ACKNOWLEDGEMENTS

We gratefully acknowledge the province-wide partnership between the Provincial Health Services Authority (PHSA), Evidence to Innovation Research Theme at the BC Children’s Hospital Research Institute, and the Department of Pediatrics, University of British Columbia (UBC) for their integral participation and contribution to the BC Injury Research and Prevention Unit (BCIRPU). Their ongoing involvement and support allows BCIRPU to continue to be a leader in the development of evidence-based prevention initiatives that build capacity in health authorities and that contributes to the improved health, well-being, and safety of British Columbians.
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MESSAGE FROM THE DIRECTORS

Dr. Ian Pike & Dr. Shelina Babul

What began as a typical year for the BC Injury Research and Prevention Unit (BCIRPU) ended very differently as the world responded to COVID-19.

Dr. Ian Pike completed a six-month sabbatical in 2019-2020, which included a research fellowship at the National Research Institute of Police Science in Japan to explore the development of a social marketing program to promote child passenger safety among parents and caregiver drivers. He and his colleagues at York University and The Community Against Preventable Injuries successfully wrapped up a three-year project funded by Transport Canada to explore attitudes and behaviours among recreational boaters in BC.

Dr. Shelina Babul took the Concussion Awareness Training Tool (CATT) to East Africa to pilot online concussion education to new audiences. A new e-learning course was launched for working adults and their employers, expanding concussion education beyond sport and recreation. Promotion efforts continued in line with the national Concussion Harmonization Project, of which CATT is a recognized resource.

Dr. Mariana Brussoni had a banner year, providing numerous presentations and media interviews across Canada and internationally on outdoor risky play. She served as guest topic editor for a chapter on outdoor play in the Encyclopedia of Early Childhood Development, which became the second-most accessed of all the content in the Encyclopedia within two months. Finally, Dr. Brussoni provided leadership to the outdoor risky play movement, co-founding Outdoor Play Canada with her colleagues across the country. We are proud of Dr. Brussoni’s continued success in the field of children’s early development and health.

Data surveillance and management has always been a pillar of the BCIRPU. This year we made updates to the Injury-Related Deaths and the Traffic Accident System tools. We continued our collaboration with the Population and Public Health Observatory at the BC Centre for Disease Control (BCCDC) to develop an Injury Data Mart. Additionally, we established a data sharing agreement with FNHA to undertake collaborative injury surveillance for First Nations peoples in BC.

BCIRPU worked with the BC Injury Prevention Committee to establish specific indicators that monitor the overall burden of injury in BC. These injury indicators serve to inform the development of a data management framework and policy-relevant whole-system reporting, and will be populated into the Injury Data Mart.

Recognizing that the COVID-19 pandemic could put people at risk for injury as they adjust to new routines, BCIRPU published a series of blog posts on injury prevention during COVID-19 at the end of 2019-2020. These messages resulted in increased visits to our website and engagement on social media. Observing lower levels of emergency

department visits and recognizing public uncertainty around COVID-19, BCIRPU responded by working with BC Children's Hospital Research Institute (BCCHR) colleagues on coronavirus-related projects and grants that will continue into 2020-2021 as we all work together to understand the pandemic’s short- and long-term effects on society.

As always, we extend sincere gratitude to our staff members and collaborators from the Health Authorities, government, and the research community. We would also like to thank the Provincial Health Services Authority and the BCCDC for their generous funding to BCIRPU—their ongoing guidance and support is invaluable. Acknowledgement is needed for Dr. Allison Eddy and the Department of Pediatrics, University of British Columbia, and to Dr. Wyeth Wasserman and BCCHR for providing the environment, ongoing resources, and support towards our research efforts. Finally, we thank the various injury prevention communities, research institutes, and NGOs for their collaboration and support as key partners in building capacity to better address injury prevention in BC and beyond.

Sincerely,

Dr. Ian Pike, Director

Dr. Shelina Babul, Associate Director
MESSAGE FROM THE PROVINCIAL HEALTH SERVICES AUTHORITY (PHSA)

Ms. Noorjean Hassam

Congratulations to the BC Injury Research and Prevention Unit (BCIRPU) for another successful year of injury prevention surveillance, research leadership and collaboration, and education in British Columbia (BC). Your support has been instrumental to the BC government, the BC Centre for Disease Control (BCCDC), the First Nations Health Authority and regional health authorities to advance the injury prevention agenda. The BCIRPU continues to be a national and international leader in injury prevention and we are fortunate to work closely with this exceptional team.

BCIRPU continued to support the development of high priority research, recommendations for action, and work plans supporting the three provincial injury prevention priorities, in collaboration with Megan Oakey, Provincial Manager for Injury Prevention. Following the development of injury indicators for BC, the BCIRPU undertook the specification of these indicators, laying the foundation for the development policy-relevant whole-system reporting in partnership with the BC Observatory for Population and Public Health and Trauma Services BC.

This annual report represents outstanding achievements in injury surveillance, research, knowledge translation, and public information by the BCIRPU throughout the 2019-2020 year. The BCCDC is pleased to be a partner with BCIRPU in our collective mission to reduce the societal and economic burden of injury in BC, and we look forward to continued collaboration for action on injury prevention in the years ahead.

Sincerely,

Noorjean Hassam, MHA
Chief Operating Officer & Chief Professional Practice Officer
BC Centre for Disease Control
Provincial Health Services Authority
Our Vision
To be a leader in the production and transfer of injury prevention knowledge and the integration of evidence-based injury prevention practices in the daily lives of those at risk, those who care for them, and those with a mandate for public health and safety in British Columbia.

Our Mission
To reduce the societal and economic burden of injury among all age groups in British Columbia through research, surveillance, education and knowledge transfer, public information and the support of evidence-based, effective prevention measures.

Background
BCIRPU is located at BC Children’s Hospital and is a core research program within the Evidence to Innovation theme at the BC Children’s Hospital Research Institute. To reduce the social and economic burden of injury in BC, the Unit was established as a strategic entity, supporting the development of policies and programs through research, surveillance, and the translation of evidence and knowledge to researchers, policy makers, practitioners, and the public. BCIRPU leaders are members of the faculty at the University of British Columbia, and train and mentor future health care professionals, researchers, policy makers, and injury prevention practitioners.

Our Role
To serve as a provincial “hub” to provide research-based leadership and coordination to stakeholders in order to reduce the societal and economic burden of injury among all age groups in British Columbia.

Key objectives include:
- Reducing the social and economic burden of injury in BC
- Leading research and knowledge development
- Improving surveillance
- Guiding evidence-based prevention
- Supporting professionals and practitioners
- Providing awareness, education, and public information

Strategic Pillars
- Surveillance
- Research
- Knowledge Synthesis and Translation
- Public Information

Funding & Support
BCIRPU operates as a province-wide partnership between the BC Centre for Disease Control at Provincial Health Services Authority (PHSA), Evidence to Innovation Research theme at BC Children’s Hospital Research Institute, and the Department of Pediatrics, University of British Columbia. BCIRPU is supported by core funding from PHSA, and competes for peer-reviewed research grants and contracts.
**Surveillance**

Understanding trends and patterns is an important first step in reducing the burden of injury. Injury surveillance is the ongoing collection, analysis, interpretation, and timely dissemination of injury data. Government, health authorities, and other stakeholders require data to inform their decisions to develop and implement effective injury prevention initiatives. The BCIRPU maintains a comprehensive, up-to-date, and standardized surveillance system through its Injury Data Online Tool (iDOT) to support these efforts.

**Research**

High-quality research is crucial for the development of evidence-based injury prevention policy and programming. With expertise in injury prevention, epidemiology, health promotion and education, psychology, kinesiology, preventive medicine, and public health, BCIRPU provides applied injury research and knowledge development leadership and support to government, health authorities, PHSA Population & Public Health, researchers, and other stakeholders. Our collaborations with provincial, national, and international researchers and stakeholders support injury prevention research across age groups, mechanisms of injury, socioeconomic status, and among Indigenous communities.

**Knowledge Synthesis & Translation**

BCIRPU monitors the best injury research and prevention practices in BC, Canada, and around the world. The Unit completes in-depth analyses of current interventions in order to identify those with proven success. This knowledge is compiled and communicated to government, health authorities, PHSA, and other stakeholders. Examples include research evidence reviews, evaluations, syntheses of injury indicators—both general and specific to the provincial injury prevention priorities—and health authority-specific reports.

**Public Information**

Improving knowledge and changing attitudes and behaviours can lead to the reduction of disability and death from preventable injuries. BCIRPU currently utilizes traditional digital tools and media to convey injury prevention information to the general public. This is achieved through the Unit’s strategic alliance with The Community Against Preventable Injuries in the delivery of a province-wide injury prevention social marketing program, as well as core programs including the Concussion Awareness Training Tool, Prevent Shaken Baby Syndrome BC, Finding Balance BC, and Outsideplay.ca.
TOP STORIES OF 2019–2020
Here’s what we were talking about this past year.

New concussion course for working adults

BCIRPU launched a new concussion toolkit that provides guidance on navigating the injury and returning to work in June 2019. CATT for Workers & Workplaces (CATT WW) consists of free online resources consisting of an e-learning course and associated materials that workers, their families, and workplaces can use to navigate the return-to-work process after sustaining a concussion. The course is available in both English and French.

To create CATT WW, an international environmental scan and extensive literature review was conducted. We also facilitated focus groups and interviews, talking to over 45 individuals from a variety of industries about their experience with concussion.

Learn more at www.cattonline.com/workers-workplaces.

Dr. Ian Pike receives Fire Researcher of the Year award

BCIRPU Director Dr. Ian Pike received the 2019 Fire Researcher of the Year Award from the Canadian Association of Fire Chiefs.

“On behalf of my collaborators, I am extremely honoured to receive this award,” Dr. Pike said. “Thank you to the Fire Chiefs for their contributions to improving fire safety in Canada.”

BCIRPU received funding from the City of Surrey to collaborate with the University of the Fraser Valley and the Surrey Fire Service on projects related to firefighter health and safety as well as to explore cause, incidence, and rate of fire-related injuries and deaths in Canada.

Video on physical literacy wins award

BCIRPU’s video on physical literacy received national recognition from the Canadian Institutes of Health Research (CIHR) Institute of Human Development, and Youth Health (IHDCYH) for the 2019 IHDCYH Talks Video Competition.

The video was developed using an integrated knowledge translation approach with key stakeholders and end users including injury prevention researchers, practitioners, a physical literacy expert, and
an athletic therapist. It is one of four videos created for the Active & Safe Central (A&S) resource. Watch the video on YouTube.

**Article on shaken baby syndrome program effectiveness wins award**

BCIRPU’s publication on the effectiveness of the Period of PURPLE Crying program in BC has received the 2018 Article of the Year Award from the journal *Child Abuse and Neglect*.

This study investigates the rates of shaken baby syndrome (SBS) in BC and shows that the program was associated with a 35% reduction in the number of children under two admitted to BC hospitals with shaking-related injuries. The study was covered by news outlets when it was first published in August 2018, including CBC, Black Press, and OMNI.

“While everyone agrees that prevention is better than therapy, anyone who has attempted a serious prevention program understands how challenging prevention really is, perhaps especially in the world of child maltreatment and abuse.”

— Dr. Ronald Barr, lead author of the paper evaluating the Period of PURPLE Crying program
BCIRPU had 57 stories in the media in 2018-2019. Here are some highlights from the past year.

**Documentary: Children’s independent mobility**

Dr. Mariana Brussoni was featured in a documentary on the benefits of children’s independent mobility. *Running Free: Children’s Independent Mobility* is a 26-minute film produced by the UBC School of Kinesiology that debuted in *September 2019*. Dr. Brussoni participated in a panel discussion moderated by CBC’s Shiral Tobin at the launch event.

**Concussions in the film industry**

Concussions can happen to anyone, anywhere, and at any time. Through an ongoing collaboration with the film and live performance industries, Dr. Shelina Babul and the Concussion Awareness Training Tool (CATT) were featured in news articles on concussions outside of sport.

Stunt performer Lori Stewart spoke to CBC’s Stephen Quinn about concussions in the film industry, and Dr. Babul discussed the new CATT for Workers and Workplaces toolkit with CityTV.

**The dangers of distracted driving**

Dr. Ian Pike was featured in an interactive web story in The Globe and Mail on the dangers of distracted driving.

“A common attitude seems to be, ‘Yeah, great idea – that’ll keep all those other people safe. I’m good as it is,’ says Dr. Ian Pike, director of the BC Injury Research and Prevention Unit. ‘Because the prevailing attitude is that injury won’t happen to them.’

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FONGBEER/REDHOT | SHUTTERSTOCK
A Provincial Hub

BCIRPU serves as a hub, providing leadership and coordination for injury prevention initiatives throughout BC. The Unit is directly aligned to support the needs of the BC Ministry of Health Service Plan, the BC Guiding Framework for Public Health, the Provincial Injury Prevention priorities, as well as the needs of the Regional Health Authorities, First Nations Health Authority, BCCDC, and other stakeholders. BCIRPU provides ongoing support to the health authorities, BC Injury Prevention Committee (BCIPC), and members of the BC Injury Prevention Alliance (BCIPA). This support enables cost-effective, evidence-based, and targeted injury prevention policies, strategies, and interventions.

Provincial Injury Prevention Priorities

To fulfill the provincial injury prevention deliverables, the BC Injury Prevention Committee (BCIPC) led by Ms. Megan Oakey (Provincial Manager for Injury and Falls Prevention and Acting Senior Director, Health Promotion, Chronic Disease and Injury Prevention at PHSA/BCCDC), and the BCIRPU established three provincial priorities for injury prevention in 2017-2018.

In 2019-2020, we continued our work on these priorities—seniors' falls and injury prevention; transport-related injury prevention; and the prevention of youth suicide and self-harm.

Seniors’ Fall Prevention

A working group formed in spring 2019 with members from the Ministry of Health's Guidelines and Protocol Advisory Committee (GPAC), the BC Injury Prevention Committee (BCIPC) and the BCIRPU to develop the BC Falls Risk Assessment and Management Guidelines for Older Adults. This work aligns with one of the key recommendations from the Senior Falls Prevention Recommendations. Over the course of six in-person meetings, research evidence and best practices have been reviewed, and the guideline that will be brought to the GPAC committee approval to launch the full external review was developed.

Presentations on the development of this guideline have been accepted: An hour-long oral fishbowl style presentation at the Community Health Nurses of Canada Conference (Vancouver, May 25-27; Postponed due to COVID-19) and a half-hour oral presentation at the 5th Canadian Fall Prevention Conference (Saskatoon, June 15-16; Cancelled due to COVID-19).

Ms. Megan Oakey and Ms. Denise Beaton continued to co-chair the BC Falls and Injury Prevention Community of Practice (CoP). The CoP fosters collaboration, reduces the duplication of efforts, and works toward the standardization of
SUPPORT SERVICES

provincial fall prevention resources. It has been joined by several new members, and an official terms of reference document has been created. The CoP has found an online platform to share resources and facilitate collaborative work on LOOP, the national interactive community platform for fall prevention.

BC Seniors’ Fall Prevention Awareness Week took place from November 4 to 10, 2019. See page 33 for more information about this annual campaign.

Road Safety

The BC International Road Safety Symposium was hosted in partnership with UBC’s Bureau of Integrated Transportation Safety and Advanced Mobility (BITSAM) and the BC Centre for Disease Control on November 7th and 8th 2019 to provide a forum for dialogue and knowledge exchange for road safety across BC.

Renowned national and international experts, Dr. Tarek Sayed (Canada), Dr. Ezra Hauer (Canada), Dr. Fred Wegman (Netherlands), Dr. Simon Washington, and Dr. Ben Beck from Australia joined municipal and provincial experts to discuss and share their experience and recent research with a focus on application, implementation and equity at the local level. It was attended by almost 100 participants and included presentations and interactive panel discussions on topics such as road safety challenges in the smart mobility era and the safe systems approach and critical success factors. The post-symposium evaluation survey questionnaire was completed by 37 participants and a compendium summarizing the presentations, panel discussions, and audience dialogue, has been written and graphically designed for knowledge sharing.

Youth Suicide and Self-Harm

The Youth Suicide & Self-Harm Working Group began meeting again following the release of the BC Coroners Service Death Review Panel Report, Supporting Youth and Health Professionals: A Report on Youth Suicides in summer 2019. The working group met three times in 2019-2020, and has been joined by Dr. Tyler Black, child and adolescent psychiatrist and the Medical Director of the Child and Adolescent Psychiatric Emergency Department at BC Children’s Hospital. Connections with other ministries and groups working in this area were made, and literature reviews regarding the recommendations from the BC Coroners Service and First Nations Health Authority Death Review Panel report, A Review of First Nation Youth and Young Adult Injury Deaths: 2010-2015 began. Given the need for consensus building, and the fact that the majority of the working group are either Medical Health Officers or injury prevention professionals with clinical backgrounds (e.g., nurses) the development of the recommendations has been delayed due to COVID-19 response.
Partnership with the First Nations Health Authority (FNHA)

Building upon explorations in injury prevention with the First Nations Health Authority (FNHA) in 2018-2019, a collaboration has been formed between FNHA, BCIRPU, and Trauma Services BC to develop First Nations Injury Surveillance in BC. The first step in establishing this surveillance system is to gain access to the First Nations Client File (FNCF) in order to enable linkages with available datasets. During 2019-2020, a FNCF Data Access Request Form was drafted and finalized.

Child Death Review Unit

The Child Death Review Unit (CDRU) of the BC Coroners Service reviews the deaths of all children age 18 and under in BC. The purpose of these reviews is to better understand how and why children die, and to use those findings to prevent other deaths and improve the health, safety, and well-being of all BC children.

Through the review of all child deaths, the CDRU gathers data that can show trends in child deaths. In some cases, deaths will be further reviewed by way of an aggregate review or through the multidisciplinary review process. Information arising from these various reviews is analyzed and shared with agencies and organizations to influence and develop programs to deter or prevent child deaths. By understanding the risks, we can be guided in determining the most significant opportunities for prevention.

In 2019-2020, Dr. Ian Pike represented the BCIRPU as a member of the multidisciplinary CDRU in the development of the following reviews and report: *Review of Unexpected Infant Deaths: January 1, 2013 – December 31, 2018.*

A collaboration has been formed between First Nations Health Authority, BCIRPU, and Trauma Services BC to develop First Nations Injury Surveillance in BC.
BCIRPU assists BC’s health authorities and other stakeholders with:

- Injury prevention program planning, development, implementation, and evaluation
- Coordination and facilitation of injury surveillance
- Identification of key trends, issues, and evidence-based best practices
- Expert training in injury and falls prevention
- Research design, methods, and analysis
- Research literature searches and synthesis
- Grant application development

**Map of Services**

BCIRPU plays a central role in coordinating communication between injury prevention leads in BC, facilitating opportunities for networking. BCIRPU provides substantial support to the work of the BC Injury Prevention Committee (BCIPC) and is represented on the Health Authority Injury Prevention Working Group.

BCIRPU and members of the BCIPC conducted a survey of decision makers with responsibility for the safety of British Columbians. This included decision makers in law enforcement, traffic engineering, city planning, health care delivery, and/or policy development. The aim of the survey was to learn what indicators (metrics) decision makers would value in decision-making and action to prevent injury. Indicators that were valued highly and that were seen to promote decision and action will be available to all vested agencies with the goal for province-wide improvement in injury prevention.

In the spring of 2019, the Indicator Reference Group approved the thresholds and methodology proposed by the BCIRPU to arrive at a final set of indicators. This final set was further refined and similar indicators, disaggregations, or variations were amalgamated to form new indicators, thus reducing the total number of indicators in the set to 43. Specification tables were drafted and approved by the Indicator Reference Group and these tables were populated with critical information to generate each indicator.

Injury surveillance is a priority for the use of these indicators. Injury surveillance using linked data has been identified as a critical requirement by the BC Observatory for Population & Public Health partnership, including regional epidemiology leads, Medical Health Officers, and endorsed by the Public Health Executive Committee. The injury data mart, which will provide the secure facility for data linkage, has been identified as a critical need for the population and public health injury prevention work plan.
During the 2019-20 operating period, BCIRPU provided the following support services to BC Health Authorities:

- **Northern Health**
  - Ongoing support for falls, road safety data, general injury prevention, and data requests. Specific data was provided pertaining to All-terrain vehicle (ATV) injuries.

- **Vancouver Coastal Health**
  - Ongoing support for falls, road safety data, general injury prevention, and data requests.
  - The new VCH injury prevention lead and the new Program Lead for Injury Prevention with Trauma Services were hosted at BCIRPU to discuss current initiatives in injury prevention in BC and provided ongoing support.
  - Reviewed submissions to the VCH Trauma Services Action Mini-grants.
  - Partnered with VCH to support the promotion of concussion awareness in schools, including tracking of school professionals completing the CATT e-learning course.

- **Island Health**
  - Ongoing support for falls, general injury prevention, and data requests.
  - Worked on gaining access to the Trauma Datacube and the CDI Data Mart in partnership with the observatory epidemiologist from Island Health.
  - Worked on defining injury definitions, inclusion and exclusion criteria in various injury datasets, in collaboration with the observatory epidemiologist from Island Health.

- **Interior Health**
  - Ongoing support for falls, general injury prevention, and data requests.
  - Regular participation in the Unintentional Injury Prevention Priority Action Committee.

- **Fraser Health**

BCIRPU assisted the BC Ministry of Health and VCH in providing data to inform the bill before the Legislature that proposes dropping daylight savings time. There is published evidence on how road crashes increase around the time of the changeover from regular to daylight savings and vice versa. BCIRPU provided data that looked at trends and patterns of road related injury mortality and hospitalizations before and after daylight savings time.
Other Injury Prevention Resources

BC Casebook for Injury Prevention

This visual resource was created for government decision makers and leaders in government to assist the Health Authorities and other injury stakeholders with decision-making, priority setting, planning processes, and resource allocation for Injury Prevention in Public Health in BC. Supporting resources include an infographic, video, and PowerPoint presentation. View the Casebook on the BCIRPU website.

Economic Burden of Injury in BC

A companion piece to the Casebook, this resource provides a breakdown of the causes of injury, rates, and costs within each BC health authority, thereby showing where injury prevention efforts in each health authority could have the greatest return on investment. Supporting resources include an executive summary and summary infographic. View the Report on the BCIRPU website.

BC Injury Online Directory

This directory lists injury prevention stakeholders in BC with the goal of facilitating networking and collaboration among practitioners, policy-makers, researchers, service providers, and community members. Access the Directory on the BCIRPU website.

The Canadian Atlas of Child and Youth Injury Prevention

The Atlas platform combines injury data and information together, allowing injury professionals, practitioners, and policy makers to make informed and timely decisions to improve child and youth injury prevention in Canada. Access the tool at injuryevidence.ca.

Injury Insights

BCIRPU produces Injury Insight, a periodic injury prevention factsheet/newsletter focused on injury issues of interest in BC. Production of these knowledge translation products has supported a partnership with the Langara College Nursing Program.

In 2019-2020, we published factsheets on burns among young children, fall-related deaths among older adults, and two factsheets on data: one on disability-adjusted life years and one on potential years of life lost and preventable years of life lost. Access them all on our website.

Active & Safe Central

This resource contains injury prevention information for over 50 sports and recreational activities. Visit activesafe.ca.

Concussion Awareness Training Tool

The Concussion Awareness Training Tool (CATT) is a series of online educational modules and resources with the goal of standardizing concussion recognition, diagnosis, treatment, and management. CATT provides medical professionals, coaches, parents, teachers, athletes, and working adults with the latest evidence-based information on concussion. Visit cattonline.com.

Outsideplay.ca

This online risk reframing tool was created to help parents and early childhood educators learn the importance of outdoor risky play and develop strategies for promoting healthy outdoor risky play for children. Visit outsideplay.ca.
SURVEILLANCE
Understanding injury trends and patterns

Improving Injury Surveillance

BCIRPU’s surveillance system currently includes data on injury hospitalizations including sports-related injuries (2001/02-2016/17), deaths (2001-2017), road crash information (TAS data) (deaths: 2002-2018), ED visits to BC Children’s Hospital (CHIRPP data) (2007-2014), and work-related injury claims (WorkSafe) (2001-2016). New databases are incorporated as they become available and new data sharing agreements are secured, with ongoing cleaning and maintenance as required.

Injury Data Tools
Ongoing efforts include:

• Operating the BC Injury Reporting System, providing injury statistics and information to the BC Ministry of Health, PHSA/BCCDC, members of the BC Injury Prevention Committee, members of the BC Injury Prevention Alliance, and the health authorities.

• Conducting ongoing collection, analysis, interpretation, and dissemination of high-quality injury statistics and information related to emerging trends, identified gaps in evidence, best practices, and best buys.

• Maintaining data sharing agreements with various agencies and organizations, to ensure a comprehensive view of injury in BC.

• Managing the interactive Injury Data Online Tool (iDOT©), a direct interface with the surveillance data for users to produce customized tables, charts, and maps.

• Support, partnership and collaboration towards the development of an Injury Data Mart, which will provide a secure facility for surveillance data and data linkage.

• Support the development of an injury surveillance system using data that identifies First Nations Status, working in collaboration with the First Nations Health Authority to identify surveillance needs, data sources, outputs, and products.

Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP)

BCIRPU operates the BCCH component of the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP)—an injury surveillance system funded by the Public Health Agency of Canada and in use in 11 pediatric and 9 general hospitals across Canada. The program continues to amass extensive data and information on child and youth injury, which is used to inform injury prevention policy and programs.
**SURVEILLANCE**

**Substance Use Project (2019)**

This project is a continuation of the *Cannabis and Alcohol Use Project 2016-2018* which aimed to retrospectively report on all pediatric patients treated for cannabis and/or alcohol-related injuries in the emergency department of BC Children's Hospital. The results were submitted as a report to the Public Health Agency of Canada (PHAC) and a separate paper, *Setting the baseline: a description of cannabis poisonings at a Canadian pediatric hospital prior to the legalization of recreational cannabis*, was published using a subset of the data.

The *Substance Use Project 2019* extended these works by collecting all substance-related pediatric injuries occurring between January 1 to December 31, 2019. All injuries associated with the use of alcohol, cannabis, and illicit drugs by patients 16 years or younger were documented in the Canadian Hospital Injury Reporting and Prevention Program (CHIRPP). Following data collection, the results were summarized and a report was developed and submitted to PHAC. It described an increase in the average number of monthly cannabis-related injuries in 2019, one year after the legalization of recreational cannabis in Canada, compared to 2018. The number of alcohol poisonings each month remained consistent between 2018 and 2019. Illicit drug-related injuries represented the smallest proportion of substance-related injuries captured. Most substance-related injuries were associated with alcohol use. In addition, more females received treatment for substance-related injuries and there was a high proportion of substance use in social gatherings. Intervention from bystanders, friends, and families were often required to help the injured patient seek medical care.

Real-time data collection of substance-related injuries will continue in 2020. This will evaluate whether current cannabis policies and actions are effective at minimizing cannabis use among young Canadians. Data will also describe how children adapt their substance use behaviours and become injured during the COVID-19 pandemic. The *Substance Use Project 2019* is part of a larger project conceived by PHAC to examine patterns in hospital visits related to substance use before and after the 2018 legalization of recreational cannabis in Canada.

**Injury Data Online Tool (iDOT)**

Available via the BCIRPU website, the Injury Data Online Tool (iDOT) provides up-to-date surveillance data and information. Users select from multiple pull-down menus to choose parameters and create a customized view of the injury mortality and injury hospitalization data according to their needs. Numbers, rates, and age-adjusted rates can be presented. Longitudinal and cross-sectional comparative data are available and can be further broken down by multiple specific parameters such as age, sex, region, and injury type. The iDOT also provides information on the number of hospital stays and the costs related to hospital treatment. Included in the iDOT are road injury data from the Traffic Accident Statistics (TAS) database provided by the Insurance Corporation of BC (ICBC); the inclusion of sports-related data using the Discharge Abstract Database, CHIRPP BC Emergency Department data, and work-related injury death and injury claims from WorkSafeBC. Data have been updated to the most recent years available. According to Google Analytics for 2019-2020, number of pageviews was 1,770.

Visit our website to access the [iDOT](https://www.injuryresearch.bc.ca/idot).

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**Google Analytics for the iDOT® pages and data visualizations** (April 1, 2019–March 31, 2020)

- Pageviews: 5,038
- Unique Pageviews: 3,723
- Most Accessed Tool: Traffic Accident System Tool
Injury Data Visualizations

Data visualizations for injury-related deaths (left), sport-related hospitalizations (top right), and ED visits to BC Children’s Hospital (bottom right) are available on our website.
Research and Knowledge Development

BCIRPU contributes to the injury prevention evidence base by pursuing research opportunities through peer-reviewed grants and contracts. Projects aligning with the Unit’s core deliverables are undertaken with provincial, national, and international research partners, collaborators, and other stakeholders.

Visiting Scholar: Dr. Ben Beck

BCIRPU and the Evidence to Innovation Research Theme at BC Children’s Hospital Research Institute were pleased to welcome Dr. Ben Beck from Monash University (Melbourne, Australia) to Canada as a visiting scholar in the spring of 2020.

Dr. Beck is the Deputy Head of Prehospital, Emergency, and Trauma Research within the School of Public Health and Preventive Medicine at Monash University. He leads a broad body of trauma and injury prevention research at Monash University, with a focus on identifying emerging injury trends, monitoring and improving trauma systems, reducing preventable deaths, and developing injury prevention strategies. Dr. Beck also currently serves as the President of the Australasian Injury Prevention Network (AIPN).

During his time in Canada, Dr. Beck collaborated with researchers and decision makers at the BCIRPU, BC Centre for Disease Control, Trauma Services BC, the Department of Civil Engineering in UBC’s Faculty of Applied Sciences, and the Cities, Health and Active Transportation Research Group at Simon Fraser University. He delivered two public presentations on his work that were very well received. Unfortunately, Dr. Beck’s visit was cut short due to travel restrictions imposed as a result of COVID-19. Dr. Beck is, however, continuing to collaborate with investigators at BCIRPU on projects related to cycling safety and the Public Health Approach to Road Safety.

Recreational Boating Safety (funded by Transport Canada)

BCIRPU was the successful recipient of funding from Transport Canada to address serious injuries and deaths associated with recreational boating and increase the number of boaters compliant with safety requirements. BCIRPU, in partnership with The Community Against Preventable Injuries (Preventable), the
Lifesaving Society, and Royal Canadian Marine Search and Rescue (RCMSAR), embarked on a successful three-year campaign, which wrapped up in 2020.

The purpose of the project was to develop, deliver, and evaluate a social marketing campaign for recreational boaters in BC that raised awareness, transformed attitudes, and ultimately changed behaviours and reduced boating injuries. Year Three of the program followed two years of strong epidemiological reporting of recreational boating deaths and injuries and a successful social marketing campaign addressing the underlying attitudes associated with specific risk factors such as alcohol consumption and lifejacket wear.

The Year Three campaign leveraged TV and social media to raise awareness of lifejacket usage at high-risk times, specifically during summer long weekends. The campaign was bolstered by multicultural public service announcements in Punjabi, Cantonese, and Mandarin, expanding our reach and audience.

The campaign wrapped up in March 2020 and left Preventable a strong understanding of the future areas of focus including prevention messaging amongst adult males, primarily using power boats on inland waterways.

Transport Canada was extremely pleased with the project outcomes and Preventable remains engaged in the Recreational Boating Community through membership in the Pacific Recreational Boating Advisory Council (Pacific Region).

**Surveillance in High School to Reduce Concussions and Consequences of Concussions in Canadian Youth (funded by National Football League)**

The SHRed Concussions program will provide a national platform for concussion surveillance in high schools that will have a significant impact in reducing the risk of sport-related concussions and their consequences in youth. The project is led by Dr. Carolyn Emery, University of Calgary, and involves investigators from universities across Canada, including UBC and UBCO. In Vancouver, SHRed will be conducted at BC Children’s Hospital (BCCH), and UBC, and is being led by Dr. Shelina Babul and Dr. Ian Pike.

As part of the three-year program, investigators will evaluate 6,000 high school athletes across Canada. The student athletes are between the ages of 13-17, and participate in one or more of the following sports: basketball, football, ice hockey, ringette, lacrosse, rugby, soccer, volleyball, cheerleading or wrestling at the interscholastic, community, or club level. Funding will assist in establishing and validating injury surveillance in high schools, integrating a variety of tools to detect concussion, predict recovery,
and inform best practice and policy in the prevention and management of concussions in a variety of youth sports. Funding for this project, from the National Football League, was announced in November 2018.

For more information, read the article by the UBC Faculty of Medicine.

**VOICES of Children and Youth in Injury Prevention (funded by Canadian Institutes of Health Research)**

Injury is the leading cause of death for First Nations (FN) children and youth. Strategies and solutions for reducing the burden of injury are critically needed. The VOICES of Children and Youth demonstration project is unique in its integration of FN youth in addressing community injury priorities, supporting the community to work with their information and programming, and exploring how effective mainstream prevention initiatives may be adapted to FN settings.

Guided by a local project lead, the VOICES research team of Drs. Ian Pike, Emilie Beaulieu, and Alison Macpherson follows the community’s lead in addressing local injury prevention, and making expertise, tools, technology, and research guidance available. Youth are engaged in Visual Storytelling—combining photography, video, narratives, and mapping to capture lived experience and provide a platform for the community to identify and target selected issues. This method has been applied in two FN communities, resulting in changes to infrastructure and knowledge transfer products designed and produced by the youth, such as YouTube videos. Youth receive training in photography, journalism, writing, first aid, fire prevention, and other salient injury prevention topics.

VOICES was previously conducted in the Mohawk community of Akwesasne, located in an area that straddles Ontario, Quebec, and New York along the St. Lawrence River, with Dr. Rose Alma-McDonald as the community lead. This year, the Hupačasath First Nations community engaged approximately ten of their youth members in the project. The youth took photographs and provided narratives of places in their community that they believe are ‘safe’ and ‘unsafe’, from an injury perspective. Ms. Carolina Tatoosh, the community lead, worked with Drs. Emilie Beaulieu (BCIRPU), Ian Pike (BCIRPU), and Alison Macpherson (York University). The project culminated in a presentation by the youth to Hupačasath community leadership.

VOICES upholds the guiding principles of OCAP, and recognizes and respects Indigenous ways of knowing. VOICES incorporates community-based participatory research to advocate for change by balancing power between Indigenous community members and policy makers, creating a sense of community ownership, fostering trust, and responding to cultural preferences.

VOICES is funded by the Canadian Institutes of Health Research (CIHR), and is in partnership with the Akwesasne Mohawk Board of Education, Hupačasath First Nation, University of British Columbia,
York University, and Katenies Research and Management Services.

**Fire and Firefighter Safety**

**Examining Cancer and Injury Among Female Firefighters**

The purpose of Examining Cancer and Injury Among Female Firefighters is to describe the incidence and circumstances of cancer and work-related injuries among female firefighters.

Studies have highlighted the elevated cancer and injury rates among male firefighters, yet few contain sufficient numbers of women to draw any substantial conclusions. This information is important for making the workplace safer for, and more supportive of, females in the fire service.

The online survey was launched in early June 2019, available in both English and French, and is scheduled to close the end of June 2020. Female firefighters, either born female or now self-identifying as female, from the United States, Canada, United Kingdom, France, Australia, and elsewhere are being sought to participate.

The findings of this study will provide support for developing and evaluating health and wellness policies, designating resources, and designing screening, surveillance, and prevention strategies. This study is being conducted by Dr. Ian Pike, Retired Fire Chief Len Garis, and medical oncologist Dr. Kenneth Kunz.

**Residential Fire Safety**

As a continuation of the previous funded work with the National Fire Information Database, BCIRPU researchers published two studies relating to residential fires and fire-related injuries.

The first study was published in September 2019. The manuscript investigates the association between neighbourhood socioeconomic factors and rate of residential fires and fire-related injuries. Researchers used data from 2005-2015 from the National Fire Information Database along with 2011 census subdivision social domain data from Statistics Canada. They examined data from BC, Alberta, Manitoba, and Ontario on fire incidence and injury along with neighbourhood-level data on income, education level, unemployment rate and number of people per home. This study provides evidence that neighbourhoods with higher education, higher unemployment rates, and smaller household size are more at risk for fire-related injuries. In addition, children are particularly vulnerable to these neighbourhood factors.

This study was published on the BCCHR website and received media attention. Read more in [CMAJ Open](https://www.cmajopen.ca/).

The second study explores the geographic and demographic distribution of fires and fire-related injuries. Over 145,000 incidents of residential fires from the provinces of British Columbia, Alberta, Manitoba, and Ontario were analyzed spanning from 2005 to 2015. Both fire incident and casualty rates were found to have decreased over this timespan, but the risk of a casualty event once a fire does occur has not changed. Injury rates were also found to be significantly higher for males than females across all age groups.

Read more in the [Canadian Journal of Public Health](https://www.canadianjournalofpublichealth.ca/).

**Opioid Overdose Study**

This study identified the working class as one of the groups disproportionately affected by the opioid crisis, as they did not fit into the typical characteristics of victims of illicit drug overdoses. These individuals were typically in the working class, without prior arrest records or overdose episodes, and mainly in the trades industry, which tend to suffer higher injury rates.
Using a large linked administrative dataset from PopDataBC, the goal of the project is to better understand the pathway and risk factors between an injury and an illicit drug overdose event. Specifically, this project aims to determine whether opioid prescription or opioid agonist therapy, whether the injury was work-related, and if the profession affected the risk of overdose.

**Economic Burden of Injury**

Recent publications with additional cost categories have provided an opportunity to enhance the current methodologies for calculating the economic burden of injury in BC. These methods will be incorporated into the calculations, with a version of the visualization anticipated to be completed in the second quarter of the 2020/21 fiscal year.

**Burden of Poisoning**

A series of manuscripts regarding the burden of poisoning have been drafted and are being reviewed by the authors and external stakeholders. Once feedback is received, the manuscripts will be submitted to *BC Medical Journal* towards the end of the first quarter in the 2020/21 fiscal year. Due to the delay in receiving the PharmaNet data, there was a delay in the completion of this deliverable.

**The Relationship between Socio-Economic Dimensions and Injury in British Columbia**

A manuscript entitled *The association of material deprivation component measures with injury hospital separations in British Columbia, Canada* was published in *Injury Epidemiology* on June 10, 2019. This manuscript resulted from a collaboration between researchers at BCIRPU and Population and Public Health investigators at PHSA.

**Cost of Burns in British Columbia**

This study aims to develop a costing model for burn injuries among children to estimate the economic burden of child burns in BC. Costs of services and resources used by children aged 0-4 years old who were treated at BC Children’s Hospital (BCCH) between January 1, 2014 and March 15, 2018 for a burn injury were estimated and summed, using a micro-costing approach.

**Injury Prevention and Outdoor Risky Play**

In 2019-2020, Dr. Mariana Brussoni was featured in 54 national and international media outlets, including the *New York Times*, Brazilian, Swedish, and UK media. She also featured in a documentary *Running Free: Children’s Independent Mobility*, which was produced by Dr. Faulkner from the UBC School of Kinesiology.

Dr. Brussoni co-authored two statements on COVID-19 and children’s outdoor play on Outdoor Play Canada, which were reprinted in several newspapers. Dr. Brussoni edited the *Encyclopedia on Early Childhood Development’s* outdoor play chapter. The Encyclopedia is a heavily-accessed resource for policy makers and practitioners in early childhood and Dr. Brussoni’s chapter was the 2nd most accessed chapter to date. Dr. Brussoni’s dedication and effort in promoting children’s outdoor risky play were

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BCIRPU’s research into the Cost of Burns in BC develops a costing model for burn injuries among children to estimate the economic burden of child burdens in BC.
recognized as the inaugural recipient of the Outdoor Play Canada Dr. Mariana Brussoni Award and a Picchione Visiting Scholar Award from the Dalhousie Medical Research Foundation.

Early Childhood Outside! Study (funded by the Government of Canada)

Expanding on the previously developed behavioural change tool to help parents make a plan to support their children’s outdoor risky play (https://outsideplay.ca), this study’s goal is to develop a tool for early childhood educators. This tool will help early childhood educators learn the importance of outdoor play, reframe perceptions of risk, manage safety fears and guide development of a plan for changing service delivery. Guided by focus group interviews with 40 early childhood educators, students, and licensing officers, the tool will address their needs and concerns in promoting children’s outdoor play at their centre.

Included in the tool are six interactive video scenarios (rough and tumble play, communicating with parents/caregivers, play at high speed, play at heights, conflict resolution, and play with tools) using a combination of animated characters and props with live action environments. In the play at high speed and play at heights scenarios, a first-person virtual reality video is included to give early childhood educators a chance to experience play through the eyes of a child. The tool will be launched September 2020.

Early Childhood Outside! Randomized Controlled Trial Study (funded by the Lawson Foundation)

This study will use a randomized controlled trial design to test the effectiveness of the Early Childhood Outside! tool in: 1) reframing early childhood educators’ perceptions of risks; and 2) changing their service delivery in promoting children’s outdoor play at their early childcare centre. This study will launch when the tool is completed.

Playability (funded by CIHR)

This mixed-methods study aims to better understand physical and socioecological factors that influence children’s outdoor play. Between April 2016 and June 2018, 105 families in three neighbourhoods (Grandview-Woodland, Lower and Central Lonsdale, and Steveston) in Metro Vancouver participated in the study. Various data were collected, including seven days worth of children’s GPS and accelerometry data, qualitative interviews, neighbourhood photos and map drawings, daily diaries, and demographic and other surveys. Dr. Brussoni’s team has published four articles on this research and continues to analyze the qualitative and quantitative data. These analyses will contribute to informing best practices for design of sustainable and child-friendly urban environments that recognize and include children as active users and meet their needs to positively influence their development and well-being.
Changing Policy, Practice, Attitudes, and Behaviours

BCIRPU gathers and synthesizes research evidence, and develops communications strategies to reach government, health authorities, health practitioners, policy makers, researchers, other stakeholders, and the public. This includes briefing notes, technical reports, letters of support, meetings, workshops, seminars, conferences, peer-reviewed publications, and traditional and digital tools, and media.

All of these products contribute to changes in injury prevention, policy, practice, attitudes, and behaviours.

New videos for Active & Safe Central

Following the launch of Active & Safe Central in May 2018, an online tool containing evidence-based injury prevention information for over 50 sports and recreational activities, BCIRPU produced a series of short, informative videos.

The four videos cover the following topics: physical literacy across the lifespan; training load; neuromuscular training exercises; and sleep, vigilance, and sport injury prevention. They provide additional injury prevention information for athletes/participants, parents, coaches, teachers, club administrators, and health care professionals.

The video on physical literacy received national recognition from the Canadian Institutes of Health Research (CIHR) Institute of Human Development, and Youth Health (IHDCYH) for the 2019 IHDCYH Talks Video Competition.

View the videos at activesafe.ca.

Concussion Awareness Training Tool

The Concussion Awareness Training Tool (CATT, cattonline.com), created by Dr. Shelina Babul, is an online resource providing eLearning in the recognition, response, treatment, and management of concussion. This evidence-based resource is tailored for medical professionals, coaches, parents and caregivers, school professionals, and athletes. The CATT modules for school professionals, for parents and caregivers, and for coaches were all updated in 2019-2020. All CATT modules are now available in both English and French.

In 2019-2020, CATT saw the addition of a module for workers and workplaces accompanied by the new Return to Work and Return to Activity resources. Sessions for CATT for Workers and Workplaces and concussion materials were presented at the 2020 Actsafe Entertainment Safety Conference.
On March 2, 2020, Dr. Shelina Babul and Ms. Denise Beaton presented on the development of the CATT Workers and Workplaces e-learning module and related resources to the Early Concussion Assessment and Treatment (ECAT) project working group at WorkSafeBC. Work is in progress on creating new CATT modules for those working with survivors of intimate partner violence, and for high performance varsity athletes.

The CATT team presented to diverse audiences throughout 2019-2020, including the BC Children's Hospital Foundation Donors Event, the Actsafe Safety Association, Vancouver International Airport Safety Contractors Roundtable, BC Physiotherapy Association, PHSA Communications, SFU Performing Arts, Doctors of BC, and BCCH Pediatric Grand Rounds. Dr. Babul presented at many conferences, was interviewed by media, and is finalizing related manuscripts for publication.

Dr. Shelina Babul partnered with Dr. Samuel Lubega to bring concussion training to Uganda. Along with Dr. Ian Pike, she travelled to Kampala to hold concussion training sessions with medical professionals, trainers, coaches, and managers working with athletes in Uganda. Evaluation results of this pilot project will soon be available.

Other CATT activities included a QI/QA assessment of 2018 relaunch of CATT for Medical Professionals, and completion of the Richmond School District Concussion Education and Awareness Evaluation.

In 2019-2020, the CATT website had 68,730 visits from 42,565 users for a total of 167,412 pageviews. This is a 30.6% increase in visits over 2018/2019. 74.3% of visitors were from Canada, and 16.6% from the United States. The top 5 provinces were BC, Ontario, Alberta, Quebec, and Nova Scotia. The top 5 pages visited were: Home (22.8%), Coach (6.6%), Coach Course (6.2%), Medical Professional (6.1%), and SCAT5 (4.2%).

CATT has been mandated by over 35 sports associations and schools.
In June 2019, Preventable’s “Big Banana” installation reminded passers-by that most injuries are preventable.
The Community Against Preventable Injuries (Preventable)

Preventable is a province-wide, multi-partner social marketing organization designed to raise awareness, transform attitudes, and ultimately change behaviours. Its goal is to significantly reduce the number and severity of preventable injuries in BC.

BCIRPU is a founding strategic partner of Preventable, and provides the evidence, the research and the evaluation behind its injury prevention social marketing campaign. Dr. Ian Pike serves as the Scientific Director for Preventable and together with injury prevention colleagues acts as the spokesperson for the campaign.

Campaign Updates

Preventable leveraged the success of the 2018 Mass Media Campaign which focused on distracted driving, poisoning, texting and walking, electrical safety in the home, bicycle helmet wear, and boating safety. The Year 10 Bridging Campaign between May 2019 and December 2019 was a success, with a delivery of 19.3 million impressions, including $201,000 added value contributed through public service announcements and in-kind contributions.

Big Banana

Due to popular demand, Preventable brought the giant yellow banana to Georgia and Granville street (Downtown Vancouver) from June 21 to 23, 2019. The banana sparked many prevention-focused conversations through messaging on and around the banana, as branded street teams handed out collateral to support the activation. The Banana received high levels of social media engagement and strong media coverage.

Atlantic Canada

Preventable expanded its jurisdictional boundaries thanks to a partnership with the Atlantic Collaborative on Injury Prevention (ACIP). A hockey helmet PSA ran for eight weeks in all four Atlantic provinces.

Medication Poisoning

Preventable and the Fraser Health Hospital Foundations launched a successful campaign focused on preventable poisoning due to medication errors among seniors. Twelve London Drugs stores were engaged with posters and medication review cards which generated substantial media responses.

Drinking and Driving

Preventable collaborated with the City of Vancouver, MADD Canada and Easy Park on a strong campaign reminding Vancouverites not to drink and drive during the holiday season. Clear messaging encouraged people to leave their cars overnight in city parkades and retrieve them the next day. Posters were put up in 50 parkades and elevators and splash screens were displayed on the Pay by Phone app.
Prevent Shaken Baby Syndrome BC – The Period of PURPLE Crying® Program

The Period of PURPLE Crying® (PURPLE) parent education program has been operating in British Columbia, Canada as a universal provincial program since 2009. Prior to discharge from the hospital, every family receives crying and shaking education from a maternity nurse and a resource package, which includes a supplementary software application (app) and booklet.

Reinforcement of key messages is provided by a public health nurse within 48-hours to one-week of being at home post-delivery. Parents and the general public are also exposed to the PURPLE program via a public education campaign called CLICK for Babies (handmade purple caps are collected province-wide and distributed with PURPLE materials to newborns in the winter).

The aim of the PURPLE program is two-fold:

1. To support caregivers in their understanding of early increased infant crying; and
2. To reduce the incidence of shaken baby syndrome (SBS) in BC.

The PURPLE program has been institutionalized in all BC birthing hospitals and public health units. Community health and service providers including midwifery clinics, pregnancy outreach, infant development, Aboriginal support, foster parent support, and adoption groups are being trained and participating in PURPLE education with parents/caregivers. The majority of materials distributed are in English in an app/booklet format, but resource packages are available in 10 additional languages. Free online training is available for the following groups: maternity, public health/primary care, adoptive and foster parents, childcare, as well as child service providers.

Since the Period of PURPLE Crying program commenced in 2009, there has been a cumulative 35% decrease of SBS cases in children under 2 years old in BC.

2019/2020: An eventful fiscal year for Prevent Shaken Baby Syndrome BC

Training:

- 368 BC nurses and community personnel completed program training online;
- 148 participants completed training at a BC Association of Pregnancy Outreach Program Education Session, the biennial Healthy Mothers and Healthy Babies Conference and the biennial Early Years Conference.

PURPLE Crying Program Updates*

- Since the PURPLE program was started in 2009, there has been a 35% decrease of SBS cases in children under 2 years old in BC.
- 34,104 program materials were distributed to BC parents and caregivers in 2019-20.
- In Jan 2020, PURPLE’s ‘Eight-year outcome of implementation of abusive head trauma prevention’ was selected as Article of the Year by Child Abuse and Neglect

*As of March 31, 2020
Program Materials:

- 2,100 PURPLE apps were downloaded by parents in 2019, which is up by 29% from 2018;
- The program app was updated in January 2020 to include several new features: a profile feature (similar to Netflix), an improved crying timer (e.g. fussing versus inconsolable crying), a new measurements graph, and quick access to the weekly news notification section;
- A total of 34,104 program materials were distributed to BC parents and caregivers.

Public Education Campaign:

- More than 120 knitting and community groups participated in the CLICK for Babies campaign;
- More than 11,500 caps were collected—which was almost triple the campaign goal!

Research:

Two journal articles were published in 2019 in the peer-reviewed *Child Abuse & Neglect* and *Child Maltreatment* journals. These articles reported the following:

- In British Columbia, the investment of $5 per newborn through the PURPLE program results in a $273.52 and $14.49 per child cost avoidance by society and by the healthcare system;
- With each increase in material and social deprivation quintiles, SBS rates increased by 42% and 25% respectively, following a social gradient.

In January 2020, the program’s *Eight-year outcome of implementation of abusive head trauma prevention* journal article was selected for the prestigious 2018 Article of the Year award by *Child Abuse & Neglect* for having demonstrated outstanding contribution to research on child welfare.

BCIRPU Webinar Series

During the 2019–20 operating period, BCIRPU continued to deliver an informative webinar series. Six seminars were provided by leading experts in the field, with a total of 250 participants.

Webinar topics:

1. May 16, 2019 | Dr. Paul van Donkelaar
Examining Traumatic Brain Injury in Intimate Partner Violence

2. July 25, 2019 | Ms. Frances MacDougall
Too Hot for Tots! The development of an evidence-based early childhood burn and scald prevention program for community educators.

3. October 3, 2019 | Dr. Emilie Beaulieu
Understanding the effect of socioeconomic inequities on childhood injury risk
4. November 21, 2019 | Dr. Jeff Brubacher
Cannabis and motor vehicle collisions

5. January 23, 2020 | Ms. Denise Beaton
Concussion Awareness, Recognition, Recovery and Return-to-Work: Developing the Concussion Awareness Tool for Workers and Workplaces

6. March 24, 2020 | Dr. Ben Beck
Road Safety Learnings from Australia

Education and Public Information

Social Media

In 2019-2020, BCIRPU supported and facilitated a number of social media campaigns. Safety messaging included concussion, road safety, Safe Kids Week, Poison Prevention Week (cannabis), and COVID-19-related messaging around injuries at home.

The BCIRPU Facebook page has over 120 page likes, and the Twitter account has over 500 followers, continuing to be an effective tool for reaching both the public and policymakers with injury prevention-related messaging. Messaging is also disseminated through dedicated social media accounts for the Concussion Awareness Training Tool, Finding Balance BC, and The Community Against Preventable Injuries.

BC Seniors’ Fall Prevention Awareness Week

Campaign highlights from the annual fall prevention awareness campaign include:

• 4,230 visits to findingbalancebc.ca;

BCIRPU Website Google Analytics

21,414 sessions
16,789 users
16,681 pageviews

Traffic Sources:
Search engines/organic = 53.02%
Direct traffic = 34.34%
Referring sites = 3.77%
Social media = 2.89%

Pages with the Highest Traffic:
Education/CATT page (7.11% of pageviews)
Homepage (13.0%)
dOT/Traffic Accident System Tool (4.41%)
Quick Facts/Seniors Fall Prevention (3.95%)
Quick Facts (3.4%)
Quick Facts/Motor Vehicle-Related Injuries (3.05%)

• Over 4,000 posters sent to 485 public health units, pharmacies, municipalities, and GP offices across BC;
• Facebook ads reached 61,968 people and generated 138,708 impressions; and
• The campaign’s Facebook page fan base broke 500 page likes.

Brain Waves

This year, BCIRPU was successful in educating over 800 elementary school children about brain and spinal cord injury through our Brain Waves program. Brain Waves is a fun and engaging half-day neuroscience presentation that teaches students in grades 4 to 6 about the brain and spinal cord. Thank you to our 44 trained...
volunteers, who brought the hands-on program—which includes activity booklets, helmet fitting tips, and JELL-O brains—to the classroom. If you would like to participate in Brain Waves, please email bcinjury1@cw.bc.ca.

Education and Training

**SPPH 555**

*Principles and Practices of Injury Prevention* is a graduate-level course at UBC’s School of Population and Public Health (SPPH 555) taught by Drs. Mariana Brussoni, Shelina Babul, and Ian Pike. The Fall 2019 course was launched in September with students engaging in four core online lessons and attending three all-day in-person sessions, completing five assignments, a reflection paper, a final paper, and delivering a presentation integrating what they have learned to develop an injury prevention intervention.

The course is based on the Canadian Injury Prevention Curriculum (CIPC), which is focused on injury prevention and control theory and practice. It has been designed to prepare students for the responsibilities they will acquire when entering an academic, research, or health care delivery work setting.

Throughout the term, students learn from the practical experiences of the instructors, guest speakers, and fellow students. Invited speakers and topics covered in 2019 included “Injury Prevention, the Public Health Approach in BC & Injury Indicators” by Ms. Megan Oakey, “Injury Surveillance” by Ms. Fahra Rajabali, and “Preventable” by Dr. Ian Pike. Other topics included intentional injuries, working with Indigenous communities, and selecting behaviour change techniques for interventions. Positive comments from students were received regarding course content and organization.

**Canadian Injury Prevention Curriculum Course (CIPC)**

Delivered as a two-day workshop on demand, the CIPC focuses on injury prevention, control theory, and practice. It is the first curriculum of its kind that is targeted to community-based public health and injury prevention practitioners, is built on Canadian content and uses Canadian examples to illustrate injury prevention concepts. The CIPC is geared towards researchers and injury prevention professionals who practice injury prevention in the community. BCIRPU also delivers a CIPC facilitator workshop for those who would like to lead their own CIPC workshop.

The workshop was last held in Vancouver in September 2017. Recent enquiries have led to the planning of the next session of the CIPC, potentially to be held in Vancouver in February 2021 to align with the joint TAC-ATS conference: Trauma Association of Canada and Australian Trauma Society.
NETWORKS, COALITIONS, AND PARTNERS
Supporting injury networks and coalitions

Cooperation and Collaboration
BCIRPU provides leadership and support to government, health authorities, and other stakeholders and their extensive networks and coalitions. Successful injury prevention activity in BC is dependent upon multi-sectoral and interdisciplinary collaborations. BCIRPU has established strong strategic relationships with many provincial, national, and international agencies and organizations. This enables the Unit to draw upon external expertise and resources to build capacity and better address injury prevention in BC.

Networks and Coalitions
In addition to participating in strategic provincial, national, and international networks, during the 2019-2020 operating period, BCIRPU directly supported:

- **BC Health Authority Injury Prevention Community of Practice** — providing coordination and support.
- **Child & Nature Alliance of Canada** — providing leadership support.
- **The Community Against Preventable Injuries** — providing injury prevention research and evaluation expertise, leadership, and spokesperson support to the injury prevention social marketing campaign.
- **Injury Surveillance Methodology Working Group** — providing co-chair and leadership.
- **Parachute** (the national NGO for injury prevention) — providing provincial leadership and coordination under the renewed memorandum of understanding.
- **Road Safety Data and Measurement Group** — providing coordination and support.
- **Trauma Association of Canada Injury Prevention Committee** — providing leadership support.
- **viaSport Safe Sport Advisory Group** — providing leadership, coordination, advocacy, and communication.
Key Partnerships

In the 2019-2020 operating period, BCIRPU worked with the following key partners:

- BC Alliance for Healthy Living
- BC Ambulance Service
- BC Automobile Association (BCAA)
- BC Coroners Service
- BC Drug and Poison Information Centre
- BC Falls and Injury Prevention Community of Practice
- BC Hockey
- BC Injury Prevention Alliance
- BC Ministry of Health
- BC Ministry of Public Safety and Solicitor General
- BC Recreation and Parks Association
- BC Regional Health Authorities
- BC Concussion Advisory Network
- Brain Injury Association of Canada
- BrainTrust Canada
- Canadian Concussion Centre: Krembil Neuroscience Centre (Toronto Western Hospital)
- Canadian Red Cross
- Canadian Standards Association
- Child Health BC
- College of Health Sciences, Makerere University
- Doctors of BC
- Federation of Uganda Basketball Association
- Federation of Uganda Football Association
- First Nations and Inuit Health Branch
- First Nations Health Authority
- Fortius Sport & Health
- Health Canada Supporting Injury Networks & Coalitions
- Hockey Canada
- Holland Bloorview Kids Rehabilitation Hospital
- Injury Prevention Centre (University of Alberta)
- Insurance Corporation of British Columbia (ICBC)
- National Sports Council of Uganda
- Occupational Health and Safety Agency for Healthcare
- Parachute
- Provincial Health Services Authority
- Public Health Agency of Canada
- Public Health Ontario
- RCMP E-Division
- Richmond School District
- Road Safety BC
- Rugby Uganda
- Safe Communities
- Saskatchewan Government Insurance
- Sport Injury Research Prevention Centre (University of Calgary)
- SportMedBC
- The Community Against Preventable Injuries (Preventable)
- The Djavad Mowafaghian Centre for Brain Health
- Uganda International Olympic Committee
- Uganda Ministry of Education and Sport
- Uganda Ministry of Health
- University of British Columbia – Vancouver and Okanagan
- University of Calgary – Sport Injury Prevention Research Centre
- Vancouver General Hospital Trauma Services
- viaSport
- Winnipeg Pan-Am Concussion Clinic
- WorkSafeBC
- York University
AWARDS, GRANTS, PUBLICATIONS, & CONFERENCES

April 1, 2019–March 31, 2020

Research Grants


Research Awards

Brussoni M, Dr. Mariana Brussoni Award - Outdoor Play Canada (2019).


Pike I, 2019 Researcher of the Year Award, Canadian Association of Fire Chiefs (2019-2020).

**Journal Articles**


**Conference Proceedings**


Pike I, Black AM, Jacob J, Babul S, Richmond S. Active & Safe Central:


**Invited Presentations**

Babul, S. Concussions: Where Are We Now? BC Children’s Hospital Foundation, BC Children’s Hospital Vancouver BC. April 11, 2019.


Babul, S. Concussions: Acute Urgent Health Problem, Physiotherapy Association of BC, Vancouver BC. September 25, 2019.


Brussoni, M. A look back and a way forward: from the position statement on active outdoor play to the launch of Outdoor Play Canada and beyond. Breath of Fresh Air Outdoor Play Summit, Ottawa ON, September 2019.


Brussoni, M. Creating a free-range community for children of all ages, Physical literacy & communities project, West Vancouver, BC. October 2019.


Brussoni M, Outdoor play and risk: Essential for Health Child...

Brussoni, M. Outdoor play: Bringing children into transport planning. Canadian Institute of Transportation Engineers (CITE) Annual Conference, Ottawa, ON. June 2019.


Pike I, Richmond, S. Physical Literacy and Injury Prevention? A resource to support the prevention of injury through the promotion of physical literacy. International Physical Literacy Conference. Winnipeg, MB. May 7-10, 2019.


**Workshops**

OTHER CONTRIBUTIONS

**Dr. Ian Pike**
- Board Member: The Community Against Preventable Injuries.
- Board Member: Parachute Canada.
- Past Chair: Expert Advisory (Scientific) Committee. Parachute Canada.
- Co-Executive Director: The Community Against Preventable Injuries.
- Director, BC Injury Research and Prevention Unit.
- Director, BC Shaken Baby Syndrome – Intentional Injury Prevention Program.
- Editorial Board Member: BMJ Injury Prevention.
- Media Spokesperson: The Community Against Preventable Injuries.
- Member: Canadian Injury Prevention and Control Curriculum – Revisions Committee.
- Member: Executive Steering Committee, Road Safety BC Strategy.
- Member: Injury Free Coalition for Kids.
- Member: International Collaborative Effort on Injury Statistics (ICES).
- Member: Research Leadership Council, BC Children’s Hospital Research Institute.
- Member: Society for Advancement of Violence and Injury Research (SAVIR).

**Dr. Shelina Babul**
- Associate Director: BC Injury Research and Prevention Unit.
- Chair: BC Concussion Advisory Network (BC CAN).
- Co-Chair: BC Concussion Advisory Network Subcommittee.
- Director: BC Hockey Board of Directors.
- Member: BC Hockey Safety Committee.
- Co-Chair: BC Hockey Risk Management Committee.
- Member: BC Brain Injury Association Scientific Advisory Committee.
- Director: Canadian Hospitals Injury Reporting & Prevention Program (CHIRPP) at BC Children’s Hospital.
- Director: BC Brain Waves.
- Media Spokesperson: The Community Against Preventable Injuries.
• Member: BC Injury Prevention Alliance.
• Member: BC Injury Prevention Committee.
• Member: Canadian Academy of Sport and Exercise Medicine.
• Member: Canadian Collaborating Centres on Injury Prevention and Control.
• Member: Canadian Standards Association, BC Advisory.
• Member: Canadian Traumatic Brain Injury Research Consortium.
• Member: Concussion Awareness Working Group (CAWG) for BC ministries of Education (MED), Health (MoH) and Tourism, Arts and Culture (MTAC) and responsible for Sport.
• Member: Interdisciplinary Trauma Network of Canada.
• Member: Parachute National Concussion Expert Advisory Committee.
• Member: viaSport Safe Sport Advisory Group.

Dr. Mariana Brussoni

• Board Member: Child & Nature Alliance of Canada (CNAC).
• Co-Chair: CNAC Strategic Committee.
• Editorial Board Member: Injury Epidemiology Journal.
• Member: BC Children’s Hospital Foundation Child Health Integrative Partnerships (CHIPS) Subcommittee 4: Keep Kids and Families Healthy – Across BC and Globally.
• Member: Canadian Public Health Association.
• Chair: BCCHR Scholars of Excellence Advisory Group.
• Member: International Play Safety Network.
• Member: National Advisory Committee on Recess (Physical and Health Education Canada).
• Member: Outdoor Play Canada Leadership Group.
• Member: Public Health Association of BC.
• Member: UBC Department of Pediatrics Appointments, Reappointments, Promotion and Tenure Committee.
• Member: UBC Department of Pediatrics Merit Review Committee.
• Member: UBC Experimental Medicine Program Executive Committee.
• Member: UBC Experimental Medicine BCCH Site Leader.
• Member: UBC Child Care Coordination Committee, Child Care Planning & Design Guidelines Project Team.
• Member: UBC Search Committee, Tenure Track cross-appointment, Exercise, Metabolism, Nutrition & Health.
• Chair: University of Alabama at Birmingham & Safe Kids Worldwide: RCT Data Safety Monitoring Board.
• Member: PLaTO-Net Terminology Consensus Project Steering Committee.