



## **Harborview Injury Prevention & Research Center**

2020 Year-in-Review

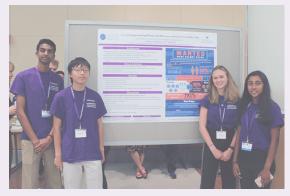












Together, we have the power to prevent harm and suffering from injury and violence.



Dear friends and colleagues,

As I reflect on my six years as director of the University of Washington's Harborview Injury Prevention and Research Center (HIPRC; www.hiprc.org), I am humbled and grateful to lead this organization. HIPRC is comprised of faculty and trainees from various schools and departments who willingly collaborate for a common purpose – to reduce the injury burden through discovery, learning, service, mentorship and inspiration. As we enter 2021, I am pleased to share with you our end-

of-year report. Despite the COVID-19 pandemic, we have been very productive because we have supported one another in this journey and are deeply committed to our mission and to the communities we serve. We have figured out how to foster a culture of inclusiveness, conduct rigorous team science, and bring together the brightest individuals to collaborate across specialties with purpose. HIPRC is thriving because of your engagement and dedication, which are instrumental to HIPRC continuing its good work.

Our 2020 fiscal year brought important and measurable progress. We added exceptional faculty to our team and trained aspiring junior faculty and fellows. The Pediatric Injury T32 was once again successfully renewed as the only such program in the country. We reestablished HIPRC as one of the nine CDC-funded Injury Control Centers and as the only one west of Iowa. This achievement allowed us to officially form our Training and Education, Research and Outreach Cores. We established two endowments to support research training and we innovated new training and education programs. Through our Outreach Core, we formed a community advisory board to guide our science to be responsive to public health needs. We strengthened our Research Core to rigorously support out-of-the box thinking and create cross-cutting collaborations across HIPRC cores and sections. We also expanded our faculty pool beyond the UW borders. We brought the concept of the Injury and Health Equity Initiative (iHeal) to fruition, thereby establishing HIPRC as the only injury control center in the country to explicitly focus on injury and health equity. Washington State established the Firearm Injury Policy and Research Program at HIPRC; a landmark bipartisan effort to study and mitigate gun violence.

This was a year testing our resilience and I am proud to report that we successfully strengthened existing academic and community partnerships to not only meet but exceed our own expectations in supporting the learning ecosystem at the UW. I am thankful to UW Medicine and Harborview Medical Center for their continued support.

Thank you again for your trust to lead this terrific organization.

Please join us and our more than 1,600 followers (@hiprc) to stay connected with us. To donate to the center, please visit the Make a Gift link on our website.

Sincerely,

Monica

#### Monica S. Vavilala, MD

Director, Harborview Injury Prevention and Research Center Professor of Anesthesiology and Pediatrics, School of Medicine Adjunct Professor, Health Services, School of Public Health University of Washington

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Founded in 1987 by pediatrician Abraham Bergman, MD, and surgeons Ronald Maier, MD, and Clifford Herman, MD, HIPRC was one of the five original Centers for Disease Control and Prevention Injury Control Centers. Under the leadership of founding director and pediatrician, Professor Frederick Rivara, MD, MPH, HIPRC achieved international standing as a premier injury control center. For over 30 years, HIPRC has conducted rigorous research in the areas of injury prevention, injury care, and public health consequences of violence. HIPRC is also a leader in interdisciplinary, socially diverse, and inclusive training of public health professionals. HIPRC has trained over 140 injury control researchers, most who work in academic settings. HIPRC's work results in effective policy, drives public health practice, and leads to transformational changes in the way we provide health care to injured patients. We collaborate with other leading institutions and organizations dedicated to the same goals.

### Mission and Vision

HIPRC's mission is to reduce the impact of injury and violence on all people's lives. Our vision is to achieve health equity across all ages and groups through interdisciplinary research, education, training and public awareness. To that end, we embed health equity considerations into all of our efforts: all people belong in the circle of human concern.

## The Why

Together, we have the power to prevent harm and suffering from injury and violence.

### The How

We are committed to creating a respectful workspace together as we seek to identify and correct structural biases that perpetuate inequities in health and well-being. We aim to dismantle biases based on age, disability, religion, ethnicity and race, social class, sexual orientation, indigenous group membership, national origin, gender identity, and linguistic differences.



Graphic courtesy of CDC

## Injury-related Health Equity Initiative

Co-Directors: Megan Moore, MSW, PhD; Monica S. Vavilala, MD



In 2017, in response to community needs and ongoing research at

HIPRC and across the country, Monica Vavilala, MD and Megan Moore, MSW, PhD, launched the inaugural <u>Injury-</u> related Health Equity Across the <u>Lifespan (iHeal)</u> symposium attended by researchers, policymakers, community members, trainees, and organizations from across the country.

A pre-event keynote address on surgical disparities was delivered by Dr. Adil Haider, surgeon and current Dean of Aga Khan University. Ana Nunez, PhD, Editor-in Chief of the journal Health Equity delivered the keynote. The goal of the symposium was to bring together stakeholders working in injury and equity, understand the state of the field, and develop an agenda for moving research and practice forward.

Attendees were divided into three work groups who provided recommendations on improving injury and equity data, increasing community driven research, and strategies for research translation. iHeal's mission is to work with multidisciplinary researchers, medical providers, and community stakeholders to identify and address disparities in injury-related prevention and healthcare. iHeal is committed to creating effective collaborations as we seek to identify and correct structural biases that perpetuate inequities in health and well-being. iHeal aims to dismantle biases based on age, disability, ethnicity, indigenous group membership, gender identity, linguistic

differences, national origin, race, religion, sexual orientation, and social class. Achieving health equity is at the core of the work we do at HIPRC.

In 2019, Drs. Moore, Rowhani-Rahbar, along with Dr. Vavilala and HIPRC Core Faculty Drs. Arbabi, and Bulger were awarded a grant from NIMHD (1R21MD013486). This project addresses critical gaps in our current healthcare data collection systems that prohibit identification of successful and largescale prevention and intervention targets to address injury disparities. The study aims to address these limitations by incorporating into our existing system a culturally sensitive data collection instrument and process for assessing health equity measures and longerterm outcomes for injury patients. Systematically accounting for care factors and outcomes by health-equity measures is a critical step towards developing system-level interventions to alleviate health disparities. A Bioethics Supplement to this award and the inclusion of University of Washington brought HIPRC better understanding and improved recruitment of diverse patients into trauma research.

The iHeal Initiative has conducted multiple trainings and engagement activities for HIPRC staff and faculty, and we look forward to continued growth and expansion of iHeal activities in the coming year.



## Leadership Team



Monica S. Vavilala, MD Center Director Lead, Traumatic Brain Injury



Saman Arbabi, MD, MPH, FACS Lead, Injury Care



Beth E. Ebel, MD, MSc, MPH Co-Director, Outreach Core Lead, Safe and Active Transport



Kenneth M. Jaffe, MD, MS



Charles N. Mock, MD, PhD, MPH, FACS Lead, Global Injury



Megan Moore, PhD, MSW Co-Director, Outreach Core Associate Director, Research Core



Frederick P. Rivara, MD, MPH Director, Firearm Injury & Policy Research Program (FIPRP) Co-Director, Education Core



Ali Rowhani-Rahbar, MD, PhD, MPH Co-Director, FIPRP Research Core Director,

Violence Prevention



Hilaire J. Thompson, PhD, RN, CNRN, AGACNP-BC, FAAN Co-Director, Education Core

## Core Faculty

Robert Bonow, MD Assistant Professor, Department of Neurological Surgery

Michele Curatolo, MD, PhD Professor of Anesthesiology and Pain Medicine

Mary Fan, JD, MPhil Jack R. MacDonald Endowed Chair & Professor-in-Law

Elizabeth Killien, MD, MPH **Assistant Professor of Pediatrics** 

Christine Mac Donald, PhD Associate Professor of Neurological Surgery James & Gaye Pigott Sports Health & Safety Endowed Chair

Rebecca Maine, MD Assistant Professor, UW Department of Surgery

Steve Mooney, PhD Associate Director, Research Core Assistant Professor of Epidemiology

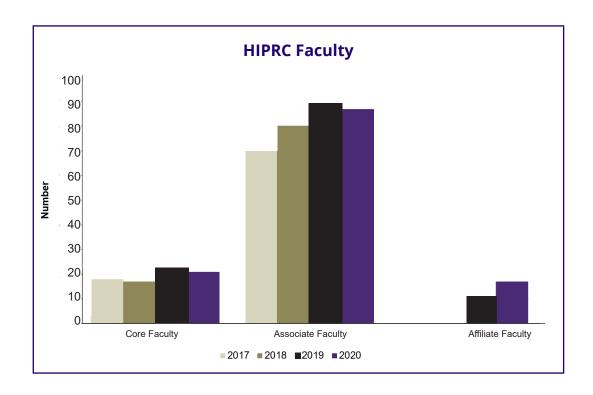
Kathleen M. O'Connell MD, MPH Assistant Professor of Surgery

Grant E. O'Keefe, MD, MPH **Professor of Surgery** 

Barclay Stewart, MD, PhD **Assistant Professor of Surgery** 

Lauren K. Whiteside, MD, MS Assistant Professor of Emergency Medicine

Doug F. Zatzick, MD **Professor of Psychiatry** 



## Institutional Advisory Board

Eileen M. Bulger, MD, FACS Chief of Trauma, Harborview Medical Center, Professor of Surgery

Mario Barnes, JD, LLM Dean, UW School of Law

Clint Burwell Assistant Vice President, Health System Philanthropy

Azita Emami, RN, PhD Dean, UW School of Nursing

Derek Fulwiler, MBA Director, Project Strategy/Communications, Population Health Initiative

Nicole Gibran, MD, FACs Associate Dean, Research, Harborview Medical Center

Hilary Godwin, PhD Dean, UW School of Public Health

J. Richard. Goss, MD, MPH Medical Director, Harborview Medical Center

David Green, MBA Chief Financial Officer, Deans Office, UW School of Medicine

Kevin Haggerty, PhD, MSW UW Endowed Professor of Social Work Sommer-Kelweno Walley Interim CEO, Harborview Medical Center

Paula L. Houston, EdD Director, Healthcare Equity, UW School of Medicine

Ronald V. Maier, MD, FACS Surgeon-in-Chief of Harborview Medical Center Jane and Donald D. Trunkey Professor and Vice Chair, UW Department of Surgery

Leo S. Morales, MD, PhD Professor and Director, Center for Health Equity, Diversity, and Inclusion, UW School of Medicine

Kenneth Sherr, PhD, MPH UW Department of Global Health

John T. Slattery, PhD Vice Dean, UW School of Medicine Research & Graduate Education

Susan Stern, MD Professor & Chair, Emergency Medicine

Edwina Uehara, PhD, MSW Professor and Dean, UW School of Social Work

Leslie Walker-Harding, MD Chair, Department of Pediatrics

## External Advisory Board

Mary Caitlin, BSN, BA, MPH, CIC Nurse Consultant Washington State Department of Health

David Grossman, MD, MPH Senior Associate Medical Director Kaiser Permanente Washington

Ian Goodhew, ID **Director of Government Relations** Google LLC

Patty Hayes, RN, MN Director Public Health Seattle & King County

Will Hitchcock, PhD Regional Coordinator Western Pacific Injury Prevention Network Todd Herrenkohl, PhD, MSW Marion Elizabeth Blue Professor of Child and Family University of Michigan School of Social Work

Therese Richmond, PhD, RN, FAAN Associate Dean and Professor Research & Innovation and Nursing in Surgery Perelman School of Medicine

John Wiesman, DrPH, MPH Secretary of Health Washington State Department of Health

## Community Advisory Board

Brett L. Bass Program Manager, Forefront Suicide Prevention University of Washington

Tumaini Coker, MD, MBA Director of Research for Diversity & Health Equity Seattle Children's Hospital

Benjamin Danielson, MD Clinical Professor of Pediatrics University of Washington

Adrian Diaz Interim Chief Seattle Police Department

**Candace Harris** Director, Valley Early Learning Center Valley School District

Paula Houston, EdD Director, Office of Healthcare Equity University of Washington

Erin James, MBA Prevention Coordinator, King County Heroin and Prescription Opiate Task Force King County Behavioral Health and Recovery Division

Rosalina "Rose" James, PhD Chief Research Officer, Urban Indian Health Institute Seattle Indian Health Board

Martine Pierre-Louis, MPH Director, Interpreter Services Harborview Medical Center

Mariel Torres Medipour, PhD Regional Health Administrator, Assessment, Policy **Development and Evaluation Unit** Public Health-Seattle and King County

Joana Ramos, MSW Health Policy Consultant Washington State Coalition for Language Access

Sally Lacy Sunder, MA Director, Health Integration and Transformation YMCA Association of Greater Seattle

Robin Tatsuda, MSW Director, Outreach Department - Information and Family Support The Arc of King County

Nicholas Ward, PhD Director, Center for Health & Safety Culture Montana State University Center for Health & Safety Culture

### Research

Core Director: Ali Rowhani-Rahbar, MD, PhD, MPH; Associate Directors: Brianna Mills, PhD; Steve Mooney, PhD; Megan Moore, MSW, PhD

HIPRC's Research Core is dedicated to leading and supporting the best in injury and violence prevention research and to embracing the principles of health equity. We join our communities in this endeavour, including the University of Washington, local and regional partners, and colleagues across the country and around the world. Research spans the continuum of injury prevention and response. Core values are the bedrock for the culture in which we work:

Collaboration where we nurture creative, team-based, and interdisciplinary approaches to advancing scientific research and knowledge regarding preventing and treating injuries. Diversity where we embrace and build on diverse backgrounds, perspectives, beliefs, and cultures to reduce the burden of injury. Equity where we promote equity and social justice in all our work. Partnership where we celebrate the contributions of our collaborators, community, faculty, staff, and students. Integrity where we maintain the highest standards of objectivity, professional integrity, mutual respect, and scientific rigor.

Our work includes epidemiological research to determine injury causes and risk factors. When injury does occur, we study the spectrum of

acute, rehabilitation, and long term recovery care in the hospital, home and community.

This year, despite the pandemic, we were awarded 35 grants and published approximately 500 peer-reviewed publications. We developed policies and procedures and infrastructure to support our research and impactful dissemination of knowledge. The research core is led by Ali Rowhani-Rahbar, MD, PhD and co-led by Associate Directors Brianna Mills, PhD, Steve Mooney, PhD and Megan Moore, MSW, PhD.

#### **FY2020 CDC ICRC PROJECTS**

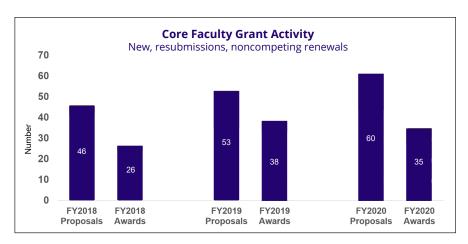
Collaborative Opioid Taper after Trauma Sullivan (PI; SOM), Baldwin, Tauben, Gordon, Arbabi

Return to Learn after Traumatic Brain Injury Vavilala (PI; SOM), Moore, Kroshus, Weiner, Glang

#### **FY2021 CDC ICRC PROJECTS**

Evaluation of a Healthcare Provider Suicide Prevention Training Program in Washington Rowhani (PI; SPH), Borghesani, Stuber, Ratzliff, Rivara

Development and Testing of a Toolkit to Prevent Falls in Long Term Care Facilities Thompson (PI; SON), Phelan, McGough



## **Education and Training**

Core Directors: Frederick P. Rivara, MD, MPH; Hilaire J. Thompson, PhD, RN, CNRN, AGACNP-BC, FAAN

A core mission of HIPRC is to create a pipeline of skilled, insightful, and productive investigators who will advance the field of injury control science. In collaboration with HIPRC's Research Core and Outreach Core, the **Education and Training Cores develop** researchers who are responsive to community needs and priorities.

We believe that the best new researchers in injury control will emerge across the spectrum of health care, public health, and injury control. We recruit individuals into injury prevention research, provide them with the best training possible, and support them to establish fulfilling and productive careers. We introduce trainees to the principles of injury research and help them to build collaborative research and practice skills that use innovative technologies and rigorous analytic methods to design, assess, and sustain interventions that can change health strategies and improve outcomes.

Our commitment to professional diversity described above is joined with our commitment to socio-demographic diversity and a spirit of inclusiveness,

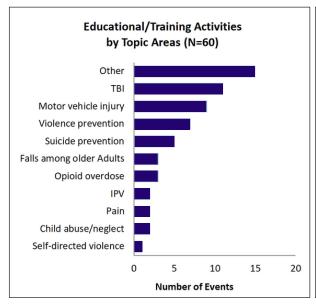
and this resolve extends equally to those with disabilities. We provided direct oneon-one mentorship to 37 fellows and junior faculty across the UW health sciences and held training sessions for public health practitioners across the Pacific Northwest.

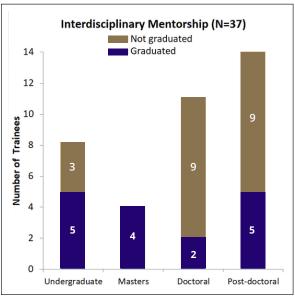


Fred Rivara, MD, MPH, HIPRC Endowment Launch



Early Career Researcher Collaboration Lunch





#### **INSIGHT Summer Programs**

The COVID-19 pandemic challenged us to pivot to on-line educational experiences. This novel approach proved fun and successful.

For high school students, we provided a first-of-a-kind intensive four-week program to introduce students to public health and biomedical research and medicine.

For undergraduate students, we provided a rigorous and enriching eight-week program where students conducted research, engaged in peer networking, and were mentored by HIPRC faculty and staff.

# Research and Career Mentorship High School Students Undergraduate **Students** Post-doctoral Fellows Injury Researchers Public Health **Practioners**



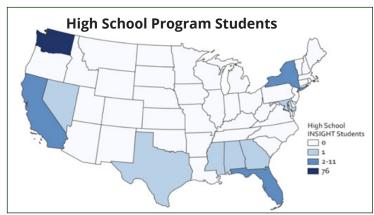


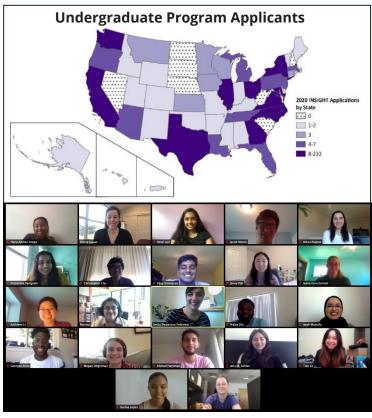
#### **High School Program**

- 136 applicants
- 99 participants
- 78 high schools
- 11 US states and Switzerland
- 16 need-based scholarships

#### **Undergraduate Program**

- 458 applicants
- 18 participants
- Over 100 schools
- 24.8% under-represented minorities
- 19.6% first generation
- Historically black colleges and universities
- Native American tribal schools
- 46 US states, Puerto Rico, and Canada







INSIGHT undergraduate and graduate participants

**Mock Study Session** 

### **NICHD-funded Pediatric Injury** T-32 Program

HIPRC is proud to have the only NICHD funded pediatric injury T-32 program, which will provide funding to train pediatric injury researchers per year for the next 5 years. We connected as colleagues and supported each other in weekly works in progress sessions, journal clubs, and interdisciplinary mentorship sessions.

Organized by Drs. Hilaire Thompson, Fred Rivara and Nicole Gibran, 63 post doctoral trainees, and junior faculty attended the inaugural mock study section. The study section aims to enhance grant writing skills and gain insight into how National Institutes of Health peer reviewers evaluate grants.

#### **Pediatric Injury** T-32 Post-Doctoral Fellows



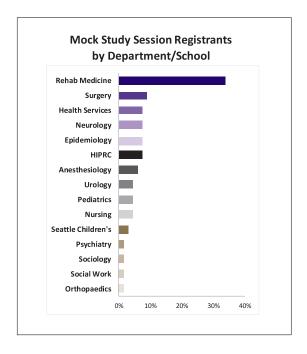
Avanti Adhia, ScD Focus on Intimate Partner Violence



Erin Morgan, PhD Focus on Firearms and Drowning Prevention



Mallory Smith, MD Focus on PTSD, Pain, QoL after Burns



### Outreach

Core Directors: Beth E. Ebel, MD, MSc, MPH (Policy); Megan Moore, PhD, MSW (Community)

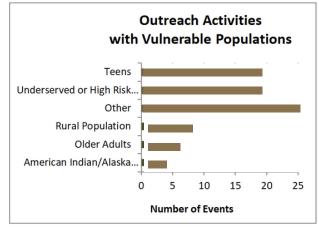
Outreach Cores collaborate with the Research and Training Core to translate research to practice. We respectfully engage with and are responsive to community needs. Through the Outreach core, HIPRC researchers work with diverse communities to identify concerns and collaborate with community and policy partners to prevent injuries and violence. Using best practices from health education, behavioral science, social marketing, and communication, we ensure that our science is responsive to community injury prevention concerns. HIPRC and our partnerships jointly ensure that research translates into public policy and effective programs.

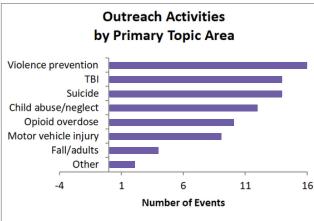
We began meeting with the Community Advisory Board to examine how HIPRC can best meet community needs through dialogue and presentations. The CAB feedback was used to direct research and training. We also held over 80 events and held a number of injury prevention campaigns addressing window falls, suicide prevention, and opioids. HIPRC outreach efforts facilitated conversations between historically marginalized groups with law enforcement and first responder groups to build shared mental models for our community benefit.



Community Advisory Board

Motor Vehicle Safety	WA State Distracted Driving Legislation     Booster Seat Informational Website     (boosterseat.org)
Traumatic Brain Injury	<ul> <li>Concussion Prevention for Coaches &amp; Student Athletes</li> <li>Pre-Hospital TBI Care for First Responders</li> <li>Return to Learn Guidelines for WA School Districts</li> </ul>
Violence Prevention	<ul> <li>Suicide Prevention Website &amp; Presentations</li> <li>Firearm Injury Intervention for Patients</li> <li>Safe Storage Firearm Lockbox Giveaway Events</li> </ul>
Trauma & Emergency Preparedness	Stop the Bleed Trainings     Geriatric Trauma Guidelines     HMC Trauma Conference
Substance Abuse	PTSD Intervention in Trauma Care Setting
Home & Recreational Safety	<ul><li>Fireworks Injury Prevention Social Media Campaign</li><li>WA Drowning Prevention Network</li></ul>





## Firearm Injury & Policy Research Program

Director: Frederick P. Rivara, MD, MPH; Co-Director: Ali Rowhani-Rahbar, MD, PhD, MPH

The <u>Firearm Injury and Policy</u> Research Program's (FIPRP) mission is to reduce the impact of firearm injury and death on people's lives through interdisciplinary research and collaboration with institutional, community, and governmental partners. FIPRP is building on a strong, successful history of investigation and collaboration in this arena. The Washington State Legislature and Governor have now made Washington just the third state in the country to specifically fund firearm research to "support investigations of firearm death and injury risk factors, evaluate the effectiveness of state firearm laws and policies, assess the consequences of firearm violence, and develop strategies to reduce the toll of firearm violence to citizens of the state." Established July 1, 2019 by Washington state funding with broad legislative support under the leadership of Drs. Rivara (Pediatrician and Director) and Rowhani-Rahbar (Epidemiologist and Co-Director), FIPRP received \$500k/year for 2 years. Over the past year, the study team has increased in size and expertise, conducting 19 different projects.

**RESEARCH HIGHLIGHTS** New UW study describes the use of extreme risk protection order laws in Washington Researchers conducted the first state-wide study of extreme risk protection orders (ERPO) in Washington state since the law's implementation in late 2016.

**States with Minimum Age Firearm** Laws have no Effect on Firearm Homicide Rates Researchers conducted a new study that found states with stricter minimum age firearm laws, stricter than federal laws, had no effect on firearm homicide rates perpetrated by young adults ages 18 to 20.

New Research Looks at the Relationship Between Age, Period, and **Cohort Effects in Firearm Homicides** and Suicides in the US Researchers conducted a new study to understand the relationship between age, gender, and temporal trends and firearm homicides and suicides. Firearm homicide and suicide rates have varied over time due to a number of factors.



KOMO News Radio interviews Dr. Fred Rivara

#### **New Study will Provide Comprehensive Information on** Non-Fatal Firearm Injuries The

American College of Surgeons Committee on Trauma (ACS COT) has awarded a 2-year grant by the National Collaborative for Gun Violence Research for a multi-center, prospective study to improve the understanding of individual and community level risk factors for non-lethal firearm injuries in the US The study intends to fill a critical data gap in understanding the burden of non-lethal firearm injuries, including looking at contextual information.

#### **Firearm Purchasing & Firearm Violence Increase During COVID-19**

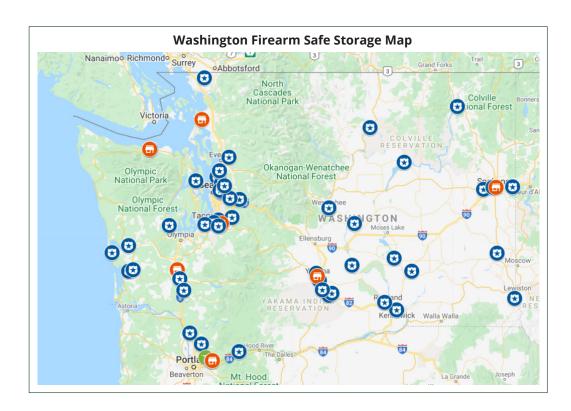
New research highlights an increase in firearm access and an increase in firearm violence during the coronavirus pandemic (March-May 2020). Research from this study suggests the increase in pandemic-related firearm purchasing correlate with the increase in firearm violence in the US Firearm violence prevention strategies are extremely important during the pandemic.

#### **Washington Firearm Safe Storage Map**

This interactive map was made to help people in crisis identify local options for temporary, voluntary firearm storage. Out-of-home firearm storage can be especially helpful to people in crisis. The businesses and law enforcement agencies listed on this map are willing to consider requests for temporary, voluntary firearm storage.



Dr. Rowhani-Rahbar engages colleagues in research discussion



# Safe & Active Transportation

Section Lead: Beth E. Ebel, MD, MSc, MPH

The Safe and Active Transportation (SAT) section collaborates with partners to reduce traffic and transportation injury risk, encourage safe travel and improve safety for active transportation modes (e.g. walking, biking and public transport). SAT policy and outreach work has focused on health equity to ensure that community voices shape research and that outreach activities are accessible to all. Led by Beth Ebel, MD and supported by Steve Mooney, PhD, and Linda Boyle, PhD, investigators conducted research and provided expert testimony to policymakers and Governor Jay Inslee that resulted in passing of the distracted driving law.

## **Injury Care**

Section Lead: Saman Arbabi, MD, MPH, FACS

Located in the WWAMI region's only level one trauma center, HIPRC <u>Injury Care</u> researchers increase positive outcomes for patients. Our work has influenced trauma treatment in emergency departments across the country. Specific research and program interests among section faculty include pain management and opioids, burn prevention and treatment, pre-hospital care including use of blood products and whole blood in air and ground emergency transport trauma care systems, Stop the Bleed first aid training, geriatric trauma care, and others. A number of members of this section are national leaders in injury care, injury prevention and setting national agenda on the quality of trauma programs. We were proud to have Dr. Eileen Bulger not only as the Chief of Trauma at Harborview Medical Center but also as the President of the American College of Surgeons Committee on Trauma, setting policy agendas, TQIP, and firearm research. Drs. Katherine O'Connell (Surgery) and Lis Powelson (Anesthesiology) co-developed and implemented a geriatric trauma care bundle, and we recruited Drs. Barclay



Governor Inslee passes the distracted driving law

#### **PROGRAM HIGHLIGHTS**

The Washington State Legislature approved updated regulations on car seat and booster seat use. The updated law went into effect state-wide January 2020. Dr. Beth Ebel testified in support of the updated law for three years.



Stop the Bleed

Stewart and Rebecca Maine as core faculty studying burns prevention, global injury prevention and optimal location and functioning of trauma centers in our state. We also recruited Michele Curatolo, MD, PhD to study pain and injury.

### **PROGRAM HIGHLIGHTS**

Stop the Bleed (STB) training with Somali Health Board & Community In January, HIPRC supported STB training in Tukwila, WA, with members from the local Somali community. STB equips the public with bleeding control techniques in the event of an emergency.

**Geriatric Trauma Bundle Researchers** are looking to improve trauma care among geriatric patients. The Geri-T Bundle designed specifically for elderly patients admitted to the Trauma Intensive Care Unit.

### Traumatic Brain Injury

Section Lead: Monica S. Vavilala, MD

HIPRC is committed to uncovering the complex layers of brain injury prevention and treatment that have long stymied the global medical community. Our mission is to generate and disseminate new knowledge pertaining to Traumatic Brain Injury (TBI) prevention and treatment. Our work studying the relationship between TBI treatment guidelines and outcomes for children transforms the way clinicians treat pediatric TBI around the world. This year, we welcomed Robert Bonow, MD (Neurosurgery) as core faculty who is interested in studying TBI care and outcomes. We also awarded Affiliate member CI Pummer, MD (Rehabilitation Medicine) the Richard Adler award to examine improving school services for children with TBI. Two visiting scholars from Colombia received scholarships to spend time at HIPRC and contributed to improving nursing engagement (Name) and Quality improvement efforts (Name) in TBI across South America. The Pediatric Guidelines and Outcomes project, developed with support from NINDS was fully transitioned and adopted as best practice by Harborview Medical Center for severe pediatric TBI care, receiving commendation by

the Department of Health. The study was published in *The Lancet Adolescent Health*. Members of this section were awarded an NIH R21 to study the application of data science to prevention of hypotension in TBI.

#### **PROGRAM HIGHLIGHTS**

Return to Learn (RTL) HIPRC launched a state-wide coalition to ensure that children "Return to Learn" after experiencing a brain injury. Researchers are ensuring every child in Washington with TBI receives unique treatment and rehabilitation and hope to reduce the burden from TBI through research, education, and public awareness.

PEGASUS Funded by NINDS, Dr. Vavilala and a team of investigators from Children's National Hospital and partners from Argentina are testing the Pediatric Guideline Adherence and Outcomes program across 16 sites in South America to benefit children and adolescents with severe TBI.



PEGASUS launch, Rosario, Argentina

### Violence Prevention

Section Lead: Ali Rowhani-Rahbar, MD, PhD, MPH

The Violence Prevention Section (VPS) works closely with FIPRP. Led by Ali Rowhani-Rahbar, projects focused on the prevention of child maltreatment, sexual violence, youth violence, intimate partner violence, and suicide.

**PROGRAM HIGHLIGHTS Helping Individuals with Firearm Injuries (HiFi)** Researchers are testing the effectiveness of an intervention designed to promote the health and well-being of gunshot wound victims. By supporting recovery through a traumainformed approach, recidivism among this highly vulnerable group will decline.

**Earned Income Tax Credit and Multiple** Forms of Violence Funded by the CDC, we examined the impact of earned income tax credit (EITC), the largest cash transfer program for low-earning workers in the US , on rates of child maltreatment, intimate partner violence, sexual violence, youth violence, and suicide and their shared risk and protective factors. We used several administrative, surveillance, and survey data sources containing information on a variety of violence outcomes to answer this question over the period 1986-2017. A number of papers and presentations were generated based on this work. Considering the burden of violence as a leading cause

of mortality and morbidity in the US, even a modest impact of state EITCs in preventing some forms of violence may translate to positive changes in a sizeable number of lives across the lifespan. Characterizing and quantifying this impact can further inform the adoption and expansion of current and future economic assistance policies to prevent violence and improve public health.

**COVID-19 and Domestic Violence: Implications for Population Health** and Justice Equity Funded by UW Population Health Initiative, we conducted a study to examine the impact of the COVID-19 pandemic on domestic violence (DV) in King

County. The COVID-19 pandemic has been disproportionately impacting domestic DV survivors of color. Identifying the needs of DV survivors of color during the pandemic and informing strategies that address those is a justice imperative toward promoting population health equity. DV protection order (DVPO) is an order of the Court granting a survivor of DV protection from their abuser. There is a significant need to preserve and enhance access to the courts and relief of DVPOs among survivors of color during the pandemic and beyond. Our study compared the rate of civil domestic violence legal filings and their adjudication trajectory before and during the pandemic. We have also been characterizing programmatic and systemic adaptations implemented during the pandemic intended to increase access

## Global Injury

Section Lead: Charles N. Mock, MD, PhD, MPH, FACS

HIPRC seeks to lower the burden of global injuries, including for people who live in low- and middle-income countries (LMICs). Led by Charles Mock, faculty from HIPRC have collaborated with partners in Ghana, India, Vietnam, multiple Latin American countries and the World Health Organization. This work includes several training grants to improve capacity for injury control work in LMICs. The addition of Dr. Barclay Stewart led to development of a project to prevent home fires in Nepal.

#### **PROGRAM HIGHLIGHTS Strengthening Injury Control** Research in Ghana and West Africa

The broad goal of this project is to develop a model program to strengthen the training and research capacity for injury control in Ghana. The program builds a cadre of outstanding scientists in cutting edge research methods and training techniques.

#### Improving Initial Management of the **Injured at Ghanaian District and Regional** Hospitals with a Trauma Intake Form

This project seeks to determine the effectiveness of a model Trauma Intake Form (TIF) to function as a checklist for increasing the appropriate use of key performance indicators (e.g. airway maintenance, pulse oximeter placed, tests to exclude internal bleeding) during care of the injured in emergency units in district (first level) and regional (second level) hospitals in Ghana, as assessed by independent observers.



Strengthening injury control research in Ghana and West Africa, collaboration with Komfo Anokye Teaching Hospital, Kumasi, Ghana

### **Partners**

We are deeply grateful to our colleagues, for their partnership in supporting our primary mission to reduce the impact of injury and violence on all people's lives. Together, we address complex issues with the aim of achieving health equity across all ages and groups through interdisciplinary research, education, training and public awareness on the impact of injury and violence.

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### Make a Gift

We appreciate your interest in making a gift to HIPRC. Your donation supports our mission to reduce the impact of injury and violence on people's lives in the US and globally.

Donations can be made to HIPRC through the University of Washington website.

### Contact Us

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Together, we have the power to prevent harm and suffering from injury and violence.