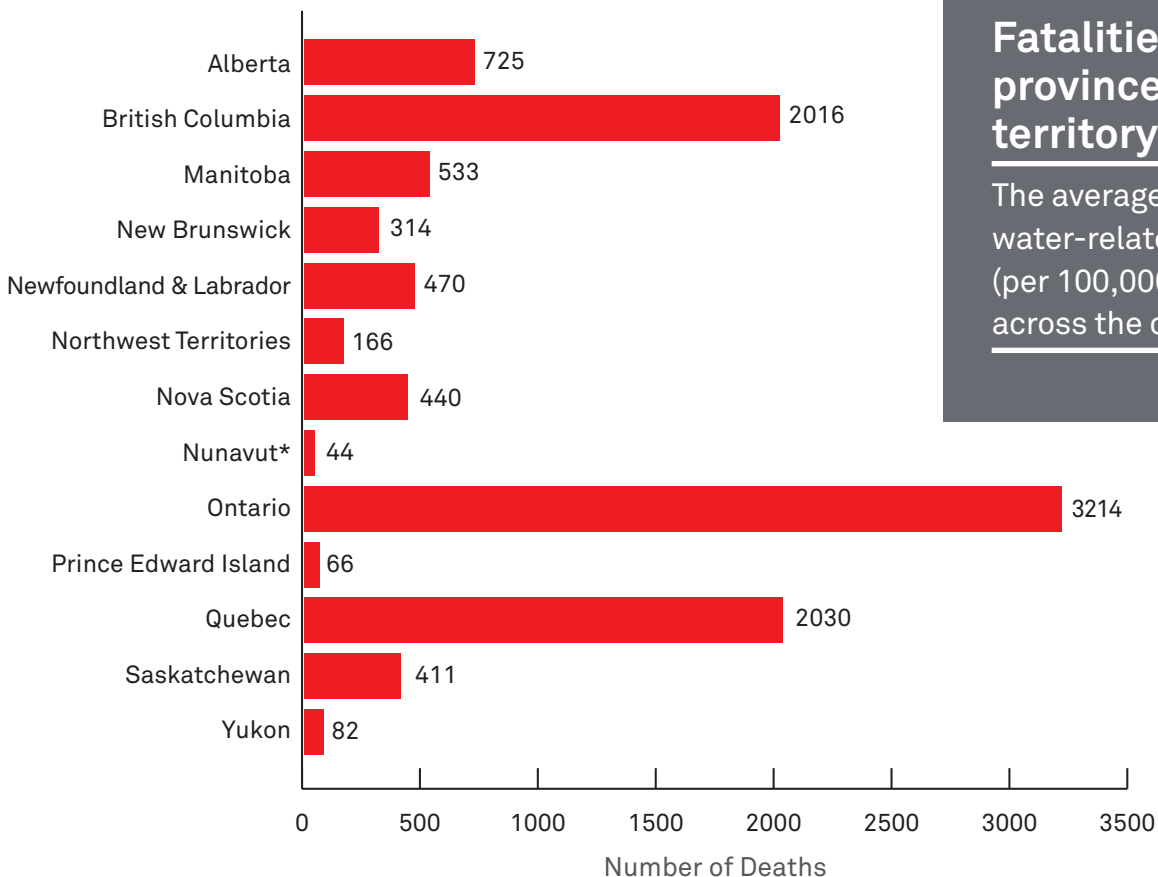


### Water-Related Fatalities Facts at a Glance, Canada 1991-2010

These deaths can be attributed to the following activities:

- Boating: 32%
- Aquatic: 22 %
- Unexpected falls: 19%
- Transportation: 16%
- Bathing: 7%
- Unknown: 4%

### Water-related fatalities by province or territory, Canada 1991-2010

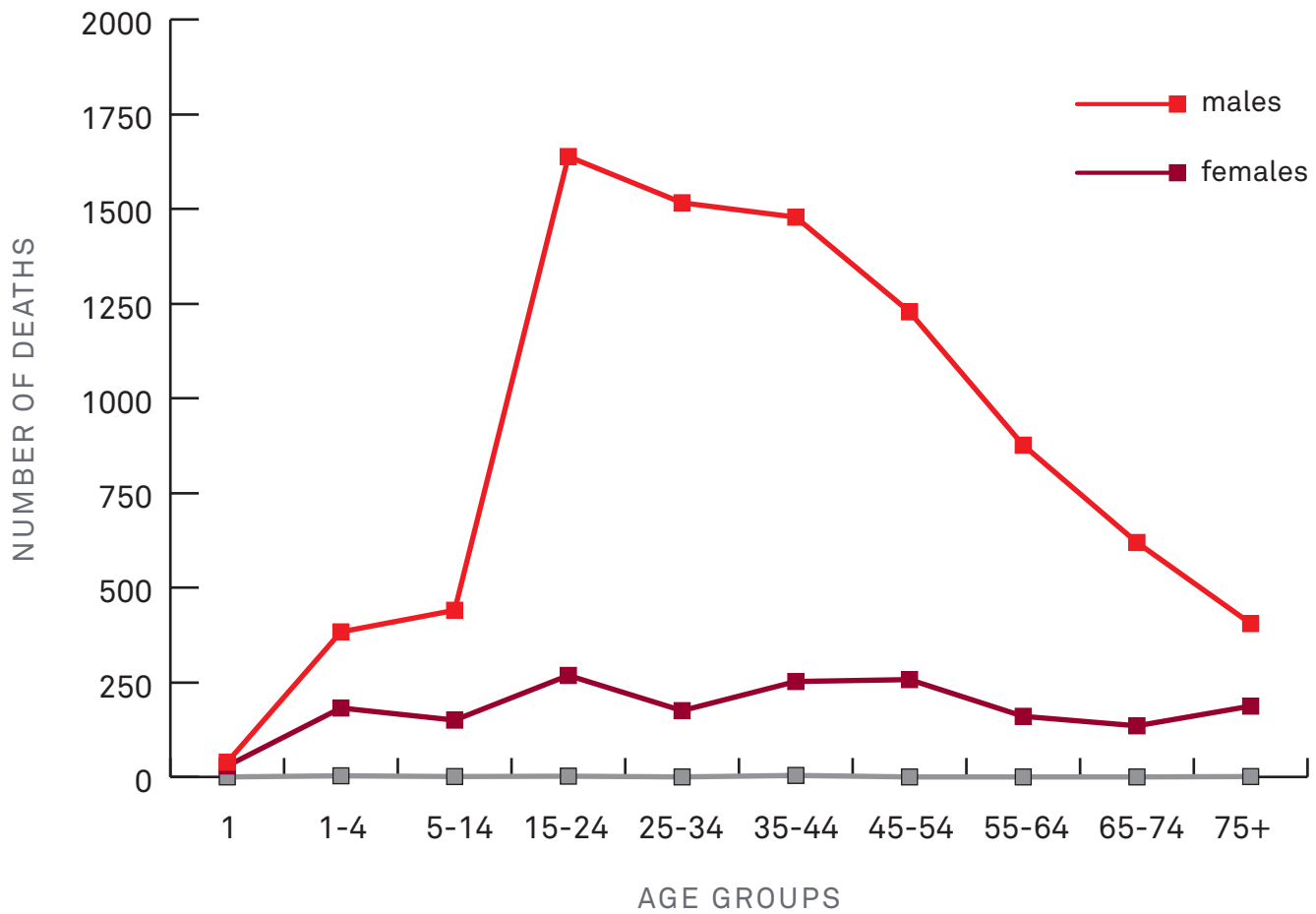


### Fatalities by province or territory:

The average rate of water-related fatalities (per 100,000 people) across the country is 1.7

\* Nunavut data represents deaths from 1999-2010

## Fatalities by age and sex, Canada 1991-2010 (n=10,511)



### Comparison by sex:

Males account for 83% of water-related fatalities

93% of boaters succumbing to water-related fatalities were male



## Unexpected falls into water

While most Canadians take proper precautions when planning to engage in recreational activities on the water, Red Cross reminds people to take the same safety measures while engaging in activities around the water. Every year, dozens of fatalities result from unexpected falls at waterfronts and pools. Some of these include activities at the shoreline, pool-side or by a dock. While fatalities occurred across the country, the Territories had a rate at several times the national average.

Children and young men were at the highest risk of death from unexpectedly falling into water. Children aged one to four years accounted for 21 per cent of fatalities. Overall, males were most at risk across all age groups and accounted for 81 per cent of all fatalities from unexpected falls into water.

Alcohol significantly increases the risk of fatalities on and around water. Among individuals age 15 and over, alcohol consumption is a contributing factor in at least 38 per cent of deaths from unexpected falls (above legal limits).



### **Quick facts: unexpected falls into water**

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**On average, 97  
deaths a year**

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**Children aged 1-4  
accounted for 21%  
of fatalities**

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**For individuals over  
15, alcohol is a  
contributing factor  
in at least 38%  
of deaths**

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### **Safety Tips**

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**Supervise children  
in, on and around  
the water**

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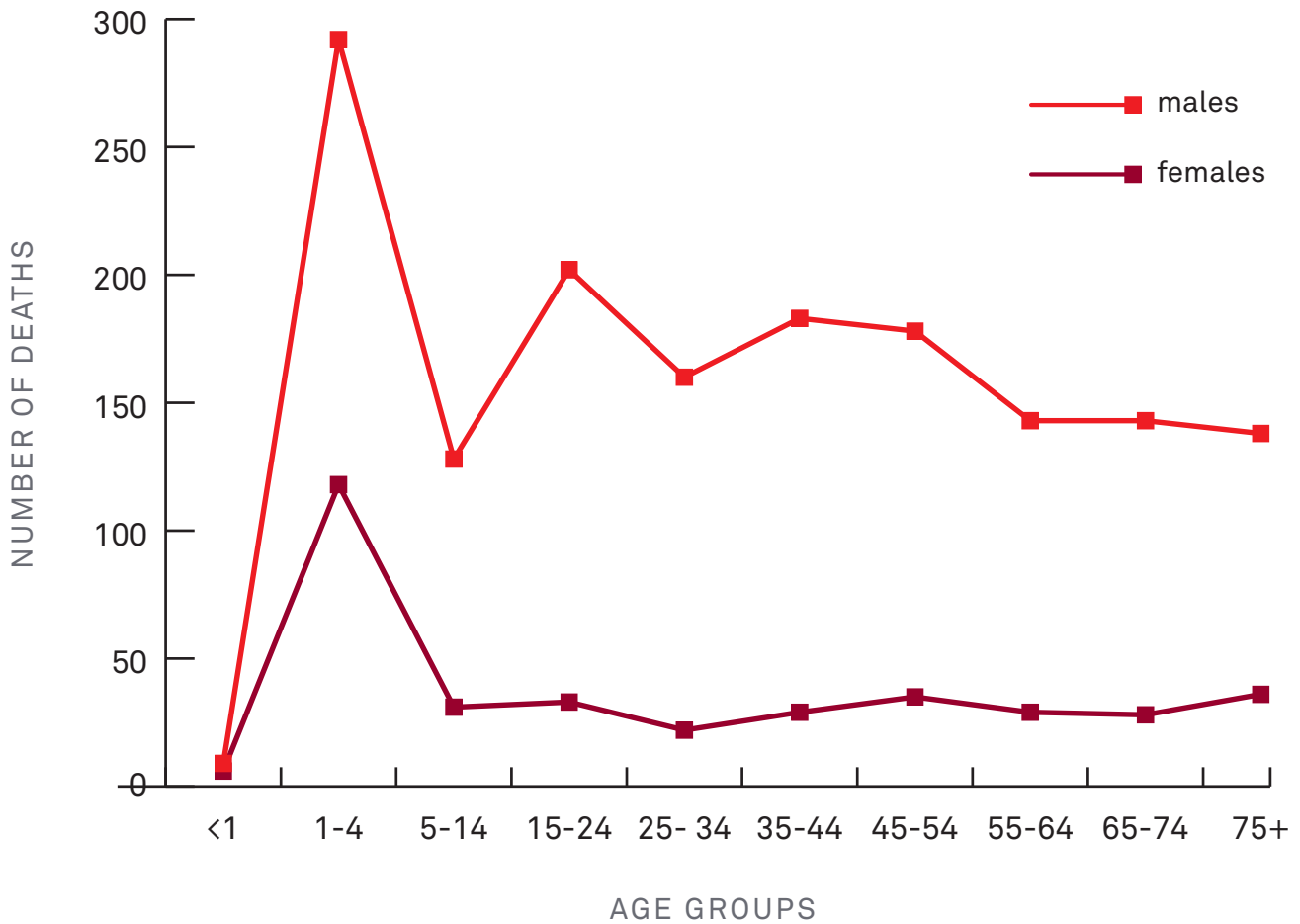
**Avoid consuming  
alcohol while  
engaging in  
activities around  
the water**

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**Take Red Cross  
Swim lessons to  
learn swimming  
skills and water  
safety**

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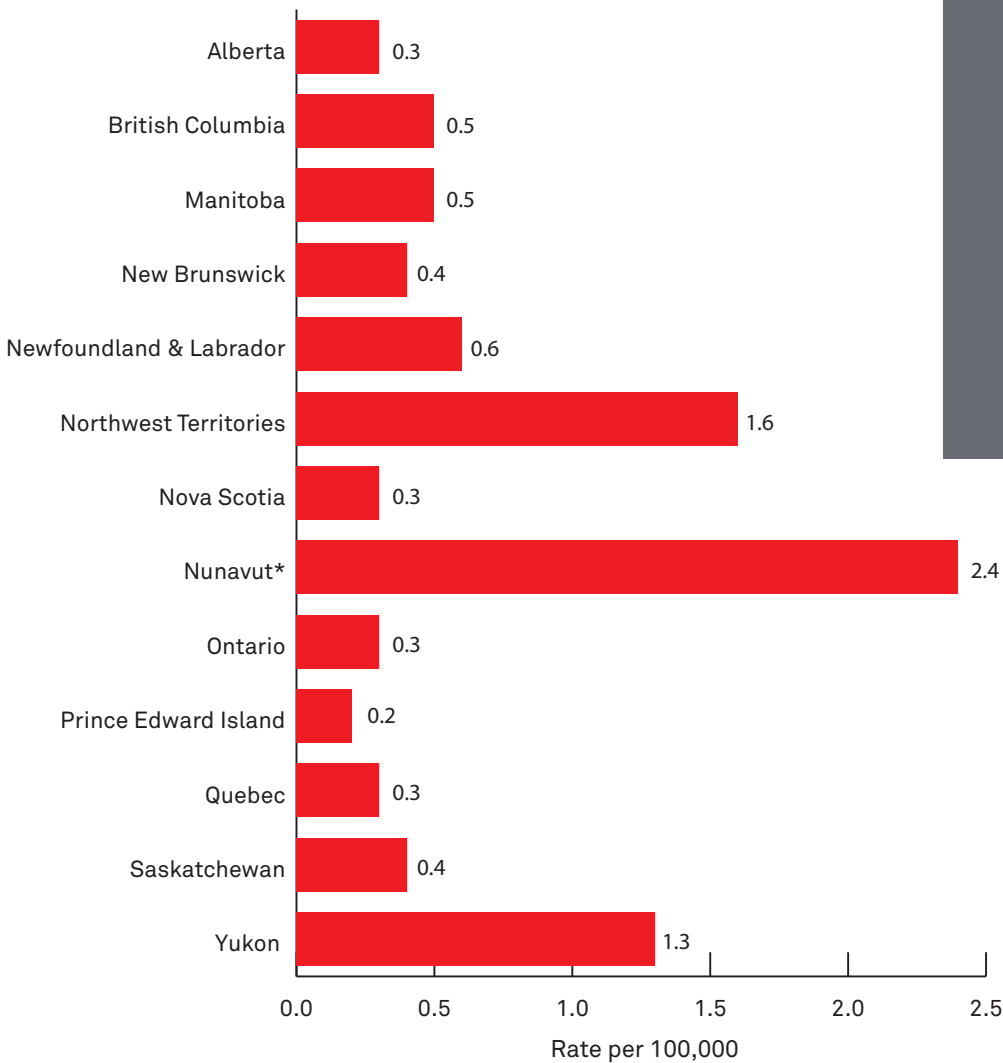
## Unexpected falls by age and sex, Canada 1991-2010 (n=1,951)



### Unexpected falls by age and sex

In total there were 1,951 fatalities due to unexpected falls into water.

## Unexpected falls into water by province or territory (per 100,000 population), Canada 1991-2010



**Fatalities by province or territory:**

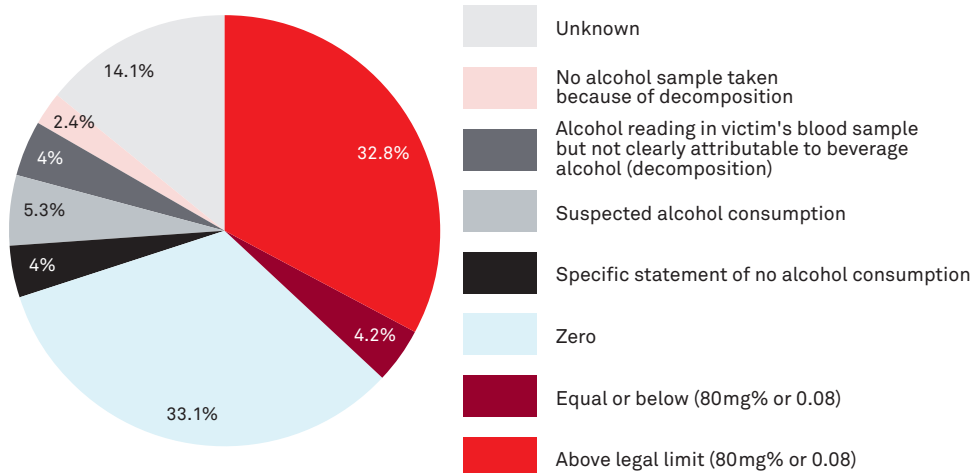
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The average rate of water-related fatalities (per 100,000 people) across the country is 1.7

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\* Nunavut data represent deaths from 1999-2010

## Unexpected falls into water of individuals 15 years of age and older by alcohol involvement, Canada 1991-2010





## Quick Facts

**On average 166 deaths a year from boating-related incidents**

**For individuals age 15 and over, alcohol contributed to at least 39% of deaths**

## Safety Tips

**Be prepared for any possible weather changes or emergencies**

**Required by law, boaters should have the following items on board: appropriately sized personal flotation devices (PFDs) or lifejackets for each person on board; a bailer; two paddles or two oars with oar locks; a whistle; and a fire extinguisher for a watercraft with an inboard motor**

## Boating

Every year, there is an average of 166 water-related fatalities while boating. Nearly 90 per cent of all boaters who drown are not wearing, or not properly wearing, a lifejacket and over 21 per cent of boating fatalities occur when a lifejacket is present on board but not worn. These risks are compounded by alcohol consumption which was present or suspected in more than 39 per cent of boating fatalities (and well over 80 mg% in 23 per cent of cases).

Despite these clear risks, Canadians are not taking proper safety precautions to stay safe while boating. Less than 50 per cent of Canadians who own a boat always wear their lifejackets, even though 82 per cent believe it is a legal requirement, and only 14 per cent of Canadians keep lifejackets on the boat. These boaters have no intention of entering the water, but believe they will be able to find and put on a lifejacket while falling out of the boat. Lifejackets, like seat belts, need to be worn to save lives.

In Canada, there is an increasing number of drowning incidents where lifejackets were available on the boat, but were not worn by boaters, from 19 per cent in the period 1991-2000 to 24 per cent between 2001 and 2010.

When asked by the Red Cross in a 2013 poll, 24 per cent of Canadians said they didn't wear a lifejacket because they knew how to swim. However, of the 44 per cent of incidents where swimming ability was known, only 52 per cent were weak or non-swimmers.<sup>1</sup>

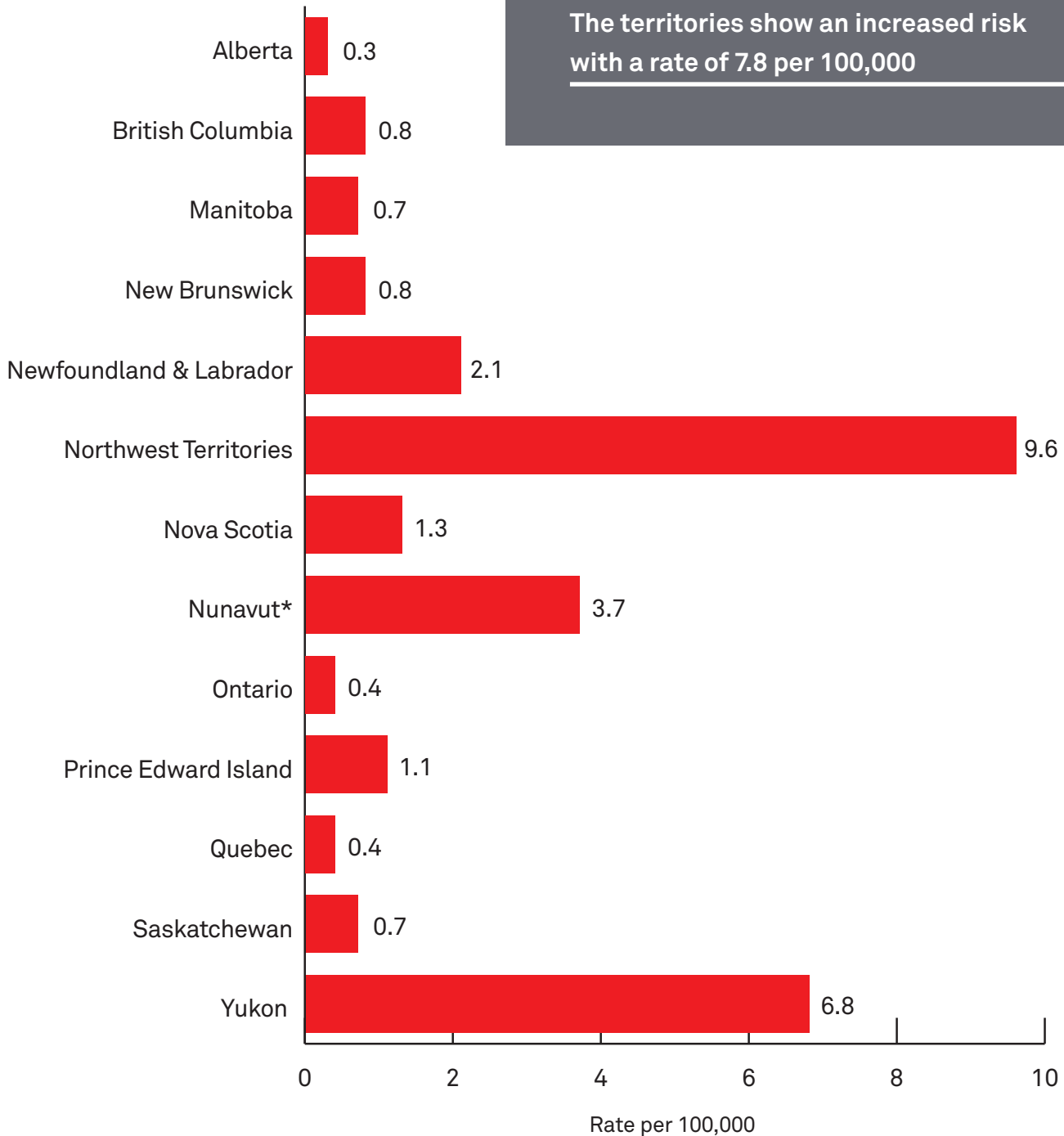
Twenty per cent of respondents also said they didn't wear a lifejacket because they found them uncomfortable. However, many styles and sizes are available, and everyone can find a comfortable lifejacket if they compare designs. Price was not mentioned as a reason for not wearing a lifejacket.

<sup>1</sup> *Boating Immersion and Trauma Deaths in Canada: 18 years of Research*, p. 15

## Boating fatalities rate by province or territory, Canada 1991-2010 (per 100,000 population)

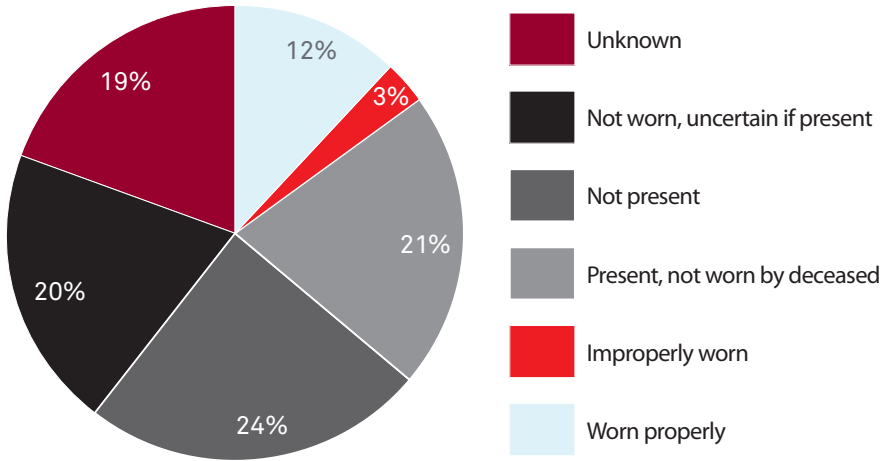
### Boating fatalities by province or territory:

In total, there were 3,324 boating-related fatalities from 1991-2010. The average rate of drowning (per 100,000) was 0.6. The territories show an increased risk with a rate of 7.8 per 100,000



\* Nunavut data represent deaths from 1999-2010

## Lifejacket usage in Canada, 1991-2010



### Lifejacket Usage:

Of the 3,324 boating related fatalities from 1991-2010, lifejackets were not worn in the majority of cases. In only 12% of cases was it verifiable that a lifejacket was properly worn at the time of a drowning incident. In 21% of cases a lifejacket was present but not worn.



### Alcohol levels:

Alcohol was known or suspected to play a factor in 1,218 boating-related deaths.

## Backyard Pools

Despite significant education efforts in water safety awareness, dozens of people die needlessly every year in backyard pools.

The absence of effective adult supervision was a significant risk factor (over 80 per cent of incidents occurred when the individual was alone) for nearly all home pool drownings.

Over a 20-year period, the majority of swimming pool deaths occurred in backyard pools. Backyard pool fatalities account for 30 per cent of the total number of children age 5 and under who drown. Nearly all of these incidents resulted from falls into pools.

The absence of an automatic self-closing and self-latching gate was a risk factor for nearly all incidents involving small children in home pools. Nearly all 1 to 4-year-old water-related fatalities in private residential pools may have been prevented if they had been equipped with self-closing and self-latching gates. Home pools must meet the municipal requirements for fencing, however when data were present only 16 per cent of fences met these by-law standards. Ideally, fencing should be at least one metre high and surround the pool completely and the home should never open into a pool area. The fence should include vertical bars with no horizontal bars or chain mesh that children can use to climb.

Despite evidence supporting the need for safety fencing, Canadians are not taking proper precautions to protect their families around backyard pools. The 2013 polling done by the Canadian Red Cross suggested that for 51 per cent of Canadians, 'not allowing children under 10 to access the pool area' was their only strategy to prevent injuries related to backyard pools. This strategy puts too much trust in a verbal command to children under ten. Alarming, 11 per cent of Canadian respondents who own a pool indicated they were doing nothing to prevent access to the pool for children under 10.

Of those surveyed, only one third took security measures to prevent pool-related injuries, of which 36 per cent relied on four-sided fencing, 33 per cent on self-closing gates, and 28 per cent on three-sided fencing using the house as the fourth side.

### Quick Facts

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**On average, over 22 deaths a year occur in backyard pools**

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**Children 1-4 accounted for 42% of fatalities**

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**80% of fatalities among children occurred when there was no adult supervision**

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**Only 16% of fences met by-law standards**

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### Safety Tips

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**Children should never be left unsupervised around a pool**

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**Home pools should be cleared of all toys when not in use as these can often tempt children to the water's edge**

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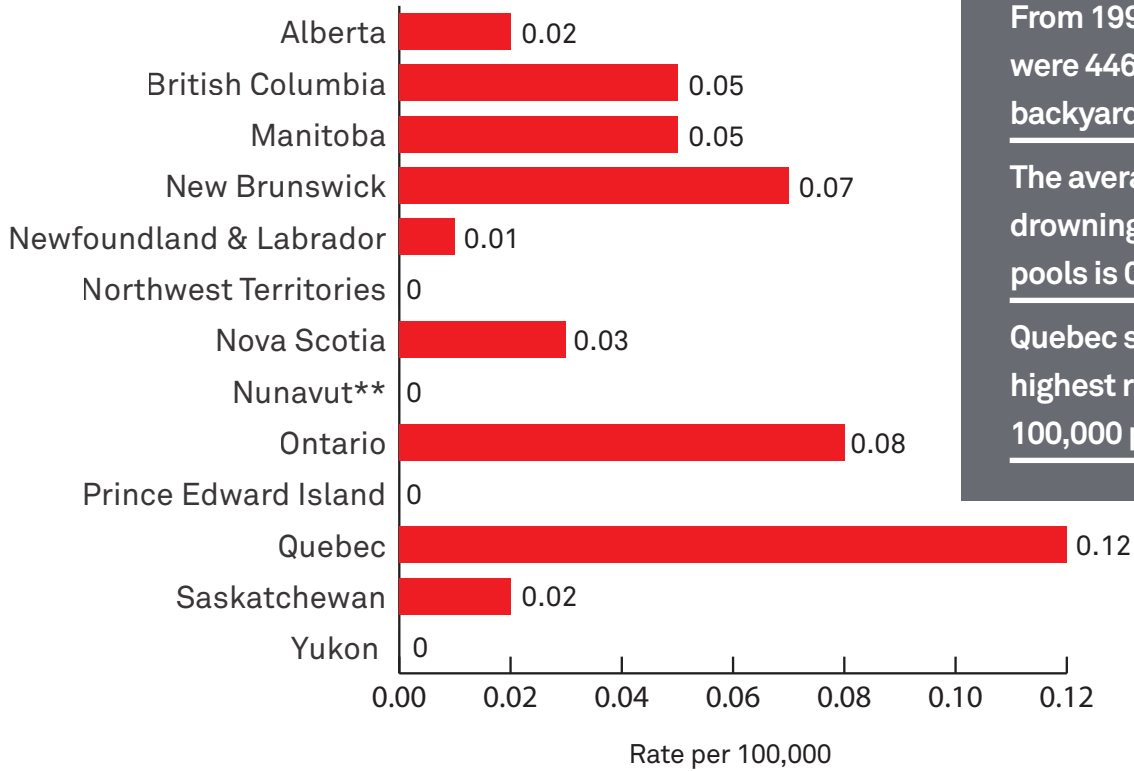
**Portable toddler pools should be emptied after each use**

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**All pools should have four sided fencing**

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## Backyard pool-related deaths by province or territory, Canada 1991-2010 (Rate per 100,000 population)



### Backyard pool-related deaths

From 1991-2010 there were 446 deaths in backyard pools

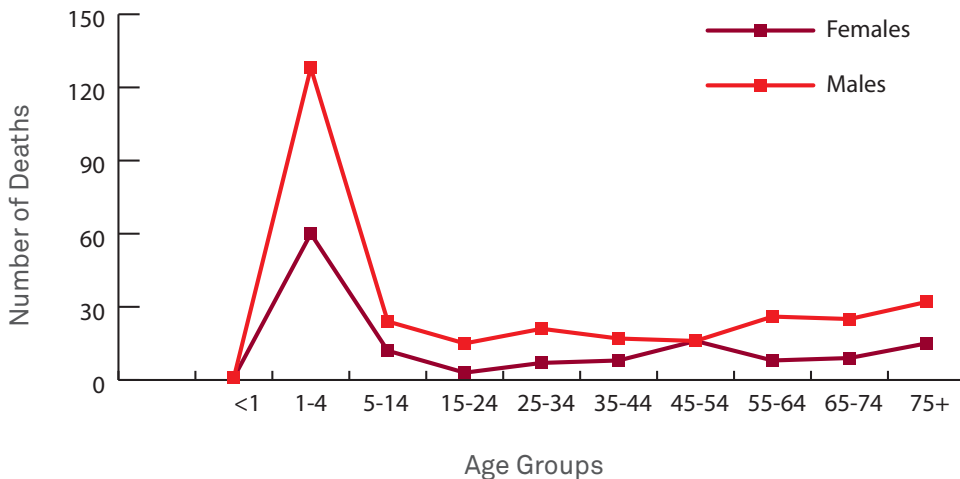
The average rate of drowning in backyard pools is 0.07

Quebec shows the highest rate at 0.12 per 100,000 population

\* Backyard pool include all private, single unit residence pools including inground pool, fixed and portable above ground pool, private single unit residence pool specific type unknown; excludes private multiple unit residence pools (apartment, condo), motel, hotel pool, public pool, public waterparks and waterslides

\*\* Nunavut data represent deaths from 1999-2010

## Backyard pool-related deaths by age and sex, Canada, 1991-2010 (n=446)

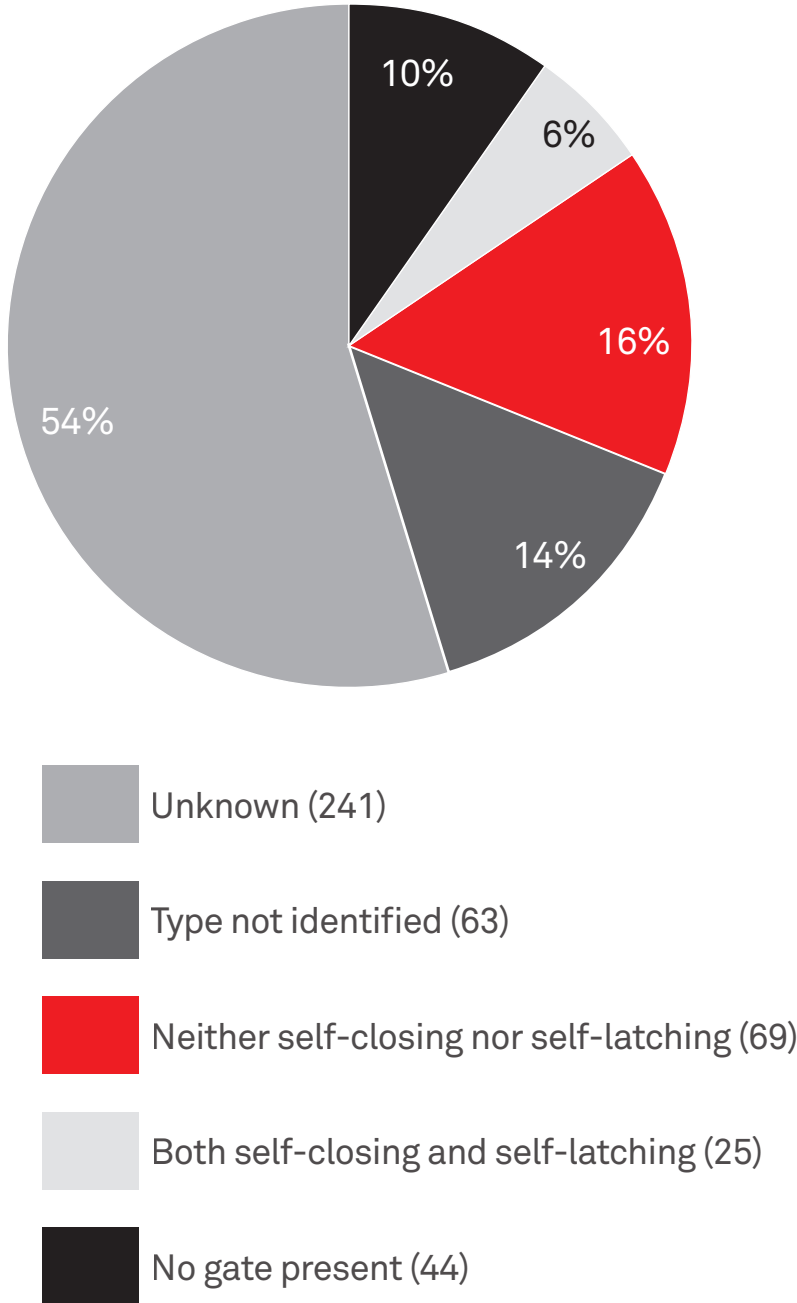


### Backyard pool fatalities by age and sex:

Of the 446 deaths from 1991-2010 almost 70% were males

The highest numbers are in the age group 1-4

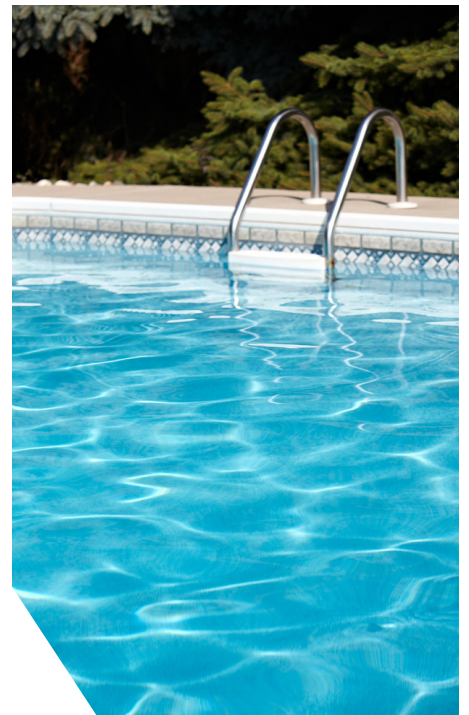
## Backyard pool-related deaths by gate or door access, Canada 1991-2010 (n=446)



### Backyard pool-related deaths by gate or door access:

In only 25 (6%) of the 446 backyard pool-related deaths, was there a verified self-closing and self-latching gate in place

The overwhelming majority of these incidents, 357 (81%), occurred in Ontario and Quebec

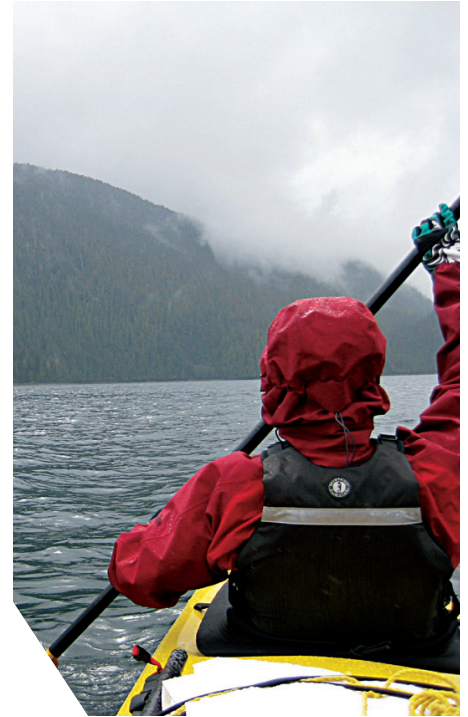




## About Red Cross

The Canadian Red Cross is a leader and resource on injury prevention.

- 1.85 million Canadians took Red Cross First Aid or Swimming and Water Safety courses over the past year.
- There are more than 24,000 active Canadian Red Cross instructors in first aid, lifeguarding, swimming and water safety.
- The Red Cross Swim program teaches both swimming skills and water safety. The infant and preschool program, Red Cross Swim Preschool, teaches caregivers strategies on how to effectively supervise children around water and teaches preschoolers not to go near the water without an adult.
- This year Red Cross Swim programs will begin to encourage youth to try swimming activities while wearing clothes. This will help them to experience the challenges of unexpected falls into water in a safe supervised environment. Youth will get a greater understanding of the risks and develop skills and attitudes to keep them safe in, on and around the water.



Visit [redcross.ca/  
findacourse](https://redcross.ca/findacourse) to find  
swimming lessons near you

Visit [redcross.ca/swim](https://redcross.ca/swim)  
for tips on how to keep your  
pool safe and more

Data collectors included volunteers and staff of the Canadian Red Cross. Annual data collection is made possible through the assistance and cooperation of the provincial and territorial Chief Coroners and Medical Examiners offices across Canada. Prior to analysis, all collected data is verified for accuracy by a minimum of two professional epidemiologists.

This report has drawn upon the Canadian Red Cross 20-year research database.

## Swimming and First Aid Course Information

Please visit our [find a course webpage](https://redcross.ca/findacourse) at [redcross.ca](https://redcross.ca)  
or call 1-877-356-3226. Contact Centre hours: 8:30 AM to 7 PM EST





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