

2021

PROGRESS REPORT

FREDERICK P. RIVARA, MD, MPH HARBORVIEW INJURY PREVENTION & RESEARCH CENTER (HIPRC) ENDOWMENT

INTRODUCTION

With your generosity the Frederick P. Rivara, MD, MPH Harborview Injury Prevention & Research Center (HIPRC) Endowment can provide resources to graduate students and post-doctoral trainee investigators looking to conduct an injury-related project.

Dr. Frederick P. Rivara, the namesake of this endowment, has created a safer and healthier world because of his work, and it was no surprise when his colleagues at UW Medicine established this endowment in his honor — one that will recognize Dr. Rivara's legacy and continue his visionary work.

Inspired by Dr. Rivara's extensive work and HIPRC's accomplishments, this endowment supports career development activities and pilot research projects for trainees. With it, we pay tribute to Dr. Rivara's profound dedication to injury control and prevention across the lifespan.

We are delighted to update you on the project of the 2020 Inaugural Award Recipient, as well as the two new recipients of 2021.

We received applications on topic areas of the HIPRC: injury health equity, safe transport, traumatic brain injury, violence prevention, firearm injury and policy and injury care or global injury prevention. Applications undergo scientific peer review from a panel of experts, using the standard National Health Institutes (NIH) grading format. Feedback from the review is provided to all applicants, and in this way, regardless if an award is granted, this process provides an opportunity for growth to all applicants to strengthen their proposed work and future applications. It is exciting that this award can be used to enhance both research advancement and career development.

2020 INAUGURAL AWARD RECIPIENT & PROJECT UPDATE

Project Title: *Religiosity and Firearm Beliefs*

Project Abstract: Firearm-related injuries and deaths represent an endemic and worsening problem in the US, accounting for nearly 40,000 fatal and 86,000 non-fatal firearm injuries annually. Studies since the 1970's have found firearm safety behaviors differ by religious affiliation. In particular, the 83.1 million religiously conservative Protestant Christian adults in the U.S. are more likely to own firearms and engage in risky firearm behavior than others. Yet, the effect of religious beliefs on practicing firearm safety behaviors, such as safe storage practices, is often ignored in firearm safety interventions. The location of this



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populations' social networks within a homogeneous religious group suggests firearm safety interventions may be most effective at the organizational (i.e., church) level. This study sought to understand how Protestant Christians view the relationship between their religious and firearm beliefs, focusing on their openness to church-based firearm safety interventions.

Project Findings: From in-depth interviews with 17 participants, the study found participants were segmented into three groups. The first group connected specific tenets of their religion, such as Bible verses, to their divinely-directed duties to protect themselves and their families, and to practice firearm safety. While they were not open to participating in firearm-safety interventions, many members expressed interest in leading such trainings as they perceived themselves to be highly proficient with firearms. The second group described their identities as a firearm owner and as a Christian to be separate and sometimes in conflict. Their firearm ownership was based more on cultural practices, and they were not open to any church-based firearm safety interventions. Finally, the third group expressed enthusiasm at participating in church-based firearm safety interventions. This group intricately connected their religious and firearm beliefs, chiefly considering protection to be an act of Christian love.

Next Steps: The next steps are to validate the findings from the qualitative study through a national survey of Protestant Christians. The survey was designed with expert guidance and mentorship from UW faculty and seeks to understand the characteristics of these groups and identify individuals most open to participating in or leading church-based firearm safety interventions.

Testimonial: Beyond the influence of the results of this study on firearm safety intervention research, I want to express my gratitude to the Rivara Endowment Award program for granting this gift. This funding has given me the opportunity to independently develop and carry out a research project I am passionate about. It has allowed me to grow as a researcher by learning new methods and analytical skills while laying the foundation for my dissertation. This program is invaluable to early career researchers like me, and I thank the donors who made it possible.

2021 AWARD RECIPIENTS & PROJECT DESCRIPTIONS

Project Title: *Patient and Parental Mental Health Utilization After Severe Pediatric Burn Injury*

Project Abstract: Survivors of severe pediatric burn injury and their parents are at high risk for developing mental health disorders after injury that impact their ability to function. Little is known about this population's mental healthcare utilization after injury in the United States. This study aims to describe the mental healthcare utilization of survivors of severe pediatric burn injuries and their parents as well as identify groups within this population with higher utilization. This is a retrospective observational cohort study of patients aged 8 to 17 years old with a burn injury. Patients with diagnoses of cognitive impairment or autism will be excluded. Demographic and injury variables will be collected as potential confounders and new medical morbidity and prolonged opioid prescriptions filled will be collected as potential effect modifiers. Two sample t-tests will be used to compare continuous variable distributions and chi square tests will be used to compare categorical variable distributions between groups. Generalized linear models using negative binomial regression will be used to identify patient and clinical factors associated with mental health utilization. This research is related to HIPRC's focus on recovery from injury and will fill a knowledge gap regarding the mental health utilization of pediatric burn survivors and their parents in the US after injury. Additionally, it will provide background data for my future work on the role of parents on mental health outcomes after pediatric injury.



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Project Title: *Antidepressants and the Role of Fall Injury in Older Adults with Depression*

Project Abstract: Each year, an average of 170 fall injuries are reported per 1,000 adults aged 65+ years, translating to 8.4 million fall injuries. One modifiable risk factor for fall injuries is use of medications acting on the central nervous system, such as antidepressants. Although older adults are the most frequent users of antidepressants little is known about how fall injury risk differs between antidepressants. Randomized trials comparing antidepressants rarely collect fall injury outcomes. Thus, observational analysis is the primary approach to learning about fall injury risk. However, these studies face a high risk of bias from confounding by indication when comparing antidepressant users versus non-users. Still, the 2019 American Geriatrics Society Beers Criteria recommend against using most antidepressants in older adults with a history of falls or fractures, leaving clinicians with no drug treatment guidance in many older adults. Thus, there is an imperative need for comparative safety research to study risk of fall injury from antidepressants. The objective of this study will be to compare the risk of fall injury among initiators of antidepressants in separate head-to-head comparisons, controlling for confounding and explore subgroups of age, sex, race, frailty status, dementia, and history of fall injury.



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THANK YOU

Thank you for providing resources to our graduate students and post-doctoral trainee investigators who are conducting injury-related projects through the Frederick P. Rivara, MD, MPH Harborview Injury Prevention & Research Center (HIPRC) Endowment. Your gifts continue to support faculty, students and programs across UW Medicine and have far-reaching impact in our community and beyond. We cannot thank you enough for all you have done, and continue to do, to support UW Medicine.

As the world changes, our commitment to improving human health remains constant. We are eager to see you when the situation is better. In the meantime, please take good care and let us know if there is any way we can be of help to you or your family. If you have any questions or want to learn even more about what your support makes possible, please do hesitate to reach out to us at via our direct inbox, hiprc@uw.edu or directly to Dr. Monica Vavilala at vavilala@uw.edu.

‘Together we can reduce the harm and suffering from injury and violence.’