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2020

ANNUAL  
REPORT

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**Program for Injury Prevention,  
Education & Research (PIPER)**  
colorado school of public health

# TABLE OF CONTENTS

**Letter from the Director.....3**

## **Our Team**

Leadership.....4

Members..... 5-6

**Highlights of 2020.....7-8**

## **New Research in 2020**

Grants and Projects.....9-10

New Publications.....11-12

**Engaging Faculty, Students,  
and Practice Partners..... 13**

## **Learning Together**

Research 2 Practice webinars.....14-15

ACEs/Child Maltreatment webinars.....16

**Thank You & New Center  
Announcement.....17**



A look back at 2020

# LETTER FROM THE DIRECTOR

The year 2020 was marked with uncertainty and upheaval as we faced a global pandemic, a reckoning with racism in America, and dramatic changes to the way we live and work.

Public health and prevention have been in the spotlight. The pandemic and social distancing measures needed to reduce infections have brought concerns about overdose and substance use, suicide risk, child maltreatment and other forms of violence. It has also brought major challenges to the workplace and our ability to conduct research.

As a program, we pivoted quickly to a virtual work environment, continuing to offer a robust menu of learning opportunities and networking sessions online. Despite the challenges of the past year, we've seen many successes as new research projects and collaborations launched – you will find some featured in this report.

I'm proud of the work we are doing at CU Anschutz to advance injury research and drive evidence-based practice. In 2020, we made progress towards formalizing our structure as an official center within the University of Colorado system, officially changing our name from the Program for Injury Prevention, Education, & Research (PIPER) to the Injury and Violence Prevention Center (IVPC) in 2021.

We also made several important commitments to advance racial equity in our work, which you can read about [here](#). Going forward in 2021 and beyond, we keep several priorities front and center:

- Continuing to formalize our leadership and advisory structures to position the center for future growth and success
- Prioritizing equity and centering anti-racism in our work
- Expanding our outreach to practitioners in public health, clinical care and related sectors
- Identifying ways to deepen partnerships with other academic, practice, and community organizations
- Building our capacity for evaluation services
- Advancing efforts to spark student interest in injury and violence prevention through stipends, scholarships, and practicum/job placements

Thank you for joining us in our work to prevent injuries and violence in Colorado, the Mountain West Region, the nation and the world.

*Ashley Brooks-Russell, PhD, MPH*  
*Director*

# OUR TEAM LEADERSHIP

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**Ashley Brooks-Russell PhD, MPH**

Director (PIPER)

Associate Professor in the Department of Community and Behavior Health



**Carol Runyan, PhD, MPH**

Founding Director (PIPER)

Professor in the Department of Epidemiology



**Marian (Emmy) Betz, MD, MPH**

Deputy Director (PIPER) and Director of Firearm Injury Prevention Initiative

Professor of Emergency Medicine



**Sara Brandspigel, MPH**

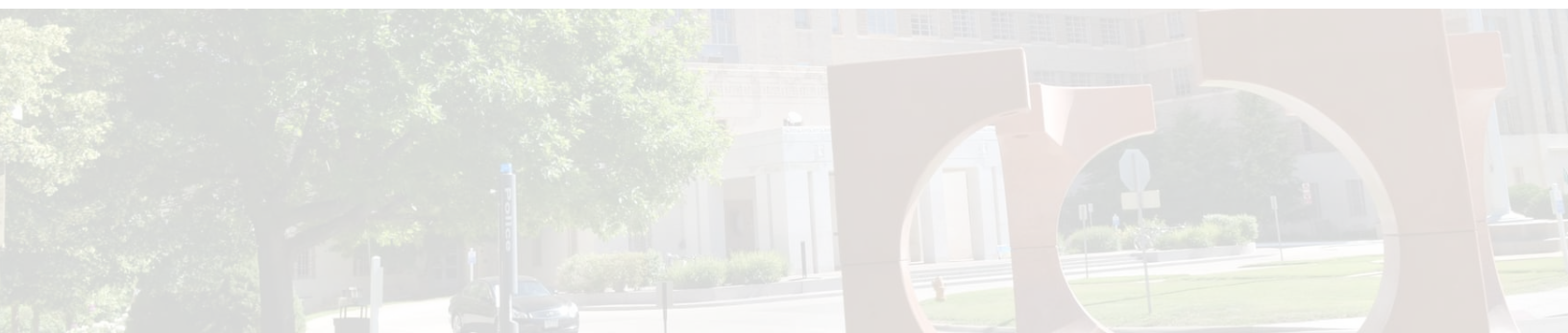
Director of Outreach (PIPER)

Research Instructor in the Department of Health Systems, Management & Policy



**Ashley Pennington, MPH (c)**

Graduate Student Assistant



# OUR TEAM MEMBERS

In 2020, the Program for Injury Prevention, Education & Research formalized faculty membership in our initiative. Our close network of faculty are located in disciplines, departments and institutions throughout Colorado and the Rocky Mountain region. We bring together and support this network to accelerate the dissemination of evidence-based solutions, policies, and practices to the community. Our *Faculty Members* are research and public health experts who are generating high quality injury research and leading implementation of evidence-based solutions to major sources of injury in Colorado and/or nationwide. Benefits of membership include networking opportunities, regular email updates, communications support, opportunities to present at seminars, and linkages to students for projects.



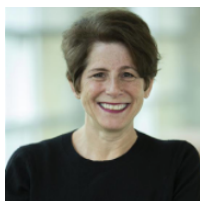
**Christine Baugh, PhD, MPH**

- Sports injuries, bioethics



**Carolyn Diguseppi, MD, PhD, MPH**

- Autism and injury, motor vehicle injuries, and falls



**Lisa Brenner, PhD**

- Suicide, traumatic injuries



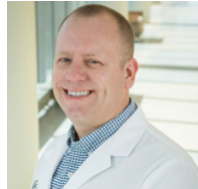
**Maya Haasz, MD**

- Firearms



**Talia Spark, PhD, MS**

- Firearms, suicide prevention



**Jason Hoppe, DO**

- Opioids



**Dawn Comstock, PhD**

- Sports injuries



**David Howell, PhD, ATC**

- Sports injuries

# OUR TEAM MEMBERS CONT.



**Erin Kelly, DrPH, MA**

- Youth violence, firearms



**Joseph Simonetti, MD, MPH**

- Firearms, suicide prevention



**Beverly Kingston, PhD**

- Youth violence



**Gregory Tung, PhD, MPH**

- Substance use, suicide, adolescent and youth violence



**Angela Lee-Winn, PhD, MA**

- Substance use, mental health



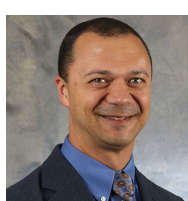
**Catherine Velopulos, MD, MPH**

- Firearms, intimate partner violence



**Terri Lewis**

- Child maltreatment



**Erik Wallace, MD**

- Firearms



**Daniel Lindberg, MD**

- Child maltreatment



**Kathryn Wells, MD**

- Child maltreatment



**Eric Sigel, MD**

- Adolescent and youth violence



**Christina Yannetsos, MD**

- Sports injuries

## IN THE NEWS

In 2020, researchers from PIPER were leaders in the national conversations about suicide, injury and violence prevention. Some highlights include:

### **Exploring the link between COVID-19 and suicide risk**

As COVID-19 raged across the U.S. and around the world, we faced questions about the mental health effects of the pandemic's stress, economic uncertainty, and social isolation. Researchers brought viewpoints informed by history as well as the latest science to put the risk into context and guide prevention strategies.

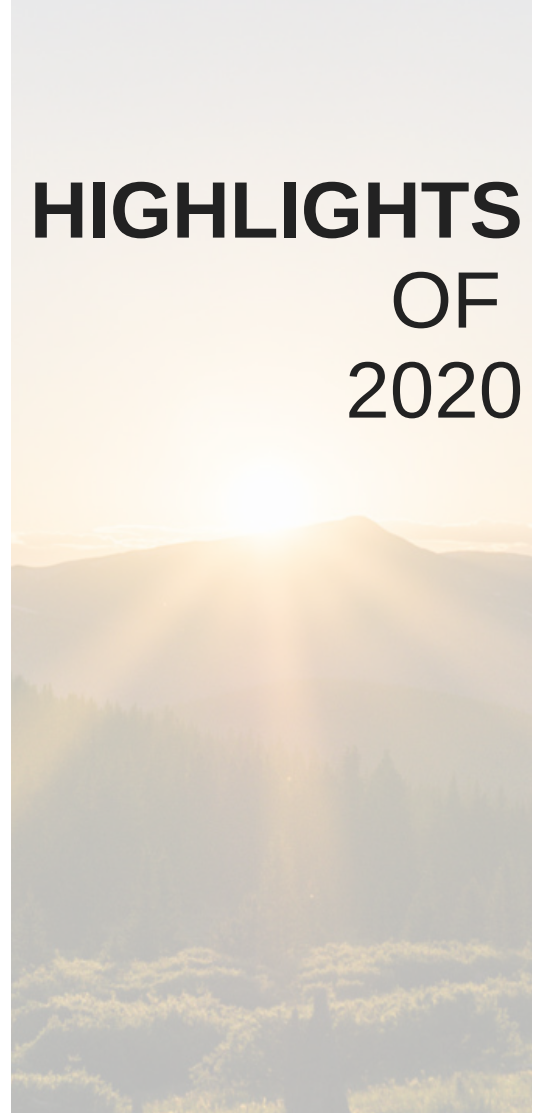
- **Covid-19 and suicide: an uncertain connection** - STAT News (Betz)
- **Fear and Isolation May Not Actually Bring a Rise in Suicides** – Slate (Betz)
- **Op-Ed: COVID-19, Colorado Firearm Suicides and Lessons for First-Time Gun Owners** – Westword (Betz/Colorado Firearm Safety Coalition)
- **With gun sales spiking in Colorado, let's talk about suicide prevention** -Rocky Mountain PBS (Betz/Colorado Firearm Safety Coalition)

### **Colorado emergency departments take new steps to prevent youth suicide**

In May 2020, a new study conducted in seven Colorado Front Range emergency departments demonstrated success in helping parents make their homes safer when a teen is distressed. An intervention to improve counseling and storage options in the emergency department was associated with a doubling in parents reporting safer storage practices after their visit. Several investigators from PIPER collaborated on the project with researchers from Northeastern University and Harvard.

- **Colorado emergency departments take new steps to prevent youth suicide** - CU Anschutz (Runyan, Betz, Brandspigel)
- **Securing weapons, medications can save lives during a crisis** - Rocky Mountain PBS (Runyan)

# HIGHLIGHTS OF 2020



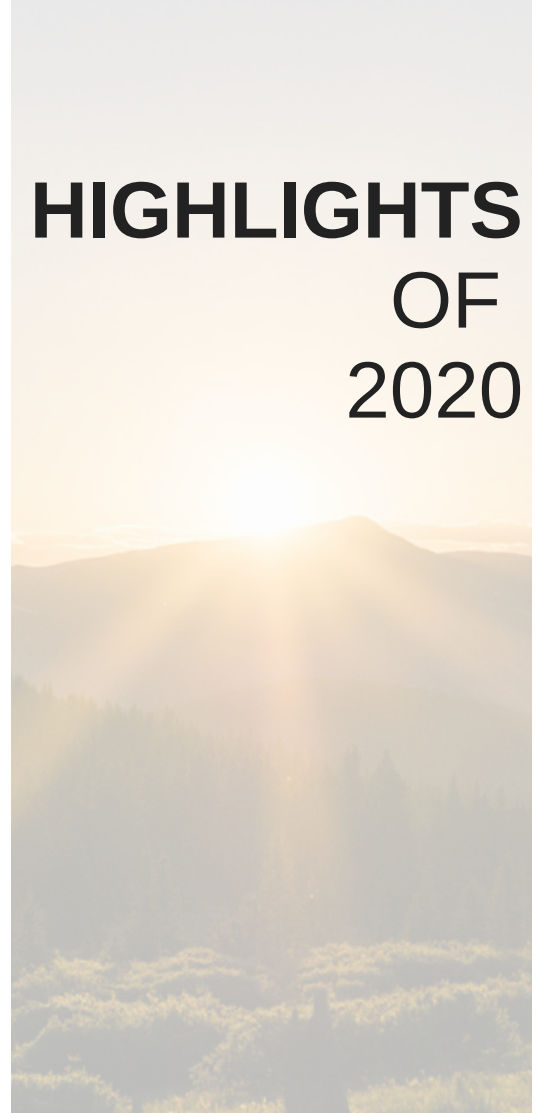
## IN THE NEWS CONT.

### **PIPER members at the forefront of firearm injury prevention**

PIPER members engaged with efforts throughout Colorado and the nation to bring attention to the need for firearm injury prevention among a range of populations including military service members and children. The Firearm Injury Prevention Initiative, a program of the PIPER, aims to coordinate, synergize, and stimulate collaborative approaches to firearm injury prevention in Colorado and nationally. This year, the Initiative launched webinars, research work-in-progress meetings, and a newsletter to help support researchers, educators, and community members in preventing firearm injuries.

- **Lethal means safety and suicide prevention among Reservists** - Presentation at US Marine Corp Reserve & Navy Reserve Psychological Health Outreach Program (Simonetti)
- **Task Force Aims to Reduce Deaths by Suicide** - The Colorado Springs Gazette (Wallace)
- **How Do You Get Gun Owners To Give Up Their Guns During A Crisis? Ask.** - National Public Radio / KUNC (Betz)
- **Op Ed: The other public health epidemic** - Daily Camera (Haasz)
- **In This Pandemic Summer, Don't Forget About Kids' Other Risks** - New York Times (Haasz)
- **When Things Aren't OK With a Child's Mental Health** - New York Times (Haasz)

## HIGHLIGHTS OF 2020



### **New program aims to prevent violence at the bedside**

In 2020, a new program launched at University of Colorado Hospital to break the cycle of violent crime by having case workers meet with victims of violence while they're still in the hospital. Led by PIPER member Catherine Velopulos, MD, a trauma surgeon, the program builds on the success of a similar initiative in Denver.

- **Hospital-based violence intervention program set to start in Aurora**



## NEW RESEARCH IN 2020

**PIPER leaders and members continue to advance the science of injury and violence prevention through cutting-edge research on priority topics.**

- **Cannabis and Motor Vehicle Safety:** PIPER Director Ashley Brooks-Russell, PhD, MPH, and team received a new R01 from the National Institute on Drug Abuse/NIH to study *Novel approaches to assessing cannabis impaired driving.*
- **Sports Safety During the Pandemic:** PIPER member Christine Baugh, PhD, received a President's Award from the Greenwall Foundation to investigate ethics-informed decision making and the return of college sports amidst COVID-19.
- **Opioid Overdose Prevention:** PIPER member Jason Hoppe, DO, received a grant from the Substance Abuse and Mental Health Services Administration to study improving Emergency Department pain management through dissemination and implementation of best practices for alternatives to opioids.
- **Etiology and Epidemiology of Child Abuse:** PIPER member Daniel Lindberg, MD, received an NICHD grant to build and deploy research resources to encourage robust, multi-center collaboration to improve our understanding of child physical abuse and to improve the clinical decisions made by child abuse pediatricians.

**Firearm Injury Prevention Initiative** – This initiative, a program of the PIPER, aims to coordinate, synergize, and stimulate collaborative approaches to firearm injury prevention in Colorado and nationally. Selected firearm-related research grants include:

- **Firearm Storage Maps:** PIPER Deputy Director Emmy Betz, MD, MPH received an R61 from NIH/NIMH to study online storage maps to facilitate voluntary firearm storage using a mixed methods evaluation. Director of Outreach Sara Brandspigel, MPH, is a collaborator on the project.

## NEW RESEARCH IN 2020 CONT.

- Older Adults and Firearm Safety:** PIPER Deputy Director Emmy Betz, MD, MPH received an R01 from NIH/National Institutes on Aging to study decision making among older adults and “firearm retirement”. Injury Center member Joseph Simonetti, MD, MPH, is a collaborator on the project.
- Collaborative Approaches to Firearm Safety:** Several PIPER members including Erin Wright-Kelly, DrPH, MA, Beverly Kingston, PhD, Marian Betz, MD, MPH, and Eric Sigel, MD are collaborating on an evaluation of the Gun Shop Project funded by the Centers for Disease Control and Prevention.
- Suicide Prevention Among Military Populations:** PIPER member Joseph Simonetti, MD, MPH, received a Career Development Award from the Veteran’s Affairs Health Services Research and Development Service, for a study entitled, “Development and testing of a veteran centered lethal means safety intervention.” Deputy Director Emmy Betz, MD, MPH serves as a co-mentor on the project.
- Pediatric Firearm Injury Prevention:** PIPER member Maya Haasz, MD received a University of Colorado, CCTSI Child and Maternal Health-Pilot Grant to evaluate the utility of a brief educational video in improving safe firearm storage and knowledge surrounding lethal means restriction among caregivers.



*Joseph Simonetti, MD presented on older adults and "firearm retirement" in May 2021 as part of the VA/Department of Defense National Suicide Prevention Conference.*

## MAJOR PUBLICATIONS

Our program members publish research in high impact journals, such as the work featured in this report. Research topics in 2020 include pediatric concussion and brain injury, firearm safety planning and safe storage, motor vehicle safety, suicide prevention among veterans, and child abuse prevention, among others.

**Selected publications from PIPER leaders and members in 2020 included:**

- **Baugh CM.** Athlete Concussion Reporting: It Is Time to Think Bigger. *J Adolesc Health.* 2020;66(6):643-644.
- **Baugh CM,** Kroshus E, Meehan WP 3rd, McGuire TG, Hatfield LA. Accuracy of US College Football Players' Estimates of Their Risk of Concussion or Injury. *JAMA Network Open.* 2020;3(12):e2031509. Published 2020 Dec 1.
- **Kelly T, Brandspigel S,** Polzer E, **Betz ME.** Firearm Storage Maps: A Pragmatic Approach to Reduce Firearm Suicide During Times of Risk. *Ann Intern Med.* 2020 Mar 3;172(5):351-353.
- **Betz ME,** Miller M, Matlock DD, Wintemute GJ, Johnson RL, Grogan C, Lum HD, Knoepke CK, Ranney ML, Suresh K, Azrael D. Older Firearm Owners and Advance Planning: Results of a National Survey. *Ann Intern Med.* 2020 Oct 6; 174(2), 279–282.
- **Betz ME,** Azrael D, Johnson RL, Knoepke CE, Ranney ML, Wintemute GJ, Matlock D, Suresh K, Miller M. (2020). Views on Firearm Safety Among Caregivers of People With Alzheimer Disease and Related Dementias. *JAMA Network Open,* 3(7).
- **Betz ME,** Hyde H, **DiGuseppi C,** Platts-Mills TF, **Hoppe J,** Strogatz D, Andrews HF, Mielenz TJ, Hill LL, Jones V, Molnar LJ, Eby DW, Li G. (2020). Self-Reported Opioid Use and Driving Outcomes among Older Adults: The AAA LongROAD Study. *Journal of the American Board of Family Medicine : JABFM,* 33(4), 521–528.

## MAJOR PUBLICATIONS CONT.

- **Brooks-Russell, A., Brandspigel, S.,** Franco, C., Alishahi, M., **Lee-Winn, A.** (2020). Perceptions of syringe services programs and supervised use sites among a sample of registered voters in a U.S. state. *Journal of Public Health Management & Practice*.
- **Brooks-Russell A,** Mulitauopele C, Fine, E. (2020). Where Data Meets Action: Linking Health Surveillance with Community Partnership. *The American Journal of Bioethics : AJOB*, 20(10), 63–65.
- **Lindberg DM.** (2020). Abusive and Nonabusive Traumatic Brain Injury: Different Diseases, Not Just Different Intent. *The Journal of Pediatrics*, 227, 15–16.
- **Runyan CW, Brandspigel S,** Kapsimalis Doyle C, Myers L. Public Health Needs to Engage in the Primary Prevention of Child Maltreatment. *Journal of Public Health Management and Practice*. 17 April 2020.
- **Runyan, C. W., Brandspigel, S.,** Barber, C. W., **Betz, M.,** Azrael, D., & Miller, M. (2020). Lessons learned in conducting youth suicide prevention research in emergency departments. *Journal of Injury Prevention*, 26(2), 159–163.
- **Simonetti JA,** Piegari R, Maynard C, **Brenner LA,** Mori A, Post E, Nelson K, Trivedi R. (2020). Characteristics and Injury Mechanisms of Veteran Primary Care Suicide Decedents with and without Diagnosed Mental Illness. *Journal of General Internal Medicine*, 10.1007/s11606-020-05787-1. Advance online publication.
- **Simonetti JA,** Dorsey-Holliman B, Holliday R, **Brenner LA,** Monteith L. (2020). Firearm-related experiences and perceptions among United States male veterans: A qualitative interview study. *PloS One*, 15(3).
- **Simonetti JA, Brenner LA.** (2020). Promoting Firearm Safety as a Suicide Prevention Strategy Within Health Care Systems: Challenges and Recommendations. *Psychiatric Services (Washington, D.C.)*, 71(3), 298–300.
- Harty NM, Friedman B, **Tung GJ.** (2020). Kids, Cops, and Community: A Qualitative Assessment of Police, Youth, and Parent Perceptions of Each Other. *Journal of Public Health Management and Practice : JPHMP*, 26(6), E16–E22.

# ENGAGING FACULTY, STUDENTS, & PRACTICE PARTNERS

## New website launched

In 2020, our initiative transitioned to a new website with expanded resources for partners, students. The website serves as a hub for information on upcoming events and news about injury and violence prevention efforts led at CU Anschutz.

## Keeping scholars and community connected virtually

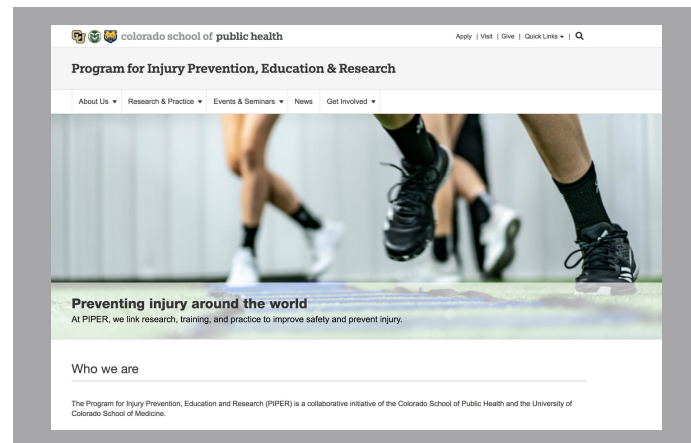
While 2020 brought sweeping changes to our work environment, the center rapidly pivoted to offering virtual opportunities for junior scholars, students, and established researchers to maintain and grow their networks and gather feedback on their research projects.

- Works-in-Progress sessions held monthly provide support, mentoring and feedback for junior scholars in the field of injury and violence prevention.
- The Firearm research work-in-progress group brings together scholars focused on firearm injury prevention to share ideas, gather feedback, and support new collaborations. Held monthly via zoom, this group includes researchers from multiple institutions in Colorado.
- Injury Center leaders and members continue to actively engage with community and practice partners through networks like the Plains to Peaks Regional Network (a community of injury and violence practice leaders in the region). Practitioners present monthly in our webinar series, helping to ensure the latest research is put into practice context. We also continued to identify new partners in the state and region. Practitioners present monthly in our webinar series, helping to ensure the latest research is put into practice context. We also continued to identify new partners in the state and region.

## Leading national conversations on prevention efforts

During 2020, as part of our rapid pivot to virtual modes of communication, the center organized several Twitter chats to convene a national conversation about pressing injury and violence topics. These included:

- Firearms and COVID-19 (March 2020) #FirearmsCOVID19
- Child Maltreatment Prevention During COVID-19 (April 2020) #SaferQuarantine
- Drugs, Overdose Prevention and COVID-19 (April 2020) #SaferQuarantine

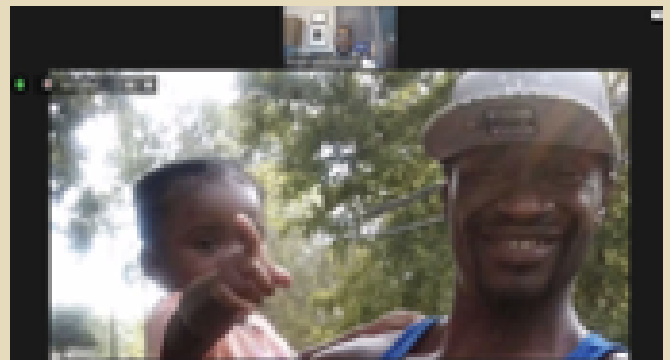


# LEARNING TOGETHER

Our monthly Research2Practice webinar series is held on the second Tuesday of the month at 12:00pm MT. The webinars highlight pressing issues in injury and violence prevention with a focus on translating research to practice. Seminars are free and open to the public. We cosponsor seminars with groups such as the Center for Bioethics and Humanities, the Department of Emergency Medicine, the Department of Community and Behavioral Health, the Department of Epidemiology, and the Centers for American Indian and Alaskan Native Health.

## 2020 Presentations Included:

- **Suicide Risk Identification and Management in the Veterans Health Administration** - Nazanin Behraini, PhD
- **Ethics and Injury: Examples of Interdisciplinary Sports Injury Research** - Christine Baugh, PhD, MPH
- **Cannabis Impaired Driving and the Importance of Tolerance** - Ashley Brooks-Russell, PhD, MPH
- **Preventing Suicide through Lethal Means Counseling in Emergency Care: Latest Research and Prevention Resources**- Carol Runyan, PhD, MPH, Sara Brandspigel, MPH, Sarah Brummett, JD
- **Sports Injury Prevention** - Christina Yannetsos, MD and Dawn Comstock, PhD
- **Deaths in Custody: A Continuum of Care**- Roger Mitchell, MD



*"We're trying to remove the bias and the display that comes with those that are dying at the hands of law enforcement and within the criminal justice system. There's no need for anyone to die from preventable deaths [such as] a knee to the neck." - Roger Mitchell, MD (Deaths in Custody: A Continuum of Care 2020 Webinar)*

# LEARNING TOGETHER

## 2020 Presentations cont.:

- **Mitigating Injuries Due to Human-Spacesuit Interaction** - Allison Anderson, PhD
- **Factors Contributing to Delay in Driving Licensure Among Teens and a Case for Bolstering GDL Policies** - Frederico Vaca, MD, MPH and Rebecca West, PhD
- **Insights from the Frontlines: Informing Practice and Research in Interpersonal Violence** - Christine Foote-Lucero MSN, RN, CEN, SANE-A, SANE-P, Annie Lewis-O'Connor, PhD, NP-BC, MPH, FAAN
- **Overdose Prevention and Harm Reduction** - Ingrid Binswanger, MD, MPH, MS and Lisa Raville
- **First Steps: A Lock Box Pilot Program Focused on Opioid Abuse Prevention in a Tribal Community** - CRD Robert Morones, MPH, Monte Yazzie, MA, Nancy Mangieri, DNP
- **Occupational Injuries Among Firefighters:** Thomas Hales, MD, MPH and Alisa Koval MD, MPH, MHSA

### Intravehicular Activity Suits

- Core function is to keep the crew alive in an off-nominal event
  - "Get me down" suits
- Origins in the high-altitude pilot suits
- Primary design drivers:
  - Minimize hard components to prevent injury in the event of an impact
  - Unpressurized comfortable for long durations
  - Survivable pressure (~3.5 psi, ~24 kPa)
- Not optimized for mobility
  - Often with a built in "posture"



*Mitigating Injuries Due to Human-Spacesuit Interaction webinar focused on human performance, biomechanics, and injuries that occur during extravehicular activity, or colloquially "spacewalking", and during training on Earth. (Dr.Anderson, August 18th, 2020)*

***Want to watch past webinars? View past webinars on PIPER's youtube playlist [here](#).***

# LEARNING TOGETHER

## ACES/CHILD MALTREATMENT WEBINARS

We also organized a monthly webinar series, Preventing Adverse Childhood Experiences and Child Maltreatment, in collaboration with

the Colorado Department of Public Health and Environment. This series, open to public health and social services practitioners, was designed to share the latest research with those working in the field to ensure the health of children and families. Sessions included:

- **Opioids and Child Maltreatment: Neighborhood Factors To Protect Families** - Nichole Michaels, PhD, and Bridget Freisthler, PhD, Nationwide Children's Hospital and The Ohio State University
- **Building Community Resilience: Addressing the 'Pair of ACEs' and Preventing Child Maltreatment through a Cross-Sector Approach** – Harrison Newton, MPH and Jeff Hild, JD, George Washington University
- **Evaluating Organizational Policies to Prevent Child Sexual Abuse** - Luciana Assini-Meytin, PhD and Katherine E. Soule, PhD of Johns Hopkins University and University of California Cooperative Extension
- **Gun Violence as an Adverse Childhood Experience: Reflections from Research and Practice Perspectives** - Sonali Rajan, EdD, Danielle Kassow, PhD, and Ginny Rauh, ScD of Columbia University and Trauma-Free NYC
- **Exploring Pre-birth Household Challenges and Early Childhood ACE Scores: Implications for Upstream Prevention** - Jared Parrish, PhD, Alaska Division of Public Health
- **Promoting Economic Stability to Reduce Child Maltreatment: Evaluating a Policy Approach** - Ali Rowhani Rahbar, MD, PhD and Nicole Kovski, MS, University of Washington
- **Community-level Interventions to Address ACEs: Successes and Lessons Learned** - Jenn Leiferman, PhD, Colorado School of Public Health and Don Hanna, PALS, La Puente





**Thank you to our practice partners, faculty members, and leadership for your work to prevent injuries and violence in the Mountain West Region and around the world. We are looking forward to the work to be done in 2021 as the newly formed Injury and Violence Prevention Center (IVPC), a collaboration between the Colorado School of Public Health and the University of Colorado School of Medicine.**

# **Injury & Violence Prevention Center**

**colorado school of public health**

