



CANADIAN DROWNING PREVENTION PLAN

6th Edition



ACKNOWLEDGING THE LAND

The Coalition would like to begin by acknowledging that the land on which the Coalition office is located is the traditional unceded territory of the Wolastoqiyik (Maliseet) and Mi'kmaq Peoples. This territory is covered by the "Treaties of Peace and Friendship" which Wolastoqiyik (Maliseet) and Mi'kmaq Peoples first signed with the British crown in 1725. The treaties did not deal with surrender of lands and resources but in fact recognized Mi'kmaq and Wolastoqiyik (Maliseet) title and established the rules for what was to be an ongoing relationship between nations.¹

VICE-REGAL PATRONAGE

The Canadian Drowning Prevention Coalition is pleased that Her Excellency the Right Honorable Julie Payette Governor General and Commander-in-Chief of Canada has graciously accepted the Coalition's request to be Patron of the Canadian Drowning Prevention Coalition.

Vice-regal Patronage

"The Governor General plays a key role in promoting national identity by supporting and promoting Canadian values, diversity, inclusion, culture and knowledge. As such, the Governor General supports associations and organizations for their outstanding contributions to society. Patronage is granted at the discretion of the Governor General to organizations that meet the following criteria:

- have objectives aligned with the role and responsibilities of the Governor General;
- are national in scope;
- are governed and managed responsibly and sustainably; and,
- have a solid record of achievement with programs implemented on an annual basis."²

Biography³

Before becoming Governor General, Julie Payette was an astronaut, engineer, scientific broadcaster and corporate director. From 1992 to 2013, Ms. Payette worked as an astronaut and flew two missions in space. She also served many years as CAPCOM (Capsule Communicator) at NASA's Mission Control Center in Houston, Texas, and was Chief Astronaut for the Canadian Space Agency.

From 2011 to 2013, she worked as a scholar at the Woodrow Wilson International Center for Scholars in Washington, D.C., and was appointed scientific authority for Quebec in the United States. Between July 2013 and October 2016, she served as Chief Operating Officer of the Montréal Science Centre. Ms. Payette is active in multiple facets of the community. She has received many distinctions and 28 honorary doctorates. She is an Officer of the Order of Canada and a Knight of the Ordre national du Québec.



Her Excellency the Right Honourable
Julie Payette
Governor General and
Commander-in-Chief of Canada



Son Excellence la très honorabile
Julie Payette
gouverneure générale et
commandante en chef du Canada

Photo credit: Sgt Johanie Maheu,
Rideau Hall © OSGG-BSGG, 2017

FOREWORD

Drowning is a preventable public health issue in Canada. Drowning prevention needs more attention and action. The Canadian Drowning Prevention Coalition (Coalition) is a leader and partner in this process. The Coalition produces this Canadian Drowning Prevention Plan (Plan) to bring focus to the issue and to the prevention strategies. The Plan is an evidence-based public health approach to reducing drowning in Canada.

This 6th edition of the Plan has updated information and actions for drowning risk and burden reduction, and information to build Canadians' understand of the drowning issue as well as recommendations for risk reduction and improved outcomes. It addresses key focus targets for drowning prevention in Canada and contains recommendations for improvement in community action, policy and legislation and further research. This 6th edition of the Plan is more compact and informative.

Prevention of drowning events is needed. We have immunizations against drowning. These proven strategies reduce drowning risk and burden. They need to be provided to everybody. We have work to do to achieve this. No single sector, agency or organization can do this alone. We need to work together.

Collaboration and shared leadership are essential elements of our collective work. This collaboration involves, governments, NGO's, academics, industry and media and civil society groups. The Canadian Drowning Prevention Coalition increased the intellectual capital and reach for the drowning prevention effort. Resources, skills, actions and learning are needed to reduce the drowning burden in Canada.

- **Stephen B. Beerman, MD**, Co-Chair, Canadian Drowning Prevention Coalition

EXECUTIVE SUMMARY

The mandate of the Canadian Drowning Prevention Coalition is to create recommendations for high impact actions for drowning reduction in eight (8) key focus target groups: children 1 to 4 years old; drownings in supervised settings; Indigenous peoples – First Nations, Inuit, and Métis; new Canadians; Northern Canada, rural areas, and cold water; water transport-related drownings; unintentional water entries; and, young adult males. These actions should be achievable, focused on impact, and measurable. Recommendations include:

- ▶ Encouraging the Government of Canada's support for the UN Resolution on Drowning Prevention.
- ▶ Ensuring that data guides interventional efforts.
- ▶ Encouraging increasing multisectoral collaboration in all areas of drowning prevention.
- ▶ Encouraging/supporting the creation/expansion of community-based coalitions and projects focused on reducing drownings to increase community-based actions.
- ▶ Encouraging community groups to use toolboxes/establish protocols for drowning prevention/post-drowning incidents.
- ▶ Researching bystander/rescuer drowning in Canada.
- ▶ Researching intentional drowning (i.e., homicides and suicides).
- ▶ Creating programs to teach basic drowning recognition and rescue skills to the public.
- ▶ Expanding data collection/research to include socioeconomic risk factors, non-fatal, and intentional drowning.
- ▶ Making drowning in supervised settings a national priority and the first target to reach zero mortality.
- ▶ Undertaking retrospective and prospective studies on drowning among those living with neurodevelopmental disorders and medical conditions.
- ▶ Encouraging research by Indigenous people to determine the extent to which current programs could benefit from adaptation prior to delivery within Indigenous communities to ensure cultural relevance.
- ▶ Designing/delivering an interactive online map to identify high-risk drowning areas to inform the public, policy and decision-makers; and, increase the effectiveness of post-drowning initiatives specific behaviors relevant to a location.
- ▶ Federal funding for research on non-fatal drowning.
- ▶ Federal facilitation/support of an implementation framework for survival swimming programs for all new Canadians.
- ▶ Federal amendments to Small Vessels Regulations 15 (SOR/2010/91 – 204(a)/310(1)(a)(i)/302 for small vessels to require that a Transport Canada approved personal floatation device or lifejacket must be worn by each person on board.
- ▶ Federal facilitation/support of an implementation framework for mandatory cardiopulmonary resuscitation (CPR) training with driver's license (new or renewal).
- ▶ Federal implementation of a Drowning Review Board to review drowning incidents and make recommendations for implementation.
- ▶ Federal facilitation/support of an implementation framework for consistent pool fencing legislation across Canada.

COALITION STAKEHOLDERS



ACKNOWLEDGEMENTS

Coalition Steering Committee The Coalition would like to thank its steering committee for providing content and expert feedback: Sara Anghel, National Marine Manufacturers Association; Dr. Stephen B. Beerman, University of British Columbia; Markus Brunner, Pool and Hot Tub Council of Canada; Barbara Byers, Drowning Prevention Research Centre Canada; Dr. Tessa Clemens, Drowning Prevention Research Centre Canada; Adrian Cossu, City of Mississauga; Dr. Audrey Giles, University of Ottawa; Michelle Hebein, Canadian Red Cross; Cara McNulty, Life Jackets for Life John Morrison, F/P/T Sport Physical Activity and Recreation Committee (SPARC); Kevin Paes, Canadian Red Cross; Dr. Ian Pike, BC Injury Research and Prevention Unit; Sheila Polard, Lifesaving Society Canada; Wendy Schultenkamper, Lifesaving Society Canada; Michael Shane, Lifesaving Society Ontario; Liane Boisvert, Children's Hospital of Eastern Ontario; and Chris Wagg, Ottawa Drowning Prevention Coalition.

Technical Working Groups The Coalition would like to thank its technical working group participants for undertaking this important work: Neil Arason, British Columbia Ministry of Health; Markus Brunner, Pool & Hot Tub Council of Canada; Dr. Louis Francescutti, School of Public Health, University of Alberta; Emily Francis, Royal Roads University; Pamela Fuselli, Parachute Canada; Dr. Gordon Giesbrecht, Laboratory for Exercise and Environmental Medicine; Dr. Susan Glover Takahashi, PostMD Education, Faculty of Medicine, University of Toronto; Vienna Lam, Simon Fraser University; Jay Lim, 25:8 Architecture + Urban Design; Craig Lingard, Kativik Regional Government, Québec; Jamesie Mearns, Emergency Management, Nunavut; Michelle Kassis, PostMD Education, Faculty of Medicine, University of Toronto; Anne Morgan, Recreation and Parks Association of the Yukon; Dr. John Oliffe, University of British Columbia; Dr. Michael Patterson, Department of Health, Nunavut; Jake Quinton, University of Ottawa; Ted Rankine, Playsafe Productions; Kia Rassekh, Investment Funds Council of Quebec; Joey Rusnak, Lifeguard Authority; Mike Scott, Emergency Services, Northwest Territories; Eric Shendelman, Canadian Camping Association; Roger Skinner, Office of the Chief Coroner for Ontario; Lisa St-Amant, PostMD Education, Faculty of Medicine, University of Toronto; Sandra Tirone, Mother of Raphaël; and, Kelli Toth, Independent Water Safety Advocate.

Executive Editor Lisa Hanson Ouellette **Editorial Committee** Tessa Clemens and Chris Wagg

Funding and Support Financial and in-kind support for the Coalition is provided by: Lifesaving Society Canada, Lifesaving Society British Columbia & Yukon, Lifesaving Society New Brunswick, and Shendy’s Swim School. Translation services are provided by la Société de sauvetage du Québec (January – March) and the Coalition’s volunteer translation committee (April – May). Website design is provided by BHWorkz. The Coalition is grateful to the Assembly of First Nations and to the Métis National Council for meeting and talking with us about the drowning burden amongst First Nations and Métis peoples. The Coalition greatly values our relationships and looks forward to the future. Photo and infographic credits for this 6th edition: Tanya Ames, Emily Francis, Dr. Gordon Giesbrecht, Lifesaving Society BC/YK, Lifesaving Society Canada, Lisa Hanson Ouellette, André Mollema, Sarah Price, University of Windsor, WorkSafeBC, York University.

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INTRODUCTION

D *A coalition* An “alliance of distinct parties, persons, or states for joint action.”⁴



The World Health Organization’s Global report on drowning: preventing a leading killer; and, Preventing drowning: an implementation guide

In 2014, the World Health Organization released the *Global report on drowning: preventing a leading killer*.⁵ The goal of that report was to galvanize attention for the drowning issue by highlighting how preventable drowning is, and how collaboration across sectors can save lives⁵. In 2017, the World Health Organization released its second report on drowning, *Preventing drowning: an implementation guide*, to provide practical guidance for implementing 10 drowning prevention strategies outlined within its pages.⁶

The Canadian Drowning Prevention Coalition (Coalition) was formed in response to the call to action from the World Health Organization’s 2014 report. Drowning is a multisectoral issue that requires partnership among all stakeholders. Drowning threatens all populations, but the risks parallel many social determinants of health, disproportionately affecting Indigenous peoples, new immigrants, the elderly, and rural populations. Fatal and non-fatal drowning incidents impact not only the individual, but families and entire communities.

This 6th edition of the *Canadian Drowning Prevention Plan* contains:

 Coalition Information	 Research & Legislation Gaps	 Community Actions	 Leadership
 Target Groups	 Recommendations	 References	 Appendices

Symbols and graphics make identifying definitions and other key pieces of information easier. Look for these symbols:

Definition	Important Safety Tip	National Engagement Required	Click to Open	Target statement
				

SECTION 1

THE CANADIAN DROWNING PREVENTION COALITION



Purpose To protect and maintain public health by conducting research into causes and possible solutions relating to the increase of fatal and non-fatal drowning, as well as collecting, organizing, delivering and disseminating the evidence-based resources to the general public; educating the general public through training, consultation services, and the promotion of exchange of knowledge and information respecting drowning prevention; and, contributing with other stakeholder groups to government policies in matters of drowning prevention, including through advocacy, community engagement and awareness activities.



Swim Day on the Hill 2019 Photo credit: Lifesaving Society

A public health approach to drowning requires an understanding of the burden, an understanding of the inequality of the burden, key focus targeting of interventions, and impact measurement. Designing interventions that engage the populations at-risk and have positive impact is essential. This approach requires careful planning based on existing evidence. Education, social innovations, persistence, resourcing, and effective implementation play key roles in successful drowning mortality and morbidity reduction.

- ▶ The Canadian Drowning Prevention Coalition (Coalition) was formed in 2016. It is a charitable organization that provides national leadership, coordination and action planning to reduce drowning in Canada.
- ▶ It brings together many multisectoral stakeholders in the Canadian drowning prevention effort - government agencies, non-governmental organizations (NGOs), academics, industry, citizen groups and media to provide broad multisectoral input and leadership to drowning prevention in Canada.
- ▶ Its leadership, technical exchange, research interpretation, and prevention strategic planning ensures that the progress made to reduce drowning is evidence-based, effective and sustainable.
- ▶ The Coalition is led by a steering committee that appoints technical working group leaders for each key focus area for drowning prevention in Canada.
- ▶ The technical working group leaders form multisectoral working groups to create recommendations for high impact actions to reduce drowning.

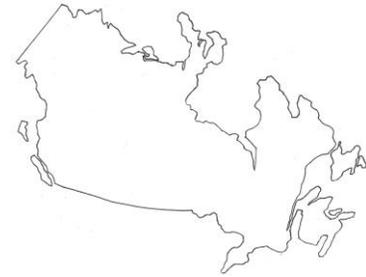
Goals and scope

- ▶ Long-term vision is zero mortality and morbidity from drowning.
- ▶ Policy and legislation are impactful drowning risk reduction interventions. Canadian legislation and enforcement exist for marine shipping, water transport, infrastructure and others. Amendments to existing legislation is required. New legislation is needed in some areas.
- ▶ Government engagement in the drowning reduction effort has been helpful and impactful. These partnerships have been driven by civic engagement and NGO leadership. These efforts should be encouraged and continued.
- ▶ NGO leadership has been helpful in elevating the priority of the drowning burden to Canadians and the Government of Canada. The Coalition facilitates collaboration and brings a public health approach to this multisectoral challenge.
- ▶ Government of Canada department and agencies' increased participation in the Coalition has been and will continue to be welcomed.

SECTION 2

GAPS IN CANADIAN RESEARCH, REGULATIONS & LEGISLATION

Gaps in Canadian drowning research



If you are in a **sinking car** get out immediately!

Remember **S W O C***

SEATBELTS off

WINDOWS open

OUT now

CHILDREN first

*Special thanks to thermophysiolgist, Dr. Gordon Giesbrecht, Laboratory for Exercise and Environmental Medicine for researching and developing a system of escape for individuals trapped inside sinking vehicles.

Gaps

- ▶ Research by Indigenous peoples about First Nations, Inuit, and Métis drownings (fatal and non-fatal)
- ▶ New Canadians fatal and nonfatal drowning data – including years since immigration
- ▶ Transportation-related fatal and nonfatal drowning events
- ▶ Rural and northern drowning prevention interventions – feasibility and scale up
- ▶ Impact of Coroners' recommendations in fatal and non-fatal drownings
- ▶ Intentional drownings – homicide and suicides
- ▶ Impact of climate change on drowning risks
- ▶ Effective communication – signage, messaging, warning, risk reduction
- ▶ PFD wearing in watercraft – willingness and impacts of legislation change
- ▶ Bystander CPR in drowning – compression and ventilation, quality indicators, mass training
- ▶ Non-fatal drowning data collection
- ▶ Cost-effectiveness of interventions
- ▶ Alcohol-related drownings – need for cultural change
- ▶ Drownings of individuals with neurodevelopmental disorders & medical conditions
- ▶ Rescuer drownings – how to educate the public

Research – Action – Highlights

- ▶ A letter of interest was shared with the Public Health Agency of Canada outlining a national project focusing on survival swimming skills training and water safety education for new Canadian adults and children.
- ▶ A presentation was made to the National Forum of Chief Coroners' and Medical Examiners' of Canada highlighting the need for the identification of 1) new Canadians and 2) Indigenous Peoples as First Nations, Inuit, or Métis; 3) attention to pool safety mechanisms/barriers; and, 4) the availability/use of pictograms, infographics, and signs in multiple languages. A second presentation, scheduled for June 2020, has been postponed due to the COVID-19 pandemic.
- ▶ Differences between drowning data collection and reporting by the Canadian Red Cross, Drowning Prevention Research Centre Canada, Lifesaving Society Canada, and Statistics Canada exist. For purposes of comparison, researchers, policy and decision-makers alike need consistency in – how and what data is collected, which cases are included, as well as categories for each distinct Indigenous population and characteristics to better define new Canadians, the time period in which data is reported during a given year (e.g., Jan to Dec), and clear definitions of where the drowning occurred.

Gaps in Canadian regulations & legislation



Gaps

- ▶ Small vessel regulations need to be amended to require that all children (0-18 years of age) wear a properly fitting, approved, floatation device or lifejacket while on or in a boat of any size for any purpose.
- ▶ Small vessel regulations need to be amended to require that adults (19+ years of age) wear a properly fitting, approved, floatation device or lifejacket while on or in a boat.
- ▶ Vessel regulations need to be amended to require crew member working on a deck of a commercial fishing vessel be required to wear a properly fitted, personal floatation device or lifejacket.
- ▶ Consistent federal legislation and regulations for public pools and public waterfronts are needed across Canada.

Research – Action – Highlights

- ▶ A letter outlining the need for an amendment to be made to the small vessel regulations requiring that children wear a properly fitting, approved, floatation device or lifejacket while on or in a boat was prepared and sent to the Minister of Transportation in March 2020. We await a reply.
- ▶ The 2019 CDPC Drowning Prevention Award – Policy & Legislation was awarded to *WorkSafeBC* for their work on an amendment which came into effect in June 2019 requiring all crew members working on a deck of a fishing vessel in BC to wear a personal floatation device or lifejacket. This is a great example of a best practice which received additional coverage as a result of the award.
- ▶ Research on a classification system outlining for whom, when, and under what circumstances adults should be required to wear a properly fitting, approved, floatation device or lifejacket is underway. A working group focusing on this task will be created. Experts will craft outcomes and recommendations on this topic at Symposium2020 in Fall 2020.
- ▶ Legislation on public and residential pool and waterfront requirements is another area about which experts attending Symposium2020 in October (20 & 27) and November (3 & 10) 2020 will be consulted and asked to create recommendations and outcomes.

SECTION 3 COMMUNITY AWARENESS, COALITIONS & TOOLS

Community drowning prevention & post-drowning activities



Goal To provide drowning prevention tools to support community-based drowning prevention activities.



The Coalition aspires to have an online map available to the public pending the availability of project funding. This map would identify areas in which fatal and non-fatal drownings have occurred. The identification of locations where more than one drowning has occurred in a single sight or where multiple drownings have occurred during a single situation is relevant to the identification of high-risk areas where local communities and governments can take positive action to prevent further drownings.

Communities use a variety of methods (e.g., storytelling, memorial stones/plaques, etc.) to retain information about drowning incidents and the bodies of water in which they occurred. These methods serve to educate community members and visitors/tourists on where it is safe to swim and where it is unsafe.

- ▶ **Mapping** is a method utilized by a number of nations around the world to identify areas at high-risk for drowning. Communities across Canada are encouraged to find key areas in which fatal drownings have occurred and identify these areas on a community map, thereby identifying their own high-risk drowning areas.
- ▶ **Community town hall meeting** or “social or community autopsy”⁶ after a drowning occurs offer an opportunity for details of the drowning incident are shared, support is offered to friends and family of the victim, and all community members can have a voice in sharing how they believe a future drowning incident can be avoided.
- ▶ **A community examination** involves a complete review of the event – e.g., behavior, environmental conditions, health, and social issues, as well as “any drowning prevention procedures followed, the type and timing of the intervention, and any barriers encountered during the intervention”⁶ which can be used by community leaders and government representatives to create and implement policies and legislation related to drowning prevention.⁶

Communities have implemented a number of post-drowning initiatives across Canada, including: the formation of a community foundation, *Life Jackets for Life*⁸; and, *Public Access Lifering*⁹ (PAL) projects that originated in British Columbia but is now being implemented along waterways in other provinces.

To share details about your community drowning prevention project with the Coalition email info@cdpcoalition.ca using the subject heading:
Community Drowning Prevention Action.

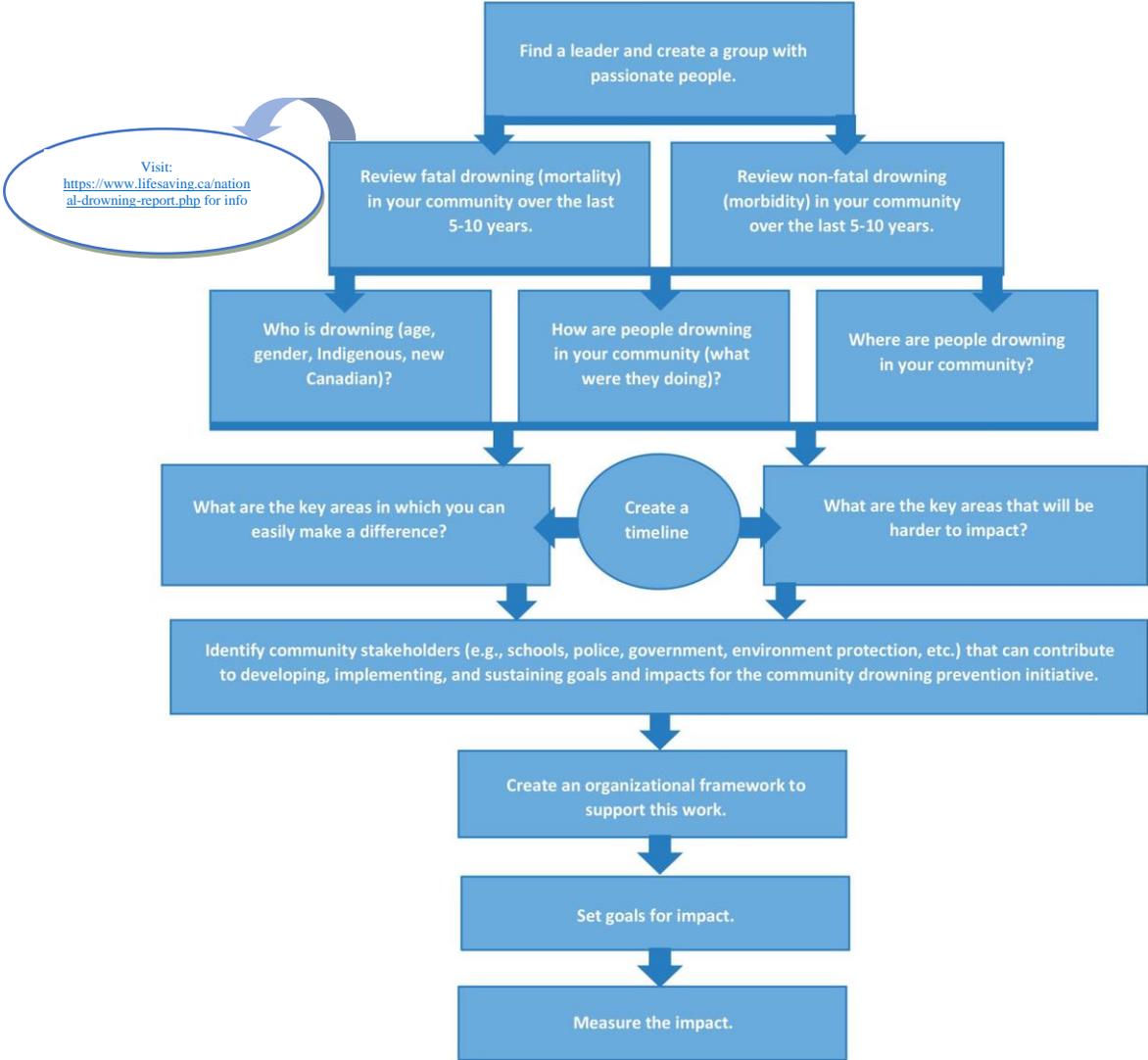
Community-based drowning prevention coalitions

Goal The aspirational long-term goal of community-based drowning prevention coalitions, the Canadian Drowning Prevention Coalition, and the Canadian Drowning Prevention Plan is for zero drowning deaths in Canada in 50 years (2066).



- ▶ Action and impact are best achieved by individuals in their own communities.
- ▶ Each community has unique key focus targets for drowning prevention.
- ▶ Stakeholder engagement needed for each community-based drowning prevention issue.
- ▶ Differences and biases need to be reduced, culture needs to be respected, and a commitment to learn from marginalized communities is crucial.

How to create a community coalition:



Drowning prevention awards

Goal To illuminate key drowning prevention initiatives taking place across Canada in the areas of community action plans, effective policies & legislation, and research



2019 Recipient – Community Action, Nuu-chah-nulth First Nations, sharing traditional wisdom with Ms. Emily Francis¹⁰ resulting in greater cultural awareness and understanding needed in the design and delivery of water safety programs



2019 Recipient – Policy & Legislation, WorkSafeBC, legislative amendment¹¹ requiring commercial fishermen to wear lifejackets



2019 Recipient – Research, Summer Locknick, University of Windsor, examining RIP currents for public safety¹²

Drowning prevention awards

Community action plan awards recognize:

- ▶ Community-based activities that are targeted, innovative and have evidence of impact.
- ▶ Displays or created best-practices
- ▶ Example to be shared and educationally exchanged
- ▶ Educational value in other settings
- ▶ Impact for Canadians

Effective policies and legislation awards recognize:

- ▶ Municipal, City, Regional, Provincial or National Policies and/or Legislation that will have a positive impact
- ▶ Sectoral (aquatic, transport, employment, business, social, sport, etc.) Policies and/or legislation that will have a positive impact
- ▶ Example of Best Practices
- ▶ Educational value in other settings
- ▶ Impact for Canadians

Research awards recognize:

- ▶ Addressing priority research questions with well-designed studies
 - Improving drowning data
 - Improving understanding of swim skills training as public health approach
 - Improving understanding of the contextual features that impact drowning program effectiveness
 - Improving understanding of effectiveness of several potential interventions
 - Demonstrate scalability and sustainability for effective drowning prevention measure
- ▶ Examples of best practices
- ▶ Educational value in other settings
- ▶ Impact for Canadians

To nominate an individual, group, organization, or department; or, to apply for the Coalition's *Drowning Prevention Awards* please complete the following application: <https://cdpcoalition.ca>

Email applications to info@cdpcoalition.ca using the subject heading *Drowning Prevention Awards*. Submissions for the Canadian Drowning Prevention Awards are due September 1st of each year.

The Barb McLintock Memorial communication award

Goal To encourage the design of clear and effective messages using posters, artwork, signs or other communication tools to enhance the safety of the public swimming/bathing in supervised settings.



Barb McLintock
1950-2018

Photo credit:
Dan Denton, Black Press

In recognition of her role as co-leader of the technical working group focused on drownings in supervised settings, her passion for drowning prevention, and her strong and steadfast desire to inform the public about important issues the Coalition is pleased to present the Barb McLintock Memorial Communication Award.

Criteria

- ▶ Messages are communicated clearly and effectively;
- ▶ Messages are designed to enhance the safety of bathers and the public in supervised swimming settings; and,
- ▶ Messages are communicated using posters, artwork, signs or other communication vehicles.

If your drowning prevention activity matches the criteria of this Award, complete an application form and include high resolution photo and/or link to any media coverage. Applications received by the deadline will be reviewed by a sub-committee of the Canadian Drowning Prevention Coalition steering committee. Recipients will be announced during the Coalition's Annual Meeting via webinar in October with awards given to recipients in their own communities later. One champion may be named. A feature on their activity will be included in the Coalition's Annual Report.

To nominate an individual, group, organization, or department; or, to apply for the *Barb McLintock Memorial communication award* please complete the following application: <https://cdpcoalition.ca>.

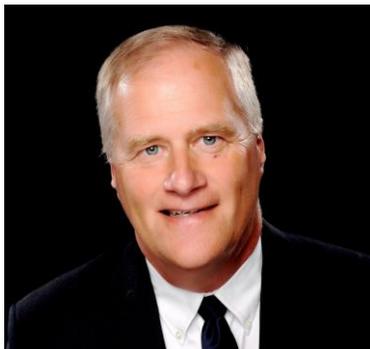
Email applications/nominations to info@cdpcoalition.ca using the subject heading: *Barb McLintock Memorial communication award*. Submissions for the Canadian Drowning Prevention Awards are due September 1st of each year.

SECTION 4

MULTISECTORAL PARTICIPATION & METHODOLOGY



Mandate To create recommendations for high impact actions for drowning reduction in one of the key focus targets. These actions should be achievable, focused on impact, and measurable.



Stephen B. Beerman, MD
Co-Chair,
Canadian Drowning Prevention
Coalition

Coalition Steering Committee
Multisectoral Leadership



- ▶ **Multisectoral input and shared leadership is an essential component of the public health approach in the search for successful actions, impacts, and outcomes.**
- ▶ Coalition participants, steering committee and technical working group leadership, participants, agencies, and organizations are varied and diverse in mandates, missions, and goals; represent many geographic areas, populations, and service providers; and, bring varying perspectives and experiences.
- ▶ The participation of at least one participant from each area – government, non-governmental organizations, academics, industry, citizen engagement groups, and media brings a wealth of knowledge about the issue of drowning in Canada.

Methodology and process

- ▶ Work within a **public health framework** - address disparities in health among different racial, ethnic and socioeconomic groups – i.e., reducing inequities when it comes to drowning morbidity and mortality, being culturally respectful in approaches and interventions, and making a commitment to learning from marginalized populations as opposed to prescribing solutions.
- ▶ Complete a **situational assessment**
 - ▶ Gather, analyze, synthesize, communicate and discuss data for the purpose of informing planning decisions.
 - ▶ Summarize all relevant data related to the key focus target to assist in formulating the goals and action steps. This situation assessment includes:
 - A summary of the existing evidence
 - The identification of key informants
 - A summary of the current work and references in Canada
 - The identification of best practice examples and or normative/expert standard guidelines for this issue from other nations or from other injury related issues, where and if they exist.
- ▶ Include short-term and long-term **goals** related to the key focus target (e.g., vision-zero).
- ▶ Identify concrete and comprehensive **action steps** linked to the specific efforts that are made to reach the ultimate and intermediary outcome goals related to the key focus target. These will include immediate actions, long-term actions, as well as the anticipated impact of these actions.

SECTION 5

KEY FOCUS TARGETS



D *Key focus targets* **High risk age groups, marginalized populations that are disproportionately affected by drowning, and high-risk sectors or activities.**

- ▶ To achieve the overall vision of zero drowning deaths in Canada, the Coalition identified key focus targets for drowning reduction. Key focus targets refer to areas for action and impact that have been identified by the steering committee, the Coalition, and Canadians.
- ▶ Multisectoral technical working groups are formed around each of the key focus targets and provide recommended actions for drowning reduction.



Canada's Key Focus Targets

Children 1 to 4 years of age

Drowning in supervised settings

Indigenous peoples: First Nations, Inuit and Métis

New Canadians

Northern Canada, rural areas & cold-water immersion



Unintentional water entry

Water transport related drowning

Young adult males



Children 1 to 4 years of age



Zero drownings among children under 1 year of age.

Zero drownings of children 1 to 4 year of age associated with bathtubs (includes distracted parenting; and, homicides).

Zero drownings of children 1 to 4 year of age associated with backyard/residential pools by 2030.



Key Messages

- ▶ Drowning prevention in children 1 to 4 years of age is the responsibility of parents/guardians/caregivers in all settings.
- ▶ A focus on undistracted supervision is paramount to eliminate drownings among children 1 to 4 years of age in all settings.
- ▶ Legislation/regulations/standards/by-laws are needed at the federal, provincial/territorial, municipal levels to enforce a layered approach to prevent Children 1 to 4 years of age from accessing pools, lakes, ponds and rivers.

Background

In Canada, drowning is a leading cause of unintentional injury death among children 1 to 4 years of age.¹³ The burden of non-fatal drowning is among the highest in this age group; children under five are more likely to suffer a non-fatal drowning requiring an emergency department visit and/or hospitalization than a fatal drowning.¹⁴ Private backyard pools are the most common setting where children 1 to 4 years of age fatally drown in Canada.¹⁵

Research – Action – Highlights

- ▶ Project collaboration with the technical working group focusing on Unintentional Water Entries – workshop facilitation at Survival2020 hosted by the International Red Cross in October 2020:
 - ▶ **“Building safer communities: Engaging experts to create innovative approaches to prevent drownings among children 1 to 4 years of age and their rescuers following an unexpected fall into water”** will engage multisectoral experts in the creation of innovative approaches, recommendations and outcome statements. These will guide the creation of a template for the development of programs and tools used to promote the importance of undistracted supervision for children 1 to 4 years of age. This will offer guidance at the Federal/Provincial/Territorial and municipal levels to support rescuer safety in scenarios involving unintentional water entry.
- ▶ Exploring the elements available to Canadians for creating a layered approach for access to bodies of water (physical barriers, warnings, safety equipment, signage and caregiver education)
- ▶ Seeking to make connections with the Canadian Nurses Association, Canadian Pediatric Society, The royal college of Physicians and Surgeons of Canada, the Ontario College of Nurses and Public Health Ontario, and others.
- ▶ Addition of two new members to the technical working group from media/communications and industry. Seeking participation from academia.

Drownings in supervised settings



LIFESAVING SOCIETY®
SOCIÉTÉ DE SAUVETAGE

The Lifeguarding Experts
Les experts en surveillance aquatique

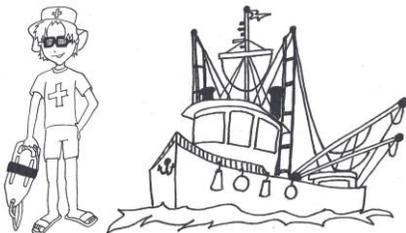


To identify actions that will result in a significant reduction of drownings to zero within supervised settings by 2025



Supervised setting

A designated area at, on or near the water where a supervised activity takes place. A safety plan is in place that directs the supervision of participants by trained personnel.



Background

Approximately **4%** of all unintentional water-related fatalities in Canada occur during occupational activities.

Approximately **1%** occur under lifeguard or instructor supervision.¹⁵

Key Messages

- ▶ A safety plan: shall set out the safety protocols for the facility or activity including applicable procedures and instructions on how to properly document health and safety incidents that occur. Its contents should include:
 - ▶ an identification of hazards;
 - ▶ location of rescue equipment (e.g. PFDs, reaching pole, first aid kit, AED);
 - ▶ how to contact assistance (e.g., EMS);
 - ▶ a list of all staff members who have First Aid training and/or appropriate certification(s) for the activity; and,
 - ▶ the minimum ratio or ratios of staff members to participants.
- ▶ Where a supervised activity is taking place, various forms of technology may be used to aid in safety supervision (e.g., Underwater detection system, cameras and/or monitors). These technologies DO NOT replace the trained individual(s) responsible for supervision.
- ▶ Both occupational and lifeguard/instructor supervised settings represent seemingly safe environments where the number of drowning deaths should be zero. Protocols for critical incident debriefing and review to create recommendations for future prevention exist in some provinces but not all.



National engagement on this issue is needed.

Research – Action – Highlights

- ▶ [Symposium2020](#) has been scheduled to take place via an online series in October & November 2020. Its focus includes the integration of technology; legislation and regulation (e.g., lifejackets and pool/waterfront barriers); and, the need for cultural change -i.e., drowning as a public health issue (e.g., need for multi-layered supervision including parent engagement).
- ▶ Technical working group projects for 2020/2021 include: producing a 1-minute video on drowning prevention in supervised settings to serve as an education piece to 1) help the public recognize bathers in trouble and, 2) instruct the public on what to do; and 3) how to maintain personal safety during a drowning emergency.





CANADIAN
DROWNING PREVENTION
PRÉVENTION DE LA NOYADE
COALITION

presents

*Symposium*2020

Innovative approaches for eliminating
drownings in supervised settings

----- Online -----

Theme

Meet, present, learn, educate, discuss issues and trends and gain a more comprehensive understanding about and knowledge of supervised settings alongside multisectoral experts – government, community, industry, academics, non-governmental organizations, and communications experts and create recommendations, actions, and outcomes which will result in the elimination of drownings in supervised settings within the next five years.

Topics include:

Cultural change – Legislation & regulation – Integration of technology

Identify actions that will result in a significant reduction of drownings to zero within supervised settings by 2025

Provide leadership and expert guidance

Focus on the urgency with which these actions must be implemented

October 20 & 27 and November 3 & 10, 2020

For details visit: www.cdpcalition.ca

Call for Abstracts

Theme 1: Drowning Prevention Initiatives

Have you or your facility implemented a new strategy to help reduce drownings or increase water safety knowledge? Do you have an idea in need of feedback drowning prevention experts? Have you developed a new training strategy for your employees to keep them and/or your patrons safe in supervised settings? Data is not required for this theme! These sessions provide those on the front lines of drowning prevention (e.g., lifeguards, aquatic managers, employers) an opportunity to share and showcase what is being done in local communities across the country to inspire others. It's your time to shine!

Theme 2: Drowning Prevention Research

These sessions offer an opportunity for new and experienced researchers to share their projects and results with others interested in the same field! Projects could include (but are not limited to) data on local drowning trends, results from a drowning prevention implementation study, or outcomes of hiring/training strategies to improve safety in supervised settings. Novice researchers are encouraged to submit an abstract and have an opportunity to get feedback on your project and/or get advice on "next step" from experienced researchers. Come to share and learn!

Abstract Submission

Abstracts should be limited to 300 words (not including title, authors, affiliations, or funding acknowledgements); clearly identify all contributing authors and their affiliations with the first author being the presenting author. **Abstract Structure:** *Theme 1 (Initiatives):* Background/Rationale/Concept, Initiative/Idea Implementation or Method/Impact/Conclusion OR *Theme 2 (Research):* Background, Methods, Results, Discussion/Conclusion. Abstracts should acknowledge any funding sources. Previously presented work is acceptable to submit. Presenting author must be registered as a conference delegate(s) by August 30th, 2020.

Presentation Options

Poster presentations will be assigned a designated location in the conference area with multiple opportunities during breaks/meals to discuss their findings with conference participants. Oral presentations will be 12-minutes in length and followed by a 3-minute Q&A period. Visit www.cdpccoalition.ca for details.

Submission Timeline

Abstract Competition Opens	April 1 st , 2020
Abstract Competition Closes	June 30 th , 2020
Selection Results	July 31 st , 2020

Abstract Submission

Completed abstracts can be submitted to program@cdpccoalition.ca on/before the competition closing date.

Indigenous peoples – First Nations, Inuit, and Métis



To support the creation of three technical working groups – First Nations, Inuit and Métis peoples – by 2021.



Background

Drowning in the Indigenous population has been reported to be 6 times higher than the Canadian average, and as much as **15 times higher** in children.^{16,17,18}

Indigenous peoples comprise about 4% of the population in Canada, but account for approximately

26% of drowning cases that involve a snowmobile,

16% of drowning cases after a fall into water,

10% of recreational drowning fatalities, and

9% of boating related drowning deaths.¹⁷

Increased risk of drowning in Indigenous populations has been linked to proximity to open water, low use of personal flotation devices, and alcohol use.¹⁷

Key Messages

- ▶ Indigenous peoples have a preventable drowning rate that is substantially higher than that of non-Indigenous Canadians.
- ▶ First Nations, Inuit, and Métis leadership must be the leaders and be involved in the collection, analysis, and dissemination of data by and for their peoples.
- ▶ Genuine and respectful relationships with Indigenous leaders, elders, and community members must continue to develop and strengthen.
- ▶ There is much to learn from First Nations, Inuit, and Métis peoples on the drowning burden amongst each of these distinct groups.
- ▶ Funding support for research on drowning amongst First Nations, Inuit, and Métis is needed.

Research – Action – Highlights

- ▶ The Coalition and the Assembly of First Nations (AFN) continue to communicate, strengthen its relationship, and collaborate. The Coalition is grateful for these opportunities to share understanding and looks forward to the possibility of supporting a technical working group focusing on First Nations Peoples.
- ▶ The Coalition is grateful for the occasion to open dialogue with the Métis National Council (MNC) in June 2019. It looks forward to future interchanges in 2020.
- ▶ The Coalition continues to reach out to the Inuit Tapiriit Kanatami (ITK) in hopes of opening dialogue.
- ▶ The Coalition is seeking to better understand and improve health outcomes for Indigenous peoples through a reduction in drowning. Part of the solution is in learning from traditional and local knowledge.
 - ▶ To start the conversation, and begin to address and eliminate this disparity, the Coalition will be presenting a workshop at the Indigenous Health Conference 2020 (IHC2020), that will focus on providing space in which participants share traditional and local drowning-related stories, methods, strategies, and interventions; and, the Coalition listens to learn about and seek to comprehend traditional understandings of drowning (e.g., boating, ice, swimming, etc.) from Indigenous leaders, elders, and community members. Collected stories will be shared with IHC2020 planners (for distribution to delegates) and through Coalition publications.
 - ▶ The Coalition will remain open to listening and learning about traditional and local drowning-related stories, methods, strategies, and interventions after IHC2020. Indigenous leaders, elders, and community members may continue to share their knowledge with the Coalition via telephone, email or the website www.cdpcoalition.ca.



To encourage the implementation of survival swimming skills training to all new Canadians within the first three years of their arrival to Canada.



Background

A study that examined the association between duration of residence in Canada and risk of unintentional injury among children and youth found that risk of drowning was highest in recent immigrants who had lived in Canada for fewer than five years.²⁰

People who are new to Canada are four times more likely to be unable to swim than those who were born in Canada.²¹

5x

Youth aged 11 to 14 who were new to Canada were five times more likely to be unable to swim than their Canadian-born classmates. 93% of new Canadians of this age indicated that they participate in activities in, on, or around water.²²

Key Messages

- ▶ Newcomers to Canada have different knowledge and/or experiences around issues of water safety/drowning prevention. New Canadians tend to be more afraid of water than those born in Canada making them more vulnerable to drowning.
- ▶ Most new Canadians have had a lack of or limited exposure to water for recreation. For many, learning to swim and water safety is not part of their experience in their home country.
- ▶ It is important to reach new Canadians with water safety/drowning prevention information and provide opportunities for them to learn survival swimming skills.
- ▶ Findings from a pilot study (Thorncliffe, Ontario) support the scaling up and expansion of the project to reach new Canadian communities across Canada.
- ▶ Boating and swimming are two important areas where new Canadians need more information and education to reduce their risk of drowning when it comes to being in, on or around water.

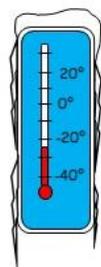
Research – Action – Highlights

- ▶ A pilot program was introduced in the Thorncliffe, Ontario community area (Toronto) during Summer 2019. It is a community with a high number of new Canadians. The program included research evaluation components with the New Canadians after water safety presentations, survival swimming skills instruction for the children, and *Family Swim to Survive* lessons.
 - ▶ Research findings were consistent with the large national quantitative studies conducted by the Lifesaving Society in 2010 and 2016.
 - ▶ The results point to a need for water safety education targeted to reach new Canadians, especially those who have been living in Canada for less than 5 years.
 - ▶ The overwhelming majority of the children who took the *Swim to Survive* lessons agreed that the program was fun, that they learned new skills, that learning to swim is important, and they would like to take more lessons.
- ▶ The majority of those surveyed agree that swimming is a life skill and that all should learn to swim in Canada.
- ▶ Overwhelming agreement that the presentation was extremely useful and informative especially to their demographic.

Northern Canada, rural areas, and cold-water immersion



To respect and learn from traditional Northern and rural practices and ensure that recommended drowning prevention strategies are appropriate to ensure a reduction in drownings in Northern Canada and rural areas.



Background

Canada has an abundance of natural bodies of water, many of which sustain very cold temperatures year-round. Immersion death in cold water is frequent in northern countries such as Canada. On average,

200

people die as a result of cold-water immersion each year.²³

Drowning rates are highest in the Yukon, Northwest Territories, and Nunavut.¹⁵ Drowning risk in Northern Canada is increased by proximity to water and lower water temperatures.²⁴

Key Messages

- ▶ Rural residence has been associated with higher risk of drowning.¹⁶
- ▶ More drowning fatalities have been occurring in rural areas in recent years than in the past.¹⁷
- ▶ Climate change (e.g., thinning ice) in the North increases risk (e.g., snowmobile usage).
- ▶ Teaching methods or information that may have originated from the South is inappropriate for the North.
- ▶ Accessibility to relevant affordable lifejackets and other safety equipment is limited or unavailable.

Research – Action – Highlights

- ▶ Summarize initiatives already in place and compare these projects to determine gaps (e.g., determine if there are any data gaps within the National Drowning Report tied to Northern Canada, rural areas and cold water).
- ▶ Identify and describe disparities that exist (e.g., lack of access to ‘learn to swim’ programs).

Unintentional water entry



To identify and encourage the implementation of actions that will result in a significant reduction of drownings due to unintentional water entries by 50% in ten years (2030).



Unintentional water entry

The person/people never intended to be in the water. There was no on or off-road motor vehicle, snowmobile, or aircraft involved, and the drowning was not boating-related.



Background

From 2005-2014 (10-years), 759 people drowned in Canada as the result of an unexpected fall into water²⁵

759

The largest frequency of death in Canada for non-aquatic activities occurred among children 1 to 4 years of age accounting for approximately 21% of fatalities related to unexpected falls into water.²⁶

Those at risk of fatal drowning from unintentional water entry are clothed, lack the skills to get out safely, and are most likely to be falling into moving water or dockside/poolside areas. Risk of falling into water due to flooding is another area in need of more research.

Key Messages

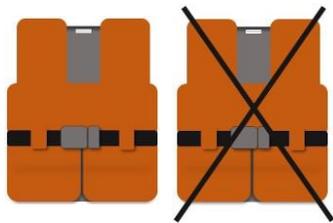
- ▶ Drowning prevention in children is the responsibility of parents, guardians, and caregivers in all settings.
- ▶ The education of individuals on the safe rescue of others is becoming increasingly important.
- ▶ Further research is needed on incidents that are fatal or non-fatal involving persons with neurodevelopmental disabilities and/or medical conditions.
- ▶ Unintentional water entry includes those who are unexpectedly pushed into water (i.e., the timing and/or method of entry is not planned when pushed, resulting in injury and possible fatality).
- ▶ Research is needed on drownings resulting from climate-related emergencies (e.g., flooding).

Research – Action – Highlights

- ▶ Engagement of multisectoral experts is scheduled to take place at the International Red Cross' *Survival2020* conference in Calgary, Alberta in October 2020 through a workshop designed to engage delegates in the creation of innovative approaches, recommendations and outcome statements. These will guide the creation of a template for the development of programs and tools used to promote the importance of undistracted supervision for children 1 to 4 years of age. This will offer guidance at the Federal/Provincial/Territorial and municipal levels to support rescuer safety in scenarios involving unintentional water entry.
- ▶ Research into fatal and non-fatal incidents involving persons with neurodevelopmental disorders and/or medical conditions will begin in Spring 2020, including a national and global situational assessment and data collection (where available). Next steps include the creation of initiatives focused on engaging the public to develop interventions focused on reducing drownings from unintentional water entries, and the creation of a pre- and post-measurement community awareness tool to evaluate the effectiveness of these interventions.
- ▶ Data on non-fatal drowning incidents caused by a push into water will be gathered and examined. Initial communications have begun with the Canadian Camping Association membership. The *No Push Movement*²⁷, developed by Eric Shendelman, will be further developed and made available to the public sector through symposium presentations, social media, and through a website. Pledge packages are designed to engage Canadians in pledging to not push anyone into the water and to stop pushing when they see it.

Water transport-related drowning

 *To identify and encourage the implementation of high impact strategies, as well as recommendations previously made by Coroners, Medical Examiners and the Transportation Safety Board that will result in a significant reduction of water transport-related drownings by 75% in ten years (2030).*



Background

Water-related deaths in Canada are more frequently associated with boating than any other activity.²⁸

The most common factor associated with boating deaths in the last two decades has been the non-wearing of personal flotation devices.²⁸

The vast majority of boating related drowning deaths occur among males between

15-74

years of age.²⁸

Key Messages

- ▶ Wear a properly fitting lifejacket or personal flotation device (pfd)
- ▶ Boat sober
- ▶ Take a boating course
- ▶ Prepare your vessel
- ▶ Be cold water safe
- ▶ Participate in North American Safe Boating Awareness week activities May 16 to 22, 2020

Research – Action – Highlights

- ▶ The technical working group for Water transport-related drowning is performing a scoping review to identify key issues, trends and gaps.
- ▶ Following the scoping review, this group will make recommendations on priority high impact implementation strategies.
- ▶ At the World Conference on Drowning Prevention (WCDP2019), October 8-10, 2019 in Durban, South Africa Eric Shendelman gave a presentation titled Informing research and policy: The place of scoping reviews' systematic approach and established methodology in drowning prevention research.

Young adult males



To change Canadian males' attitudes toward high-risk behaviors in, on and around water.



Background

In Canada, young adults 20 to 34 years of age consistently have high unintentional water-related fatality rates relative to other age groups.¹⁵ Within this age group 20-24-year-olds have the highest death rate (1.6 per 100,000).¹⁵

79%

are male

Approximately 1 of every 2 young adults who fatally drowned had consumed alcohol.^{15,29} 79% of drowning fatalities occur among men and the greatest proportion of male drowning deaths occurs among young adults 20 to 34 years of age (9 out of 10 drowning victims are male in this age group).¹⁵

Key Messages

- ▶ 80% of all drownings are male. Male drowning rates are not unique to Canada.
- ▶ Indigenous men are over-represented in this group.
- ▶ More initiatives focused on reducing drowning rates among males are needed.
- ▶ Prevention initiatives targeting behavior changes are needed as they relate to prevention, knowledge, and intention
- ▶ Targeted efforts in a variety of venues and using multiple channels is needed to reduce the high-risk behaviors of males.
- ▶ Reinforced messaging over the long-term is recommended due to the complex nature of changing behaviors and attitudes.
- ▶ Modification of existing programs to accommodate differences between males (boys and men) and females (girls and women) are needed to transform societal norms about gender-relations.

Research – Action – Highlights

- ▶ Changing Canadian males' attitudes toward high-risk behaviors in, on and around water is a long-term goal. It will be supported by consistent evidence-based messaging, delivered in a variety of ways, which appeals to diverse males' values and needs that reinforce safe behavior in, on, and around water while transforming social norms about water safety practices.
- ▶ Technical working group leadership is currently being sought.

SECTION 6

RECOMMENDATIONS & NEXT STEPS

Community-based engagement



Goal To encourage Canadians to seek, identify, and share drowning prevention initiatives which focus on best practices and impacts.

Recommendations – Call to action

- ▶ Data should guide interventional efforts.
- ▶ Encourage the increase of multisectoral collaboration in all areas of drowning prevention.
- ▶ Continue to build relationships with stakeholders within the Government of Canada ministries, departments and agencies; the Assembly of First Nations, Inuit Tapiriit Kanatami, and the Métis National Council; as well as multicultural associations, and communities across Canada.
- ▶ Encourage and support the creation and expansion of community-based coalitions and drowning reduction projects to increase community-based actions and to include both fatal and non-fatal drowning.
- ▶ To encourage community groups to utilize toolboxes provided and establishing a list of protocols to be followed for drowning prevention and post-drowning incidents.

Next steps

- ▶ Include unintentional and intentional drownings in the scope of community-based research, activities, strategies, etc.
- ▶ Engage the most vulnerable Canadians in solution finding and leadership to find interventional strategies for drowning risk reduction.
- ▶ Create additional tools to support communities in mapping high-risk areas
- ▶ Create work with multisectoral stakeholders to develop a list of protocols to be followed for drowning prevention and post-drowning incidents.

Policy and legislation

Goal To ensure evidence-based data guides interventional drowning prevention efforts.

Recommendations – Call to action

- ▶ The Government of Canada can assist the Canadian Drowning Prevention Coalition by:
 - ▶ Supporting the UN Declaration on Drowning Prevention.
 - ▶ Funding research on non-fatal drowning.
 - ▶ Facilitating and supporting the implementation framework for survival swimming programs for all new Canadians within three (3) years of arrival.
 - ▶ Amending Small Vessels Regulations¹⁵ (SOR/2010/91 – 204(a)/310(1)(a)(i)/302 for small vessels to require that a Transport Canada approved personal flotation device or lifejacket must be worn by each person on board.
 - ▶ Facilitating and supporting an implementation framework for mandatory cardiopulmonary resuscitation (CPR) training with driver’s license (new or renewal).
 - ▶ Implementing a Drowning Review Board to review drowning incidents and make recommendations for implementation.
 - ▶ Facilitating and supporting an implementation framework for consistent pool fencing legislation across Canada.

Next steps

- ▶ Engage the Government of Canada, provincial/territorial governments and local governments across Canada in the drowning prevention effort.
- ▶ Review evidence to more clearly identify the length and/or type of “small vessels” that must have statutory requirements for wearing a personal flotation device or lifejacket.

Research and Development

Goal To ensure evidence-based data is available to guide interventional drowning prevention efforts.

Recommendations – Call to action

- ▶ Create and evaluate programs that teach basic drowning recognition and rescue skills to the public with specific focus given to groups at highest risk.
- ▶ Expand Canadian drowning data collection and research should expand to include a more in-depth understanding of socioeconomic risk factors and should progress to the inclusion of non-fatal and intentional drowning. Normative/expert guidance on an unintentional water entry definition and classification system would be helpful.
- ▶ Make drownings in supervised settings a national priority and the first target to reach zero mortality. Government of Canada officials should participate online in Symposium2020 taking place October 20 & 27 and Nov 3 & 10.
- ▶ Conduct retrospective and prospective studies on drownings amongst children and adults living with neurodevelopmental disorders and medical conditions.
- ▶ Research by Indigenous people – First Nations, Inuit, and Métis – to determine the extent to which current learn-to-swim programs can benefit from adaptation prior to delivery within Indigenous communities for cultural relevance.
- ▶ Design/deliver an interactive online map on which all fatal and non-fatal drowning locations across Canada (1990-present) are identified and made available to increase awareness of high-risk areas among the public, policy and decision-makers; and, increase the effectiveness of post-drowning initiatives through the identification of specific behaviors relevant to a location.
- ▶ Research bystander/rescuer drownings in Canada to learn the circumstances under which each such drowning occurred to better understand how these drownings may be prevented in the future.

Next steps

- ▶ A study on drowning among children and adults living with neurodevelopmental disorders is being undertaken by the technical working group focusing on unintentional water entries.
- ▶ Seek funding for the design/delivery of an interactive online map highlighting fatal and non-fatal drowning locations across Canada to be made available to Canadians/public to increase awareness of the danger of high-risk areas among the public, as well as policy and decision-makers.

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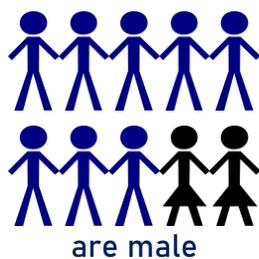
APPENDICES

THE DROWNING ISSUE IN CANADA

Fatal drowning



D *Fatal drowning* “The process of experiencing respiratory impairment from submersion / immersion in liquid; outcomes are classified as death, morbidity and no morbidity.”³⁰



- ▶ The number of drowning deaths reported over 25 years has declined, yet hundreds of fatal drowning incidents still occur in Canada each year.
- ▶ During 2012-2016 (most current five-year period), approximately 444 people fatally drowned in Canada which corresponds to 1.3 deaths per 100,000 population each year.¹⁵
- ▶ More than 30 years of national research and reports are available through Lifesaving Society Canada. A [2-page at-a-glance version](#) with infographics is published annually complimenting the annual [Canadian drowning report](#).¹⁵

Additional Resources



At-A-Glance

Analysis of the most recent available water-related fatality data reveals the current profile of drowning mortality in Canada:

- ▶ The highest water-related fatality rates (2012-2016) are found in seniors 65+ and young adults 20 to 34 years of age.
- ▶ Most victims are male (80%).
- ▶ The largest number of drownings occur in summer - May through September.
- ▶ The majority of water-related fatalities in Canada occur in natural bodies of water (69%) like lakes, ponds, and rivers. Water-related fatalities in man-made settings were less common than in natural bodies of water in 2012-2016. Bathtubs were the most common man-made setting where drowning deaths occurred.
- ▶ Almost two-thirds of all fatal unintentional drowning occurs during a recreational activity. Another quarter occur during daily living activities.
- ▶ Boating and aquatic activities such as swimming and wading are the most common.

The long-term progress that has been made in reducing death by drowning in Canada is encouraging, but on average there are still approximately 450 preventable, unintentional water-related fatalities occurring each year. This reinforces the need for continued drowning prevention efforts.

THE DROWNING ISSUE IN CANADA

Non-fatal drowning

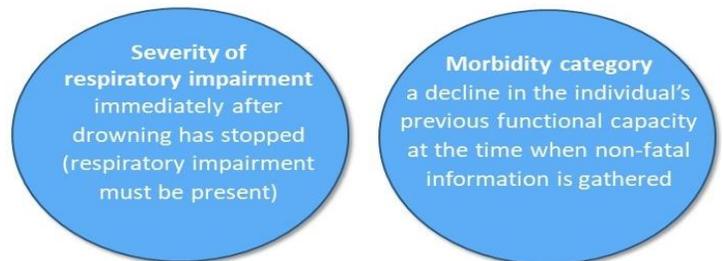
- D** **Non-fatal drowning** “Outcomes are fatal or non-fatal. In non-fatal drowning, the process of respiratory impairment is stopped before death.”³¹
- D** **Involuntary distressed coughing** The coughing up of liquid, moving liquid out of the airway, and/or sustained coughing. This offers all observers a reliable and suitable means of establishing that the process of drowning had begun.³¹
- D** **Previous functional capacity** The individual’s cognitive, motor, and psychological capacity before the drowning incident. It is used to measure the degree of morbidity which occurred as a result of drowning.³¹

Non-fatal Drowning Categorization Framework (NDCF)

The NDCF offers clarity of understanding, as well as consistency and reliability for assessment, evaluation, conversation and debate. It also serves as a means for dialogue and communication about non-fatal drownings in all settings, including the media and community surveys.³¹

The NDCF could impact the quality of pre-hospital or in-facility care and treatment, thus, resulting in a decline in the number of individuals living with severe morbidity/injury (meaning that there may be an increase in number of individuals living with some or no morbidity/injury) from a drowning event.³¹

Severity of respiratory impairment (immediately after drowning process stopped)		
(1) Mild impairment	(2) Moderate impairment	(3) Severe impairment
<ul style="list-style-type: none"> • Breathing • Involuntary distressed coughing 	<ul style="list-style-type: none"> • Difficulty breathing <p>AND/OR</p> <ul style="list-style-type: none"> • Disoriented but conscious 	<ul style="list-style-type: none"> • Not breathing <p>AND/OR</p> <ul style="list-style-type: none"> • Unconscious
AND		
<ul style="list-style-type: none"> • Fully alert 		
Morbidity category (based on any decline from previous functional capacity) at the time of measurement		
(A) No morbidity	(B) Some morbidity	(C) Severe morbidity
No decline	Some decline	Severe decline



Limitations

1. The reporting of a description of respiratory impairment immediately following the drowning incident can be ambiguous.³¹
2. The cross-sectional measurement of an individual’s capacity is done at the time the information is gathered. As time progresses so too may the symptoms and may, therefore, change.³¹

It should be noted that where more detailed clinical data is available, the NDCF may be used alongside other scoring systems to provide additional detail.³¹

Canadian Drowning Prevention Coalition

Canadian Drowning Prevention Plan, 6th edition (May 2020)

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