

Predictors and Consequences of Violence and Firearm Violence in King County

Presentation to the Seattle City Council
The Harborview Injury Prevention and Research Center
University of Washington

Frederick Rivara, MD, MPH

Ali Rowhani, MD, PhD

Jin Wang, PhD

Douglas Zatzick, MD

July 7, 2014

Goal of the study

- To provide information to assist policy makers in developing a comprehensive approach to addressing violence and firearm violence in the community
- To identify characteristics of people at high risk of firearm crime, injury, death and key times for potential intervention

Seattle City Council funding of \$153,000 was provided to the University of Washington in June 2013 to conduct this study

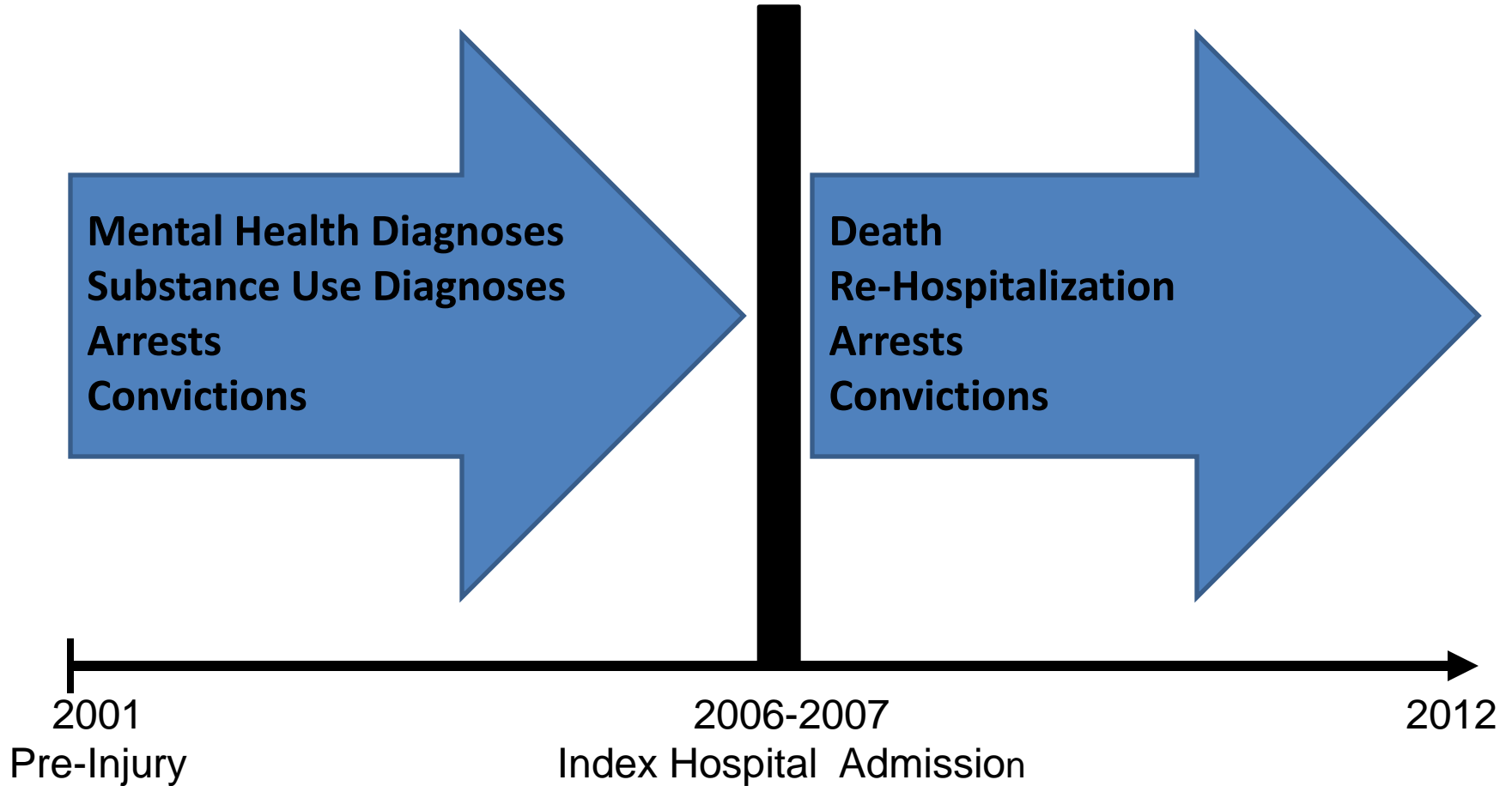
Key Findings

- A large proportion of people hospitalized in 2006-07 for a firearm injury were subsequently arrested over the next 5 years
- People hospitalized with an injury who had a prior arrest for firearms or violence were at greatly increased risk of being arrested over next 5 years
- This increased risk of arrest was much greater than for people with a prior psychiatric history
- This group had a greatly increased risk of being killed by homicide in the next 5 years
- People hospitalized with a firearm injury were at greatly increased risk of having another firearm injury or of dying from a firearm in the next 5 years.

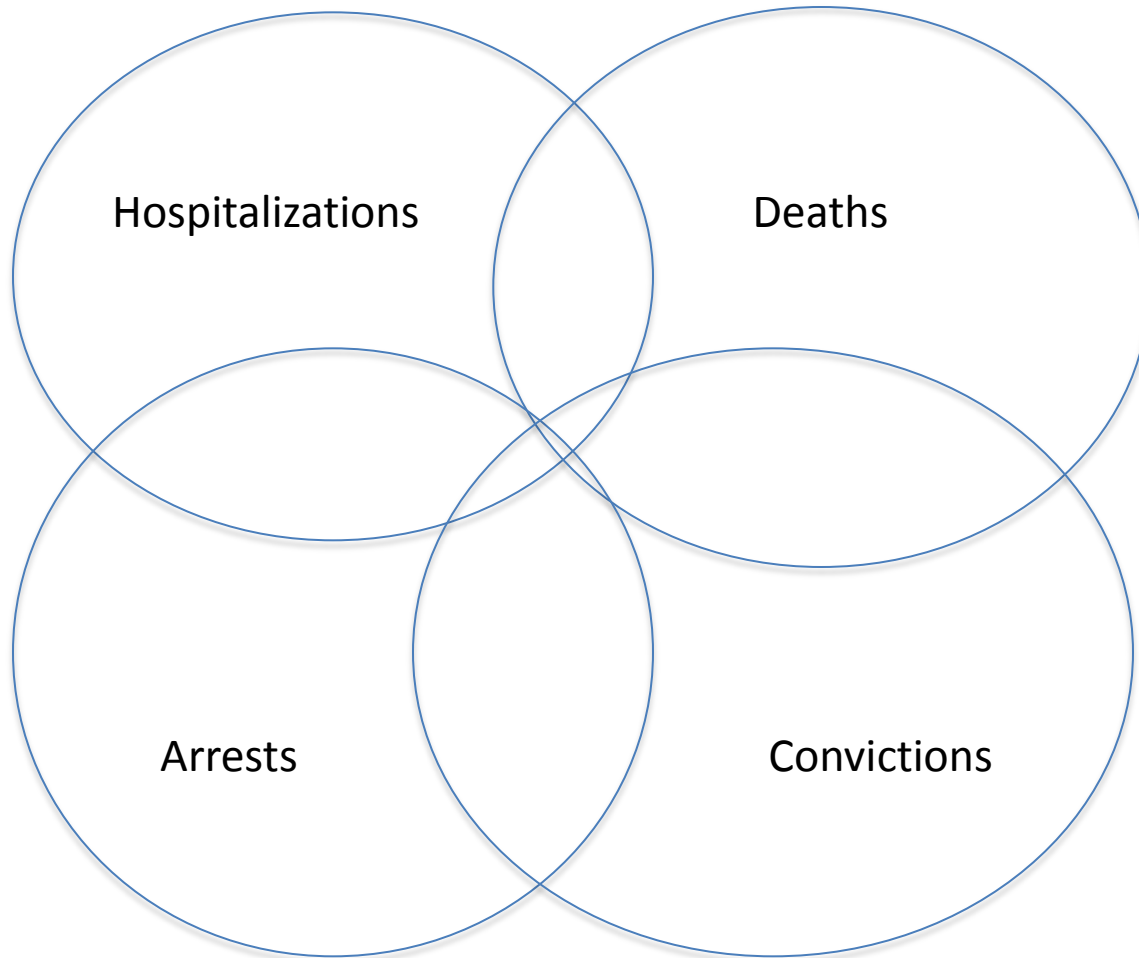
“Take Home” Points

- Firearm related injury hospitalizations are associated with a number of poor outcomes after discharge from the hospital including death, crime and recurrent injury hospitalization
- There is a greater risk of subsequent violent/firearm-related crime, hospitalizations and death among those with history of firearm injuries or crimes than among those with psychiatric disorders
- Better orchestration of medical, public health, police and court intervention efforts may be warranted
- These events should trigger proactive interventions to prevent subsequent injury, death and crime

Study Design



Data linkage



Firearm data

- Very problematic to obtain
- Previously, WA gun registration data was available; 1986 federal law prohibits registry
- Data on concealed weapons permits only available to corrections officers
- RCW does not have categories that identify gun related felonies; thus, gun and violent felonies were grouped together

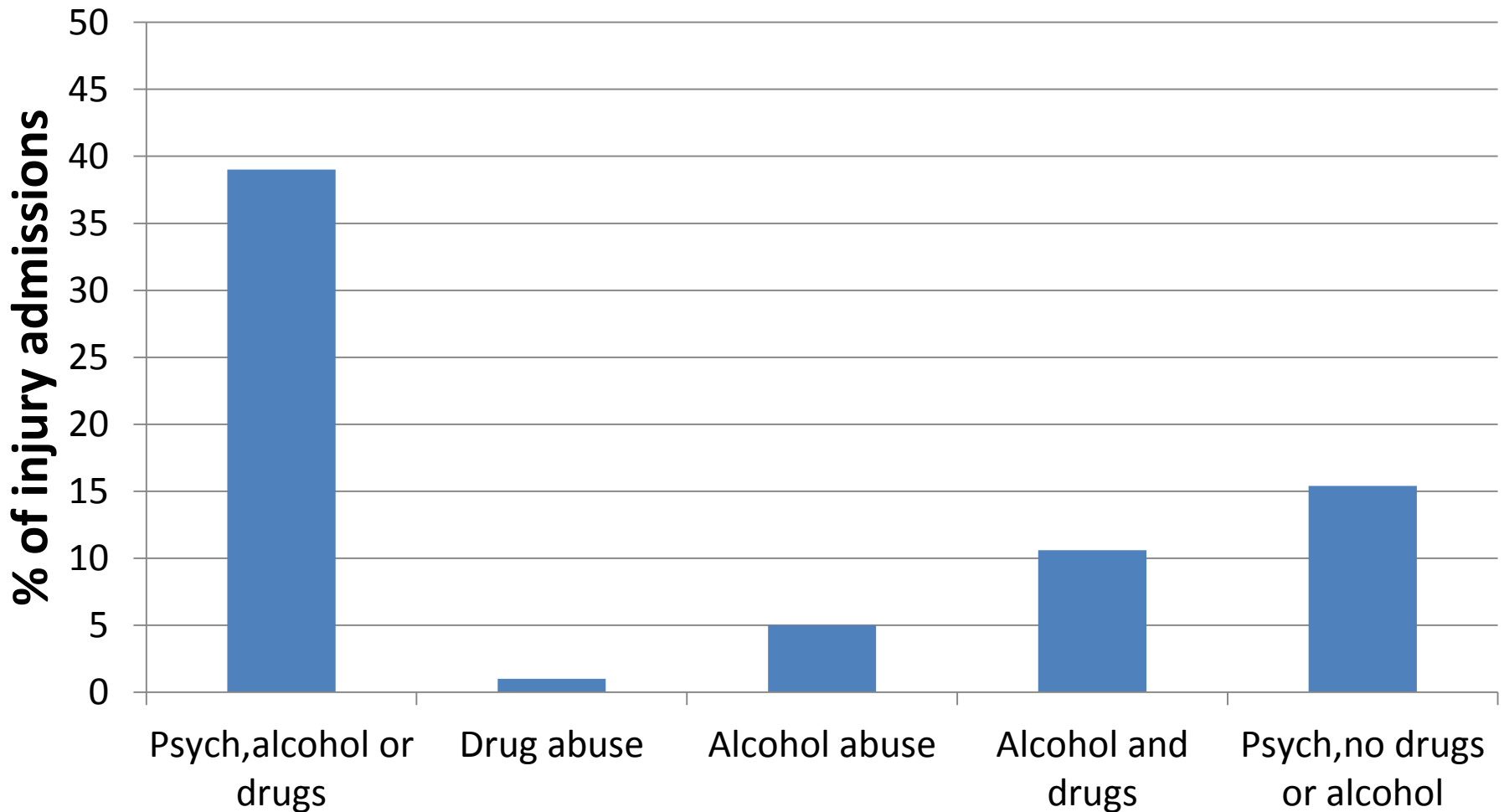
Patients hospitalized for injuries 2006-7

King County and WA state

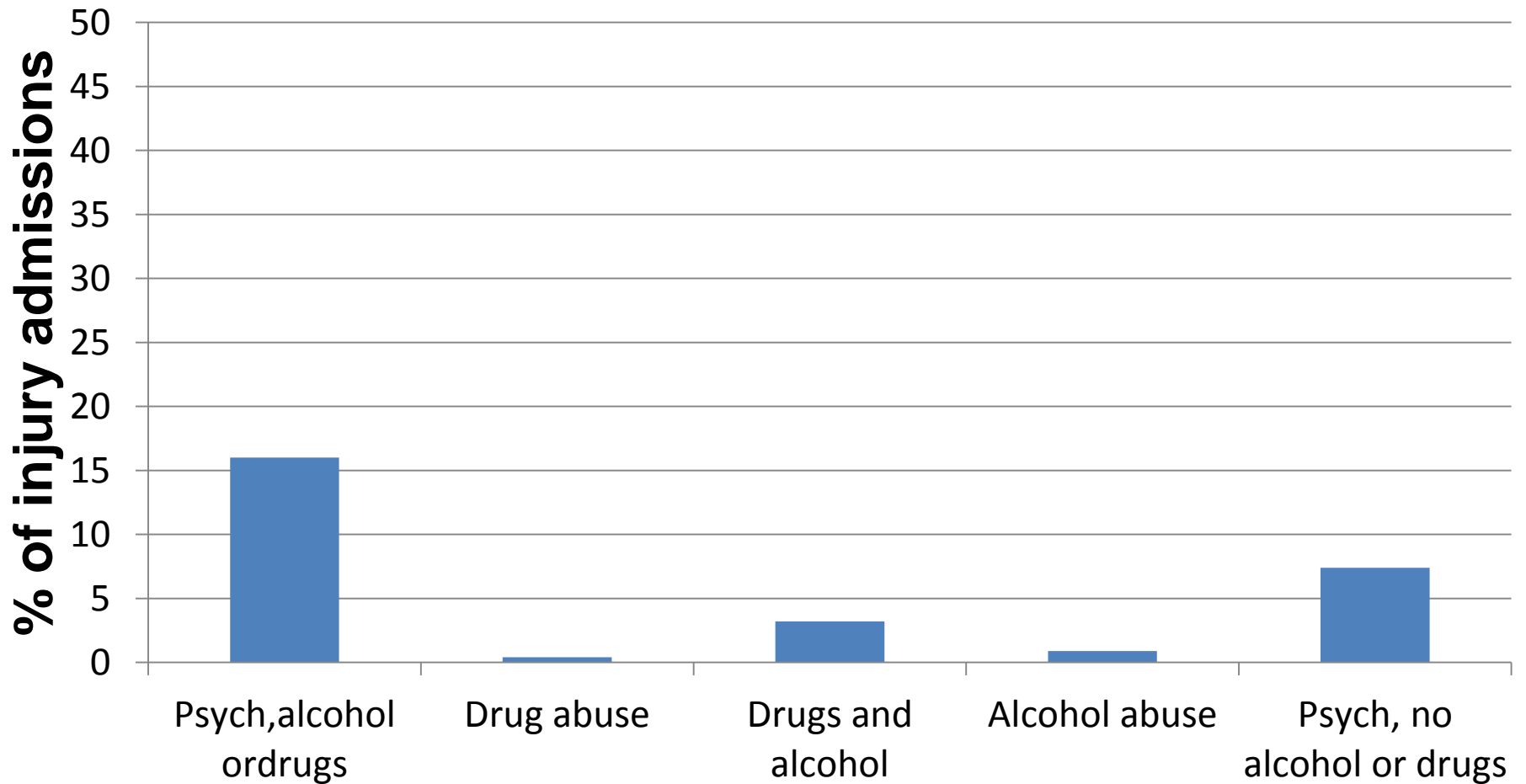
Diagnosis	King County	Washington State
Firearm related	222	680
Non-gun suicide attempts	1,280	5,842
Non-gun assaults	873	2,526
Overdoses	1,257	4,844
Accidents	16, 418	62, 819

Will just show King County data in subsequent slides; state data was very similar

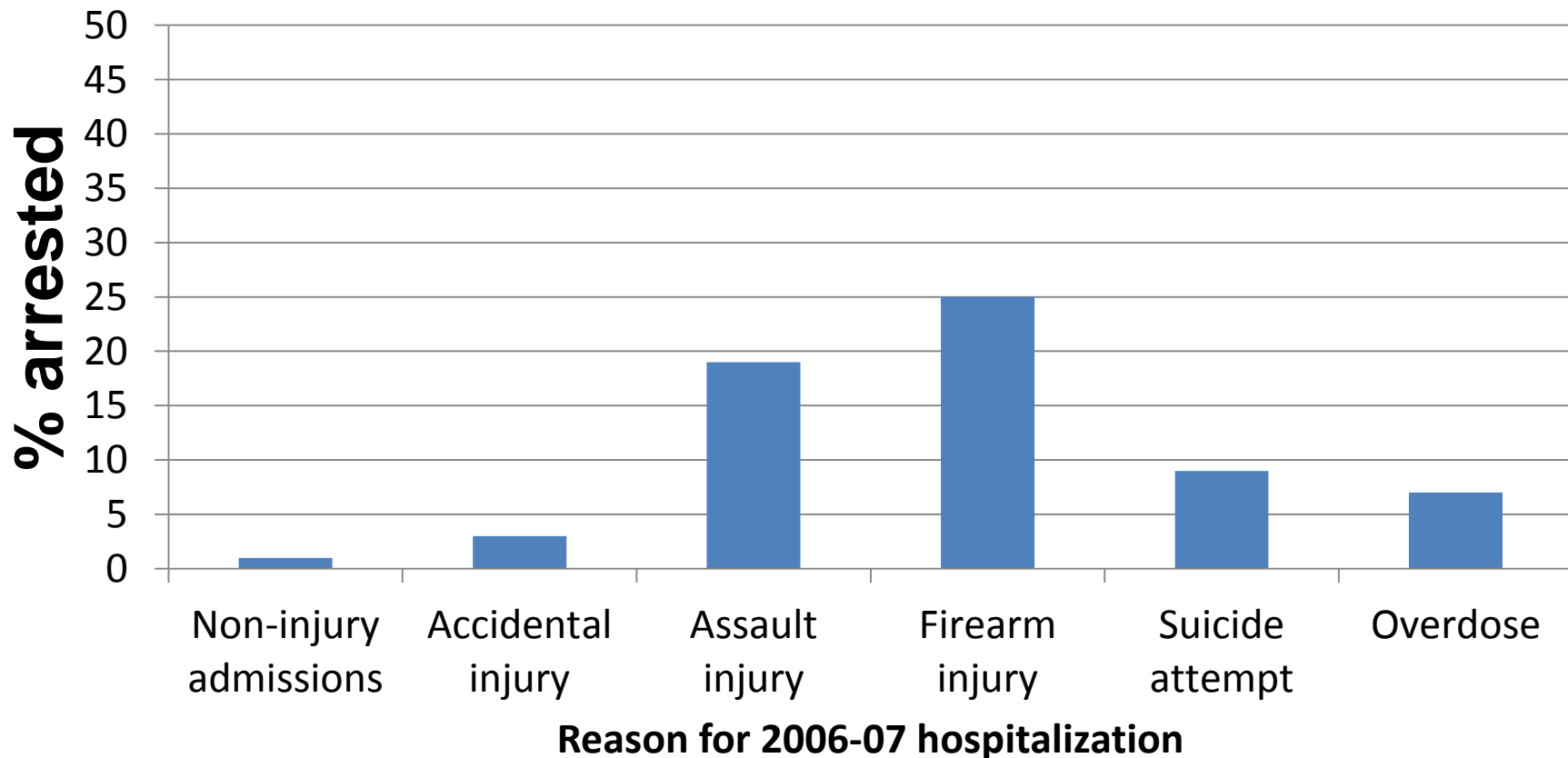
Percent of injury admissions 2006-07 with psychiatric, alcohol or drug problems **noted at hospitalization**



Percent of injury admissions 2006-07 with prior psychiatric, alcohol or drug problems

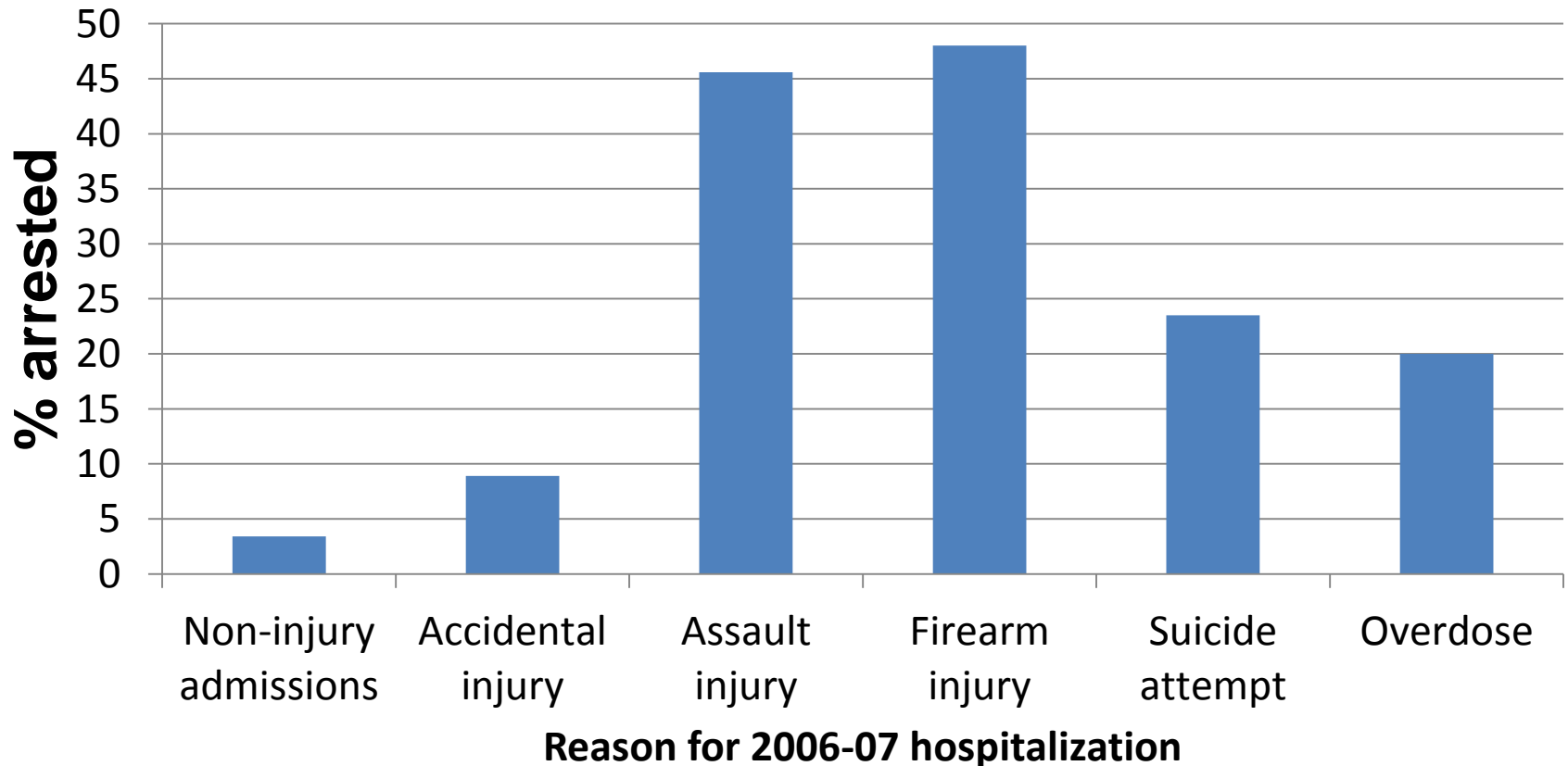


Arrests for **violent or firearm-related** crimes during 5 years after 2006-2007 hospitalization



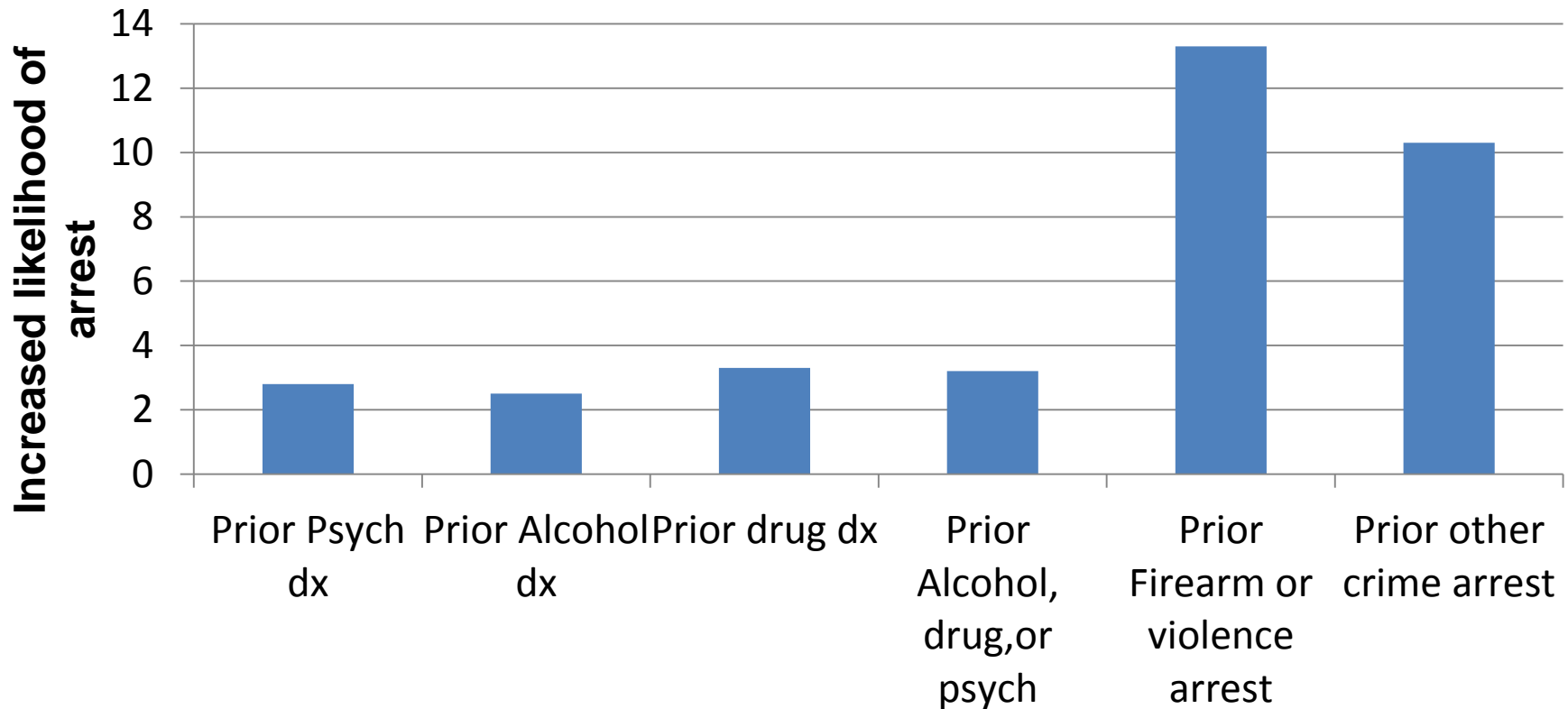
25% of people hospitalized in 2006-07 for firearm-related injury were arrested for violent or firearm-related crime over next 5 years

Arrests for **non-violent, non-gun related** crimes during 5 years after 2006-07 hospitalization



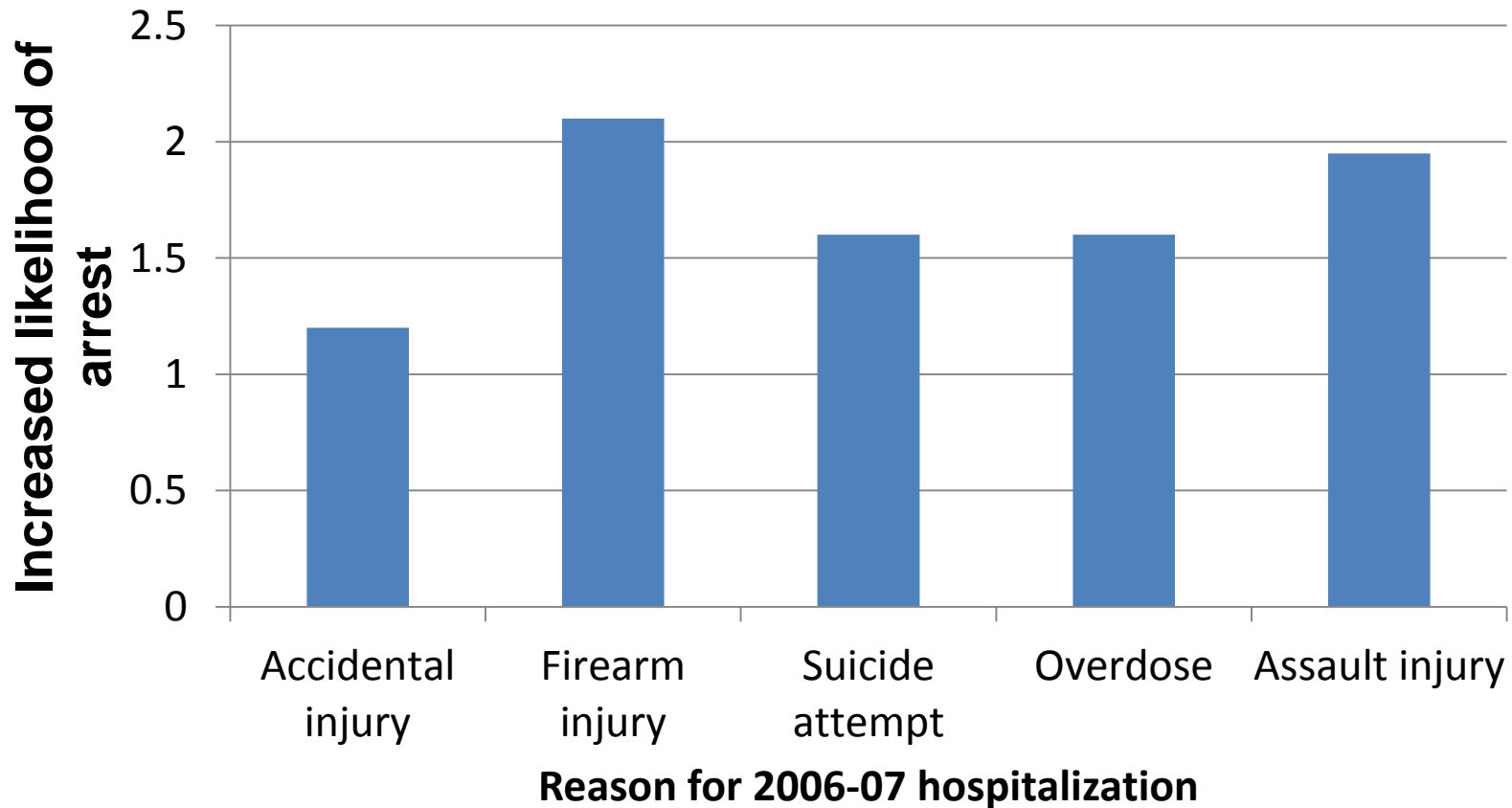
Nearly 50% of people hospitalized in 2006-07 for a firearm-related injury were arrested for a non-violent crime over next 5 years

Increased likelihood of arrest for any crime within 5 years after 2006-07 injury hospitalization compared to people without prior psych or crimes



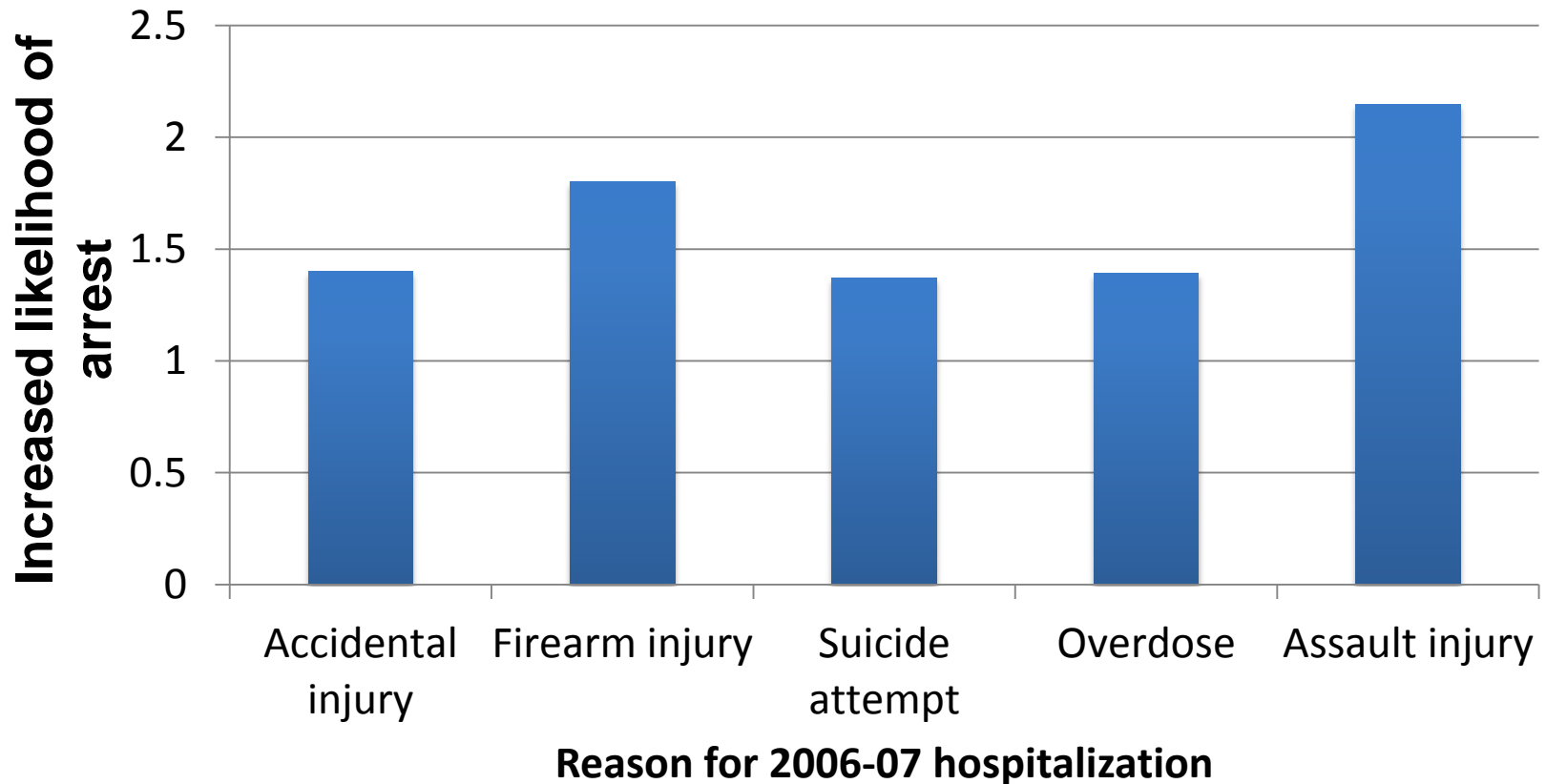
*Individuals hospitalized with an injury who had prior arrest for firearms or violence were 13-fold more likely to be arrested over next 5 years -----
People with prior psychiatric history were only twice as likely to be arrested*

Increased likelihood of **arrest for violent or firearm-related crime** within 5 years after 2006-07 injury hospitalization compared to other hospitalization



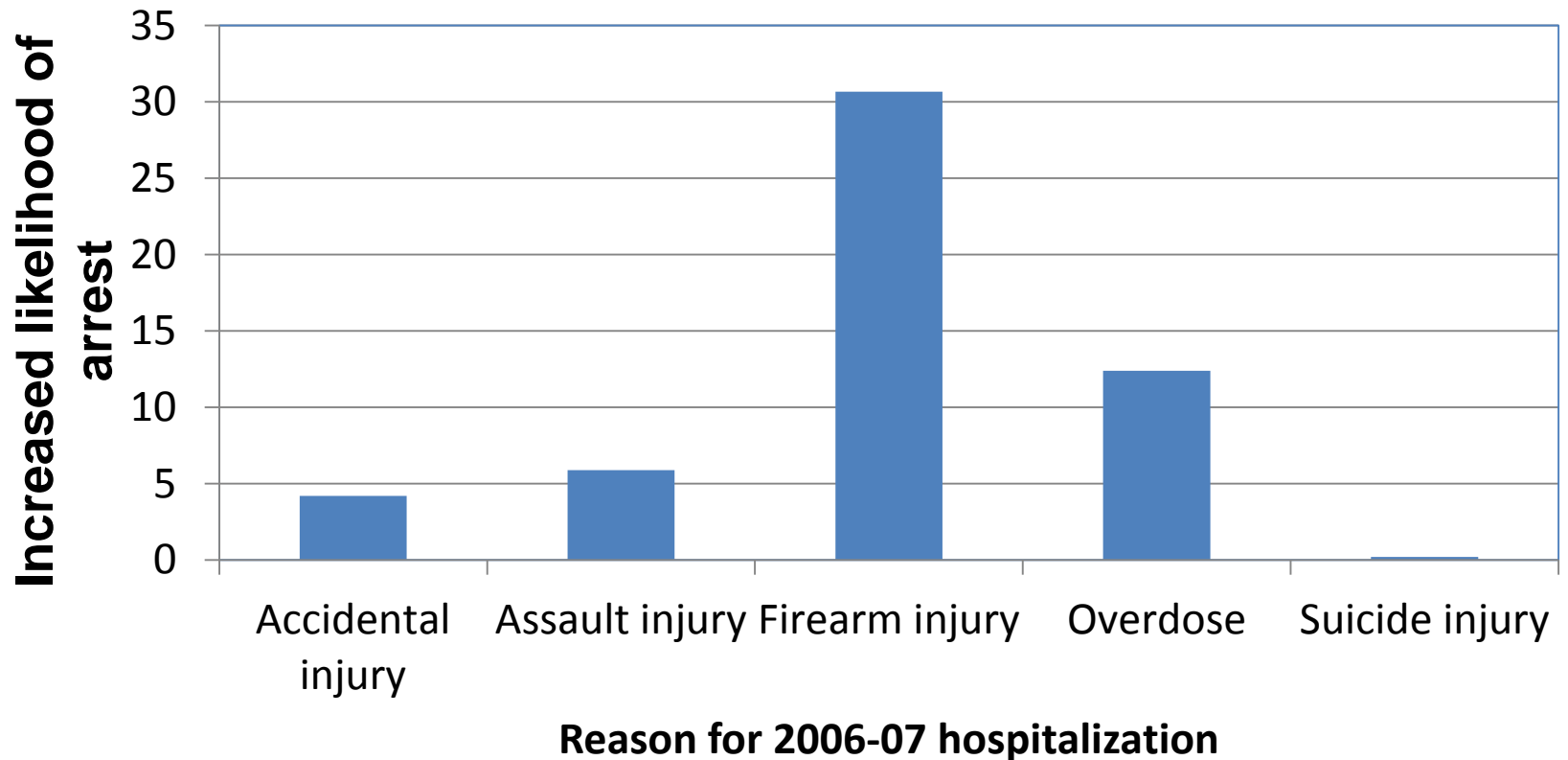
Individuals hospitalized with firearm injury in 2006-07 were twice as likely to be arrested over next 5 years than people admitted for non-injury reasons

Increased likelihood of **arrest for non-violent crime** within 5 years after 2006-07 injury hospitalization compared to people with other hospitalization



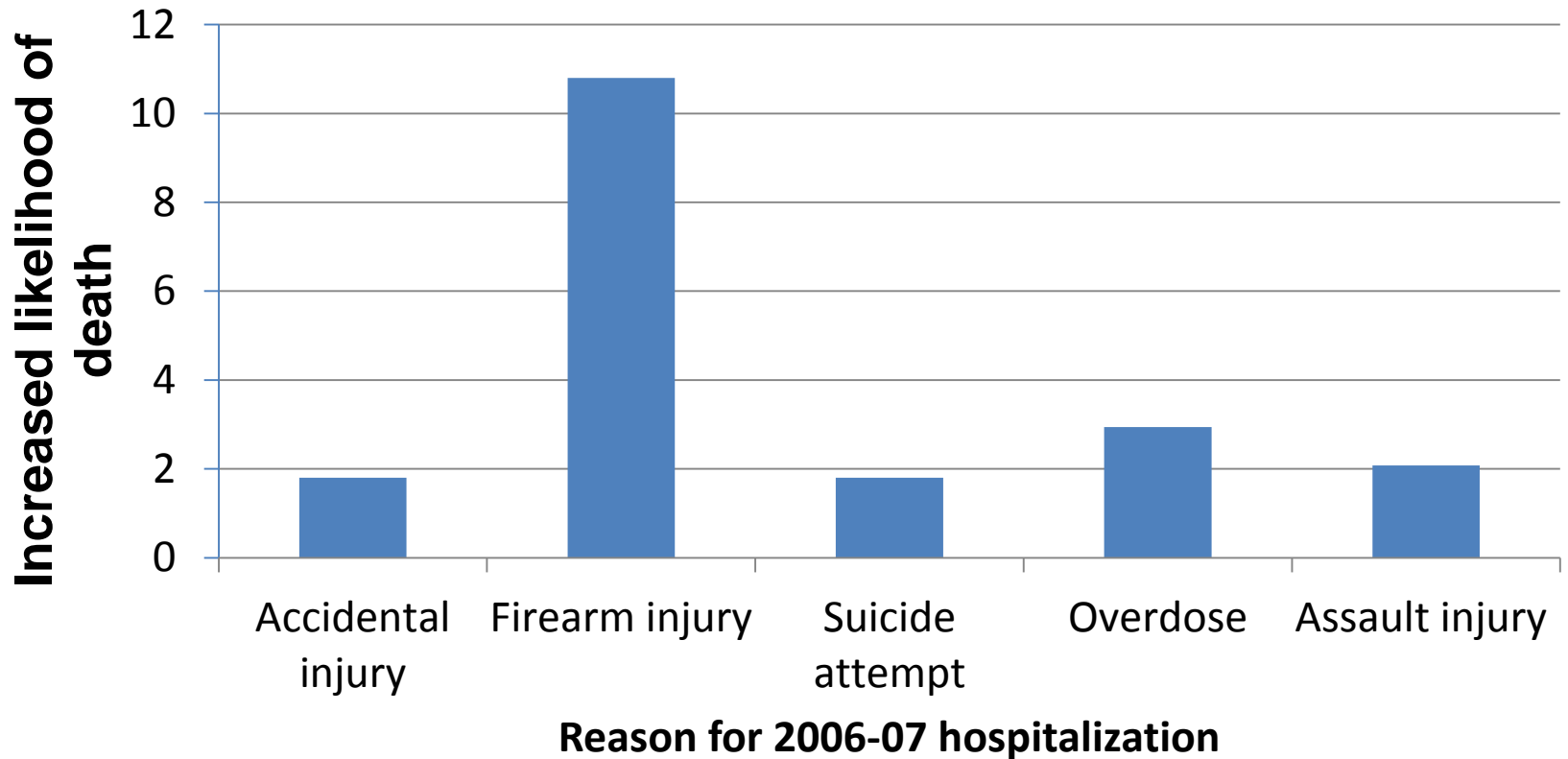
Individuals hospitalized with assault injury in 2006-07 were twice as likely to be arrested within 5 years after discharge than people admitted for non-injury reasons

Increased likelihood of being **hospitalized for firearm injury** within 5 years after 2006-07 injury hospitalization compared to people with other hospitalizations



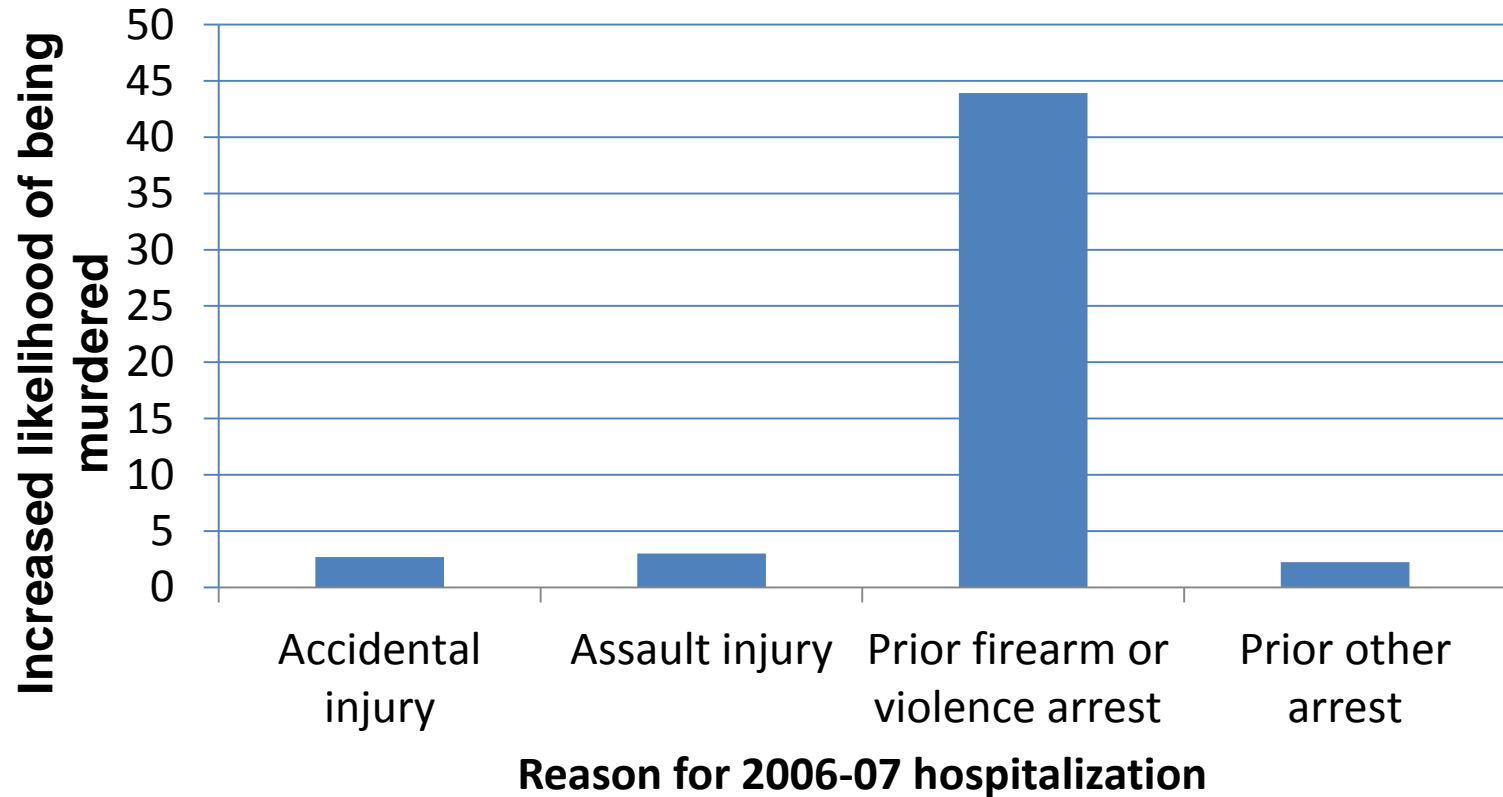
Individuals hospitalized for firearm injury in 2006-07 were 30 times more likely to be re-hospitalized for another firearm injury than people admitted for non-injury reasons

Increased likelihood of **death due to firearm** within 5 years after 2006-07 injury hospitalization compared to other hospitalizations



Individuals hospitalized with firearm injury in 2006-07 were 11 times more likely to die due to a gun over next 5 years than people admitted for non-injury reasons

Increased likelihood of being **murdered** within 5 years after 2006-07 injury hospitalization compared to people with other hospitalizations



Individuals hospitalized with injury in 2006-07 and with prior gun or violence arrest were 43 times more likely to be murdered over next 5 years after discharge than people without such a history

Questions?

The Harborview Injury Prevention and Research Center
University of Washington

- Frederick Rivara, MD, MPH
 - Ali Rowhani MD, PhD
 - Jin Wang, PhD
 - Douglas Zatzick, MD