



Workplace violence injury in 106 US hospitals participating in the Occupational Health Safety Network (OHSN), 2012 - 2015

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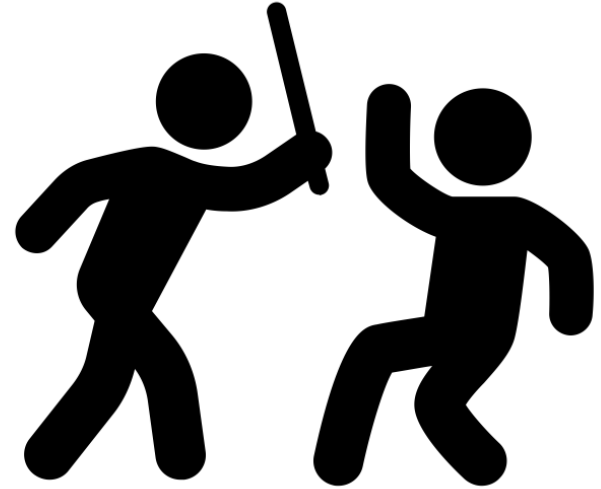
NORA HCSA Workshop

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Introduction

Workplace Violence (WPV)

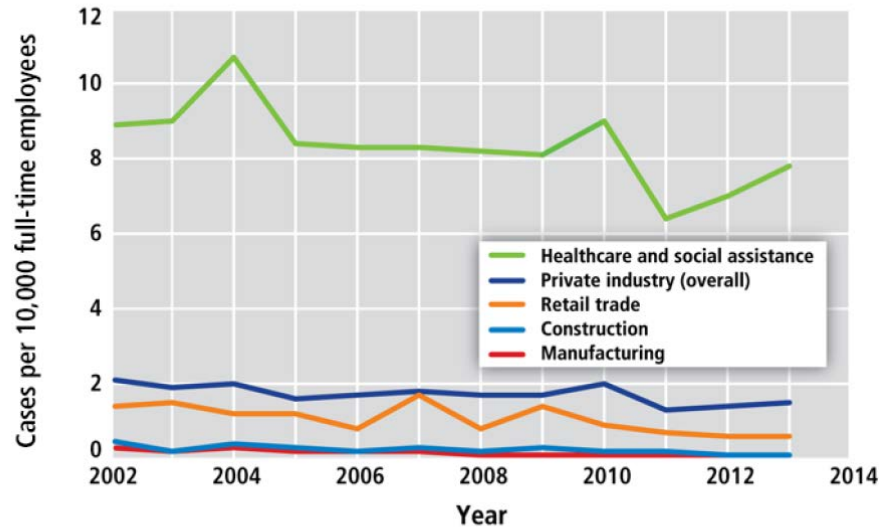
- “...any physical assault, threatening behavior, or verbal abuse occurring in the work setting” (NIOSH, 1996)
- “...incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health” (ILO, ICN, WHO & PSI, 2002)



Workplace Violence (WPV)

- Substantial hazard for healthcare workers (HCW) in the US

Violent Injuries Resulting in Days Away from Work, by Industry, 2002–2013



Data source: Bureau of Labor Statistics data for intentional injuries caused by humans, excluding self-inflicted injuries.

High-Risk Settings and Occupations



RN

CNA

The Occupational Health Safety Network (OHSN)

- Voluntary system created by NIOSH
- Enables hospitals to track 3 types of occupational injuries
 - Slips, trips and fall injuries (STF)
 - Musculoskeletal injuries from patient handling and movement (PHM)
 - Workplace violence injuries (WPV)
- By various worker and event characteristics
- Using standardized data elements designed for OHSN
- To identify prevention priorities and to implement and evaluate interventions

The Occupational Health Safety Network: A Secure Confidential Internet Surveillance System



Methods

Study Design and Population

- Objectives
 - Characterize the extent of WPV injuries in OHSN-participating hospitals
 - Identify potential WPV risk factors
- Analysis
 - WPV injury surveillance data submitted to OHSN during 2012 – 2015
 - All workers in participating hospitals, with or without patient care duties
 - Describe distribution of WPV event characteristics
 - Incidence rates and incidence rate ratios (IRR) for
 - Occupation
 - Year
 - Selected hospital characteristics

Variables

▪ Describing distribution of WPV event characteristics

- Worker occupation
- Worker age
- Worker sex
- Event location
- Injury severity
- Type of assailant
- Type of event

▪ Hospital characteristics

(From AHA annual member surveys)

- Overall and occupation-specific person-time denominators (FTE)
- Hospital type
- Hospital ownership
- Hospital size
- Hospital location (urbanicity)
- Medical school affiliation
- Ratio of nurse FTEs to monthly admission (proxy for staffing levels)

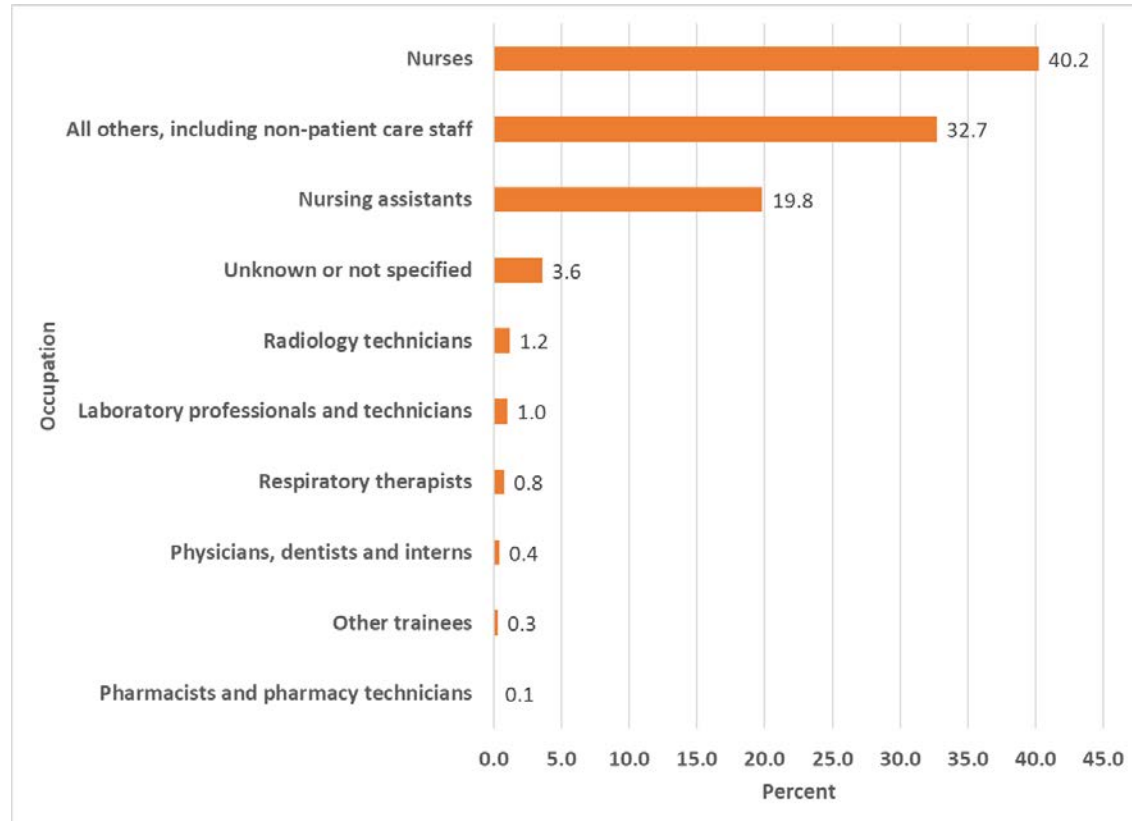
Statistical Analysis

- Frequency and proportional distribution of WPV event characteristics
 - Denominator data not available by age, sex, location
- WPV incidence rates per 1,000 FTE and 95% CIs
 - Occupation, year and hospital characteristics
- Bivariable IRR and 95% CIs
 - Occupation, year and hospital characteristics
- Multivariable-adjusted IRR and 95% CIs
 - Occupation, year, hospital characteristics, random effect of hospital
 - Multilevel, multivariable negative binomial regression model (SAS GLIMMIX)

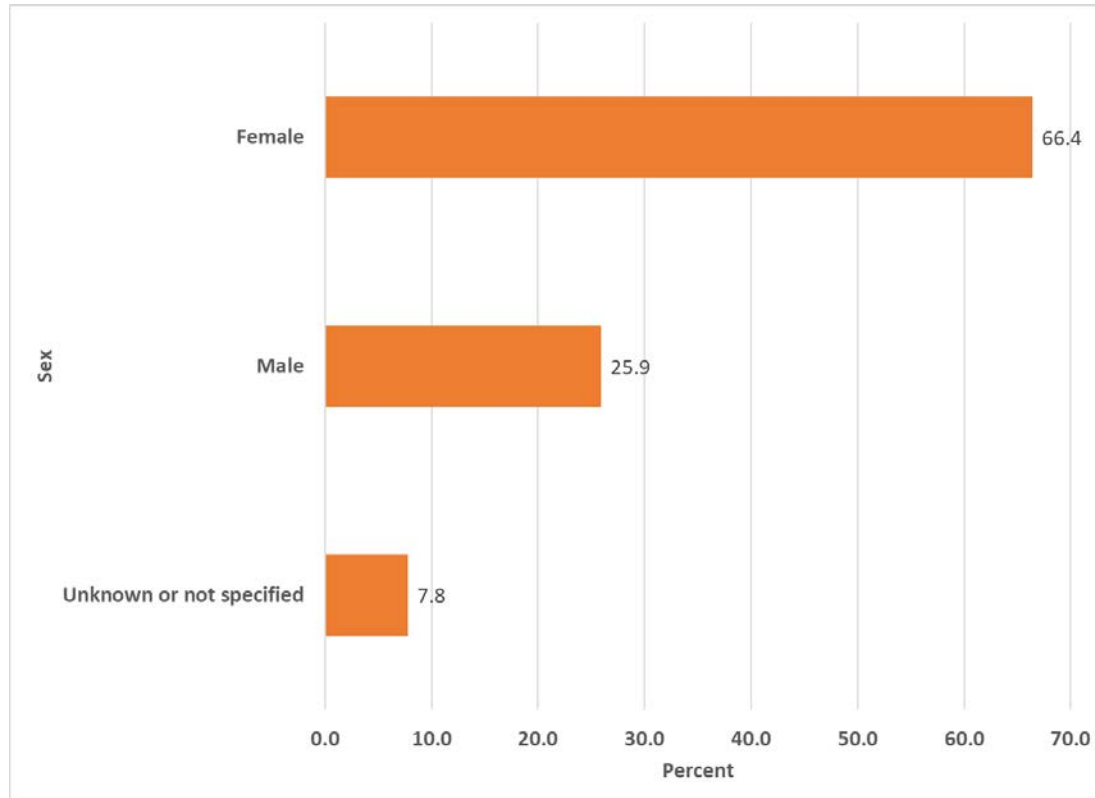
Results

One-Way Analysis of WPV Events

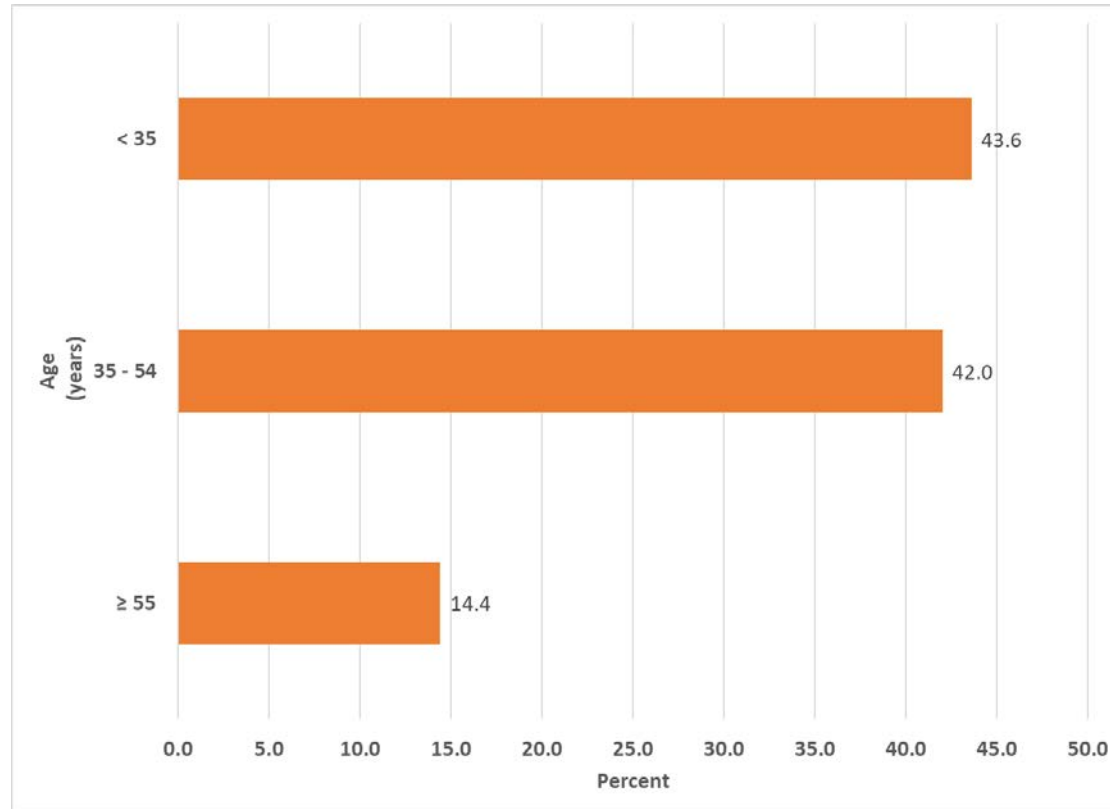
Distribution of Workplace Violence Events in 106 OHSN -Participating Hospitals by Occupation, 2012 - 2015 (N=3,263)



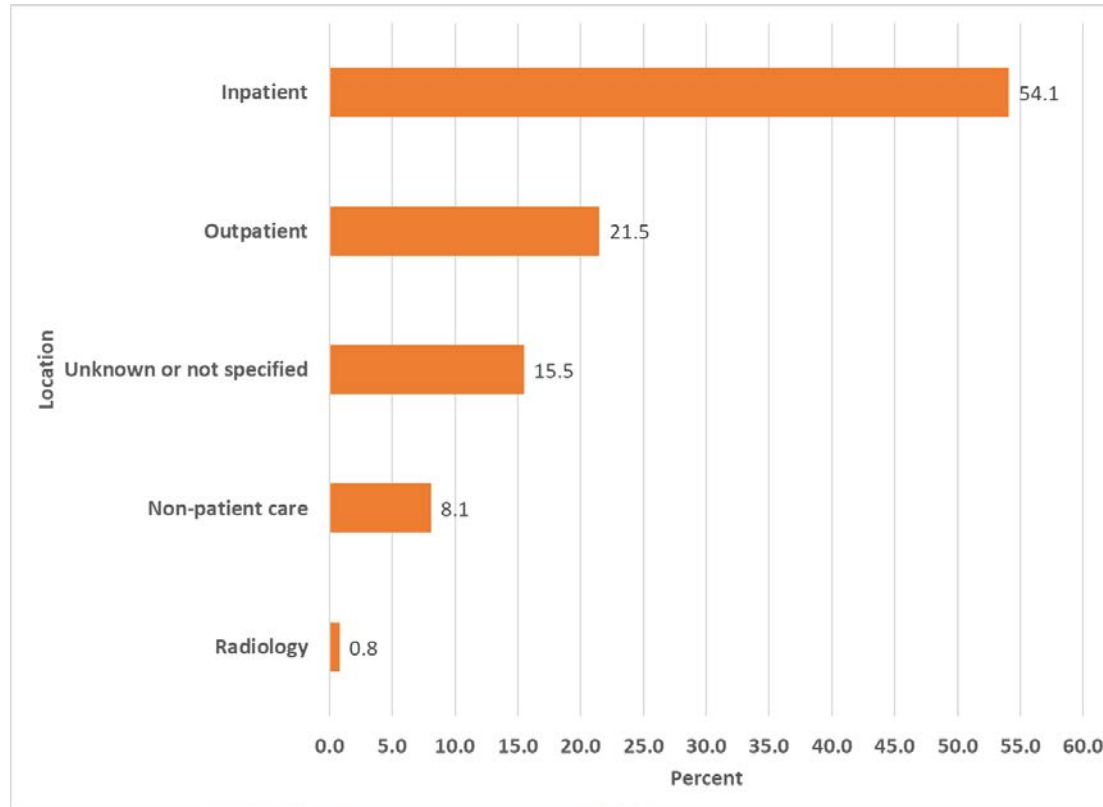
Distribution of Workplace Violence Events in 106 OHSN -Participating Hospitals by Sex,2012 - 2015 (N=3,263)



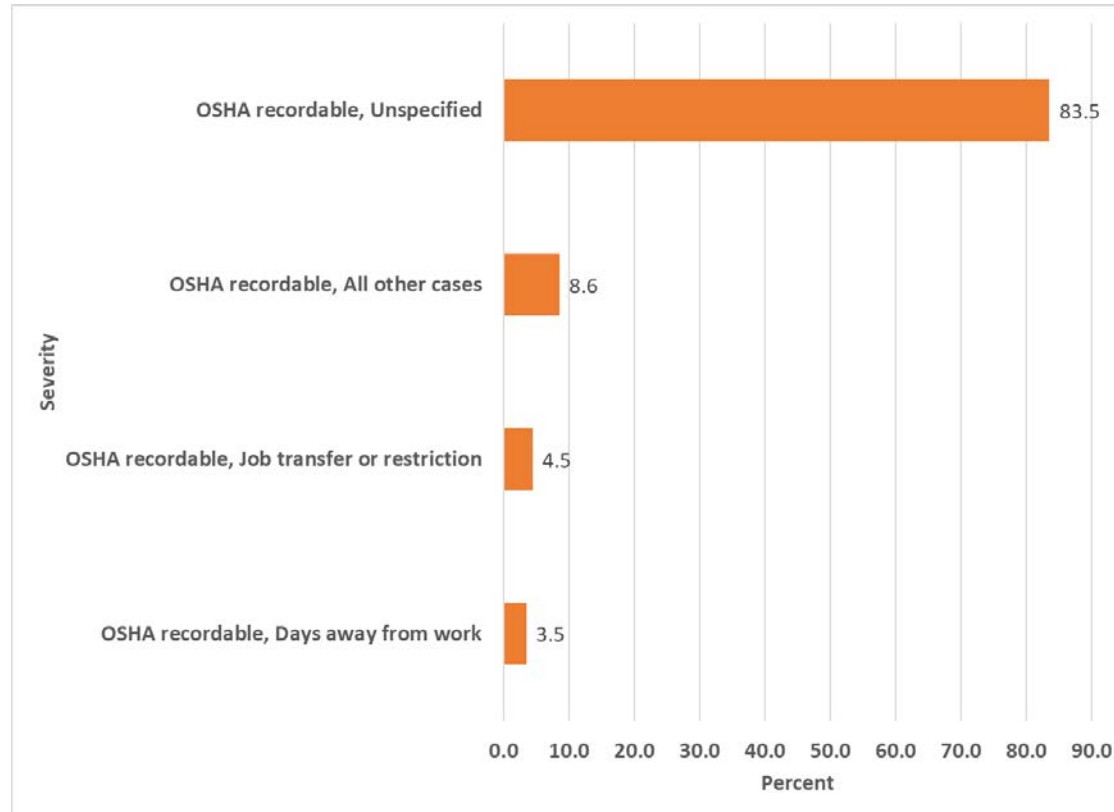
Distribution of Workplace Violence Events in 106 OHSN -Participating Hospitals by Age Group, 2012 - 2015 (N=3,263)



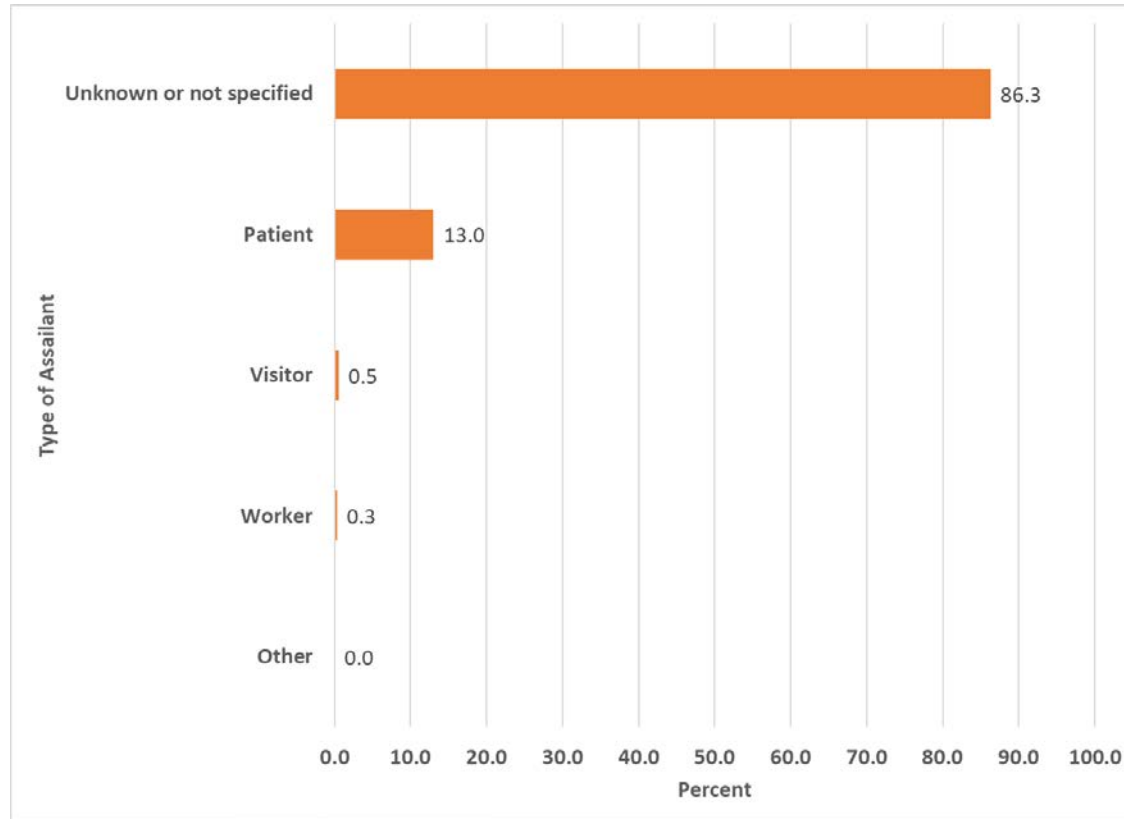
Distribution of Workplace Violence Events in 106 OHSN -Participating Hospitals by Event Location, 2012 - 2015 (N=3,263)



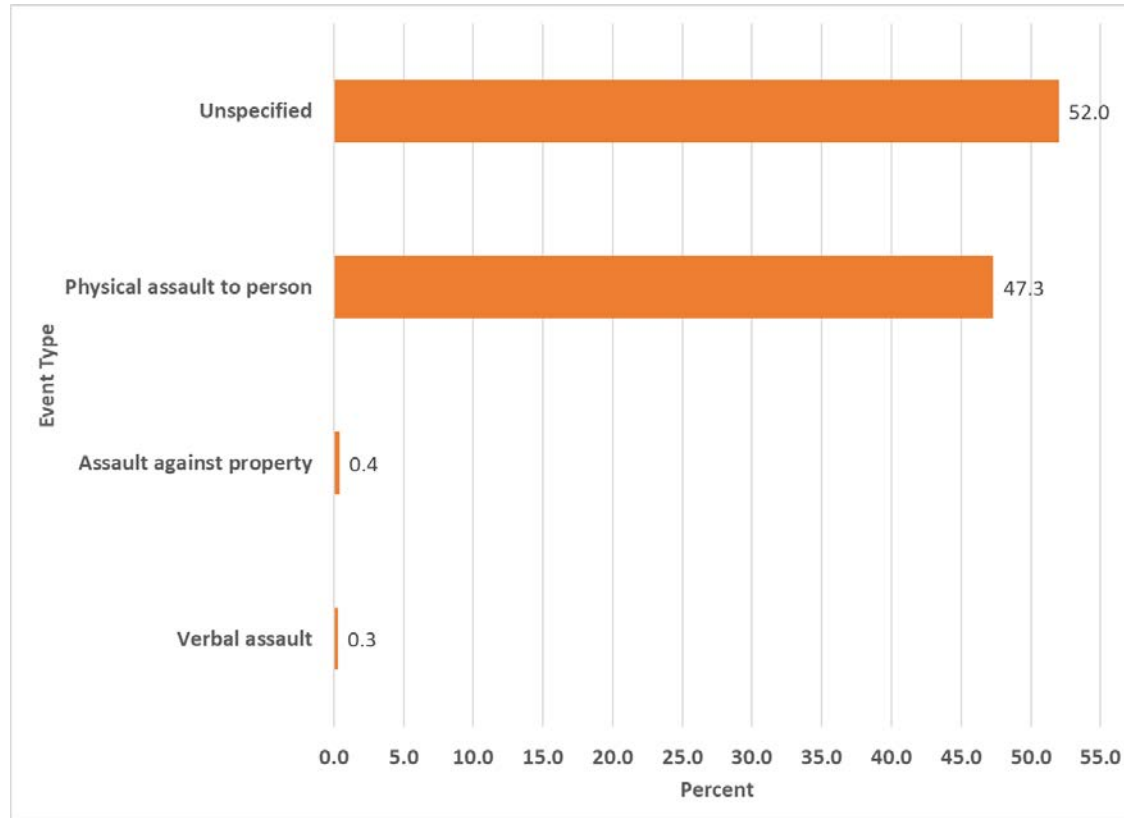
Distribution of Workplace Violence Events in 106 OHSN -Participating Hospitals by Severity, 2012 - 2015 (N=3,263)



Distribution of Workplace Violence Events in 106 OHSN -Participating Hospitals by Type of Assailant, 2012 - 2015 (N=3,263)



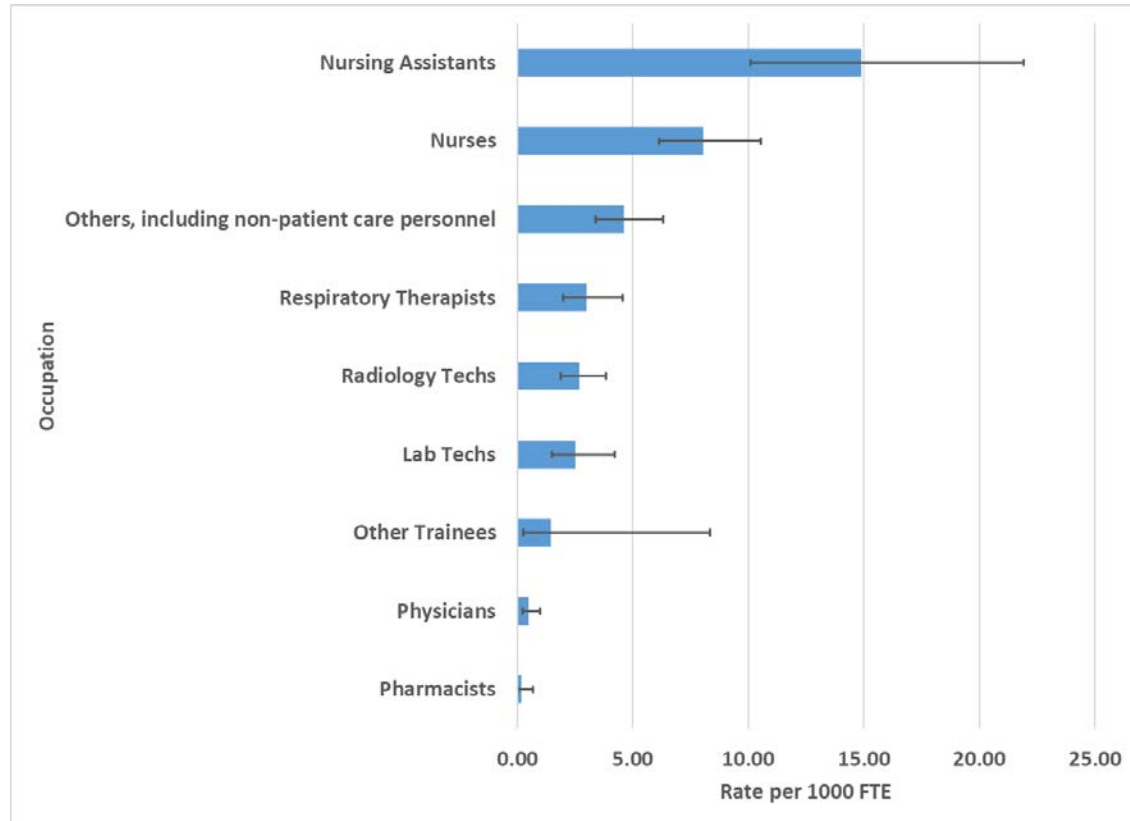
Distribution of Workplace Violence Events in 106 OHSN -Participating Hospitals by Event Type,2012 - 2015 (N=3,263)



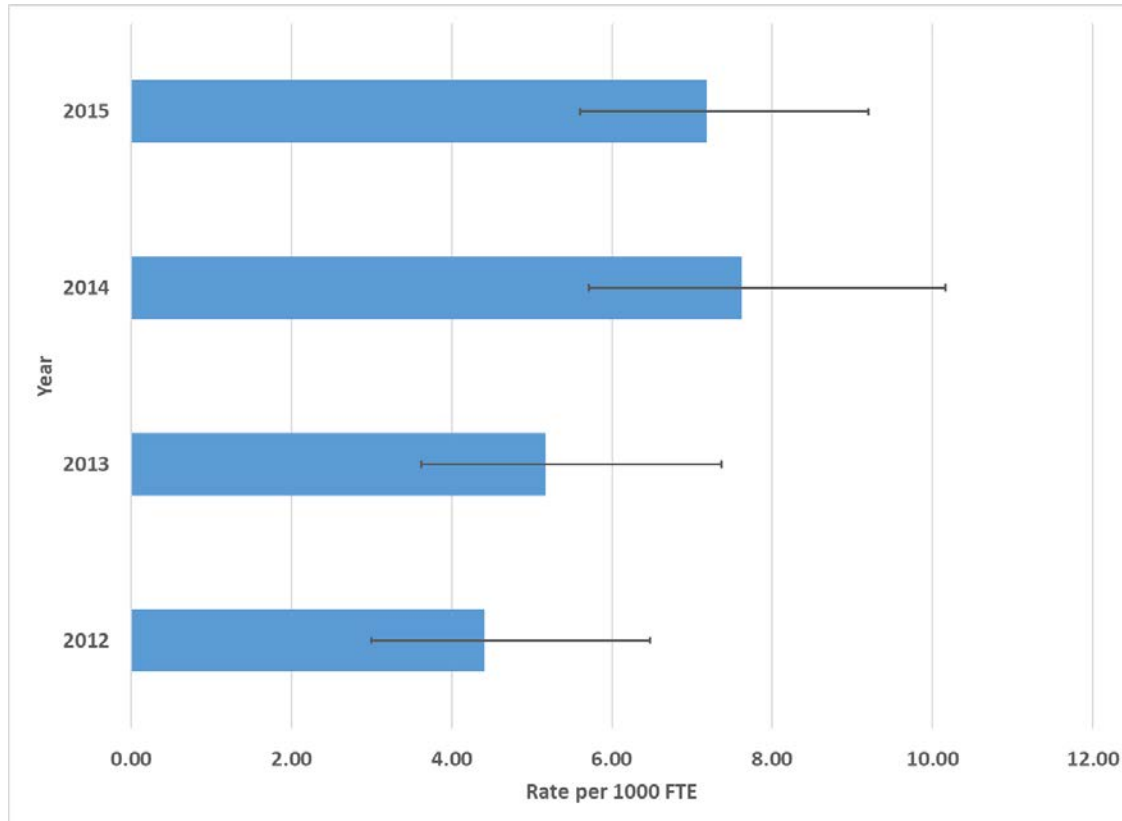
Results

WPV Injury Incidence Rates per 1,000 FTE

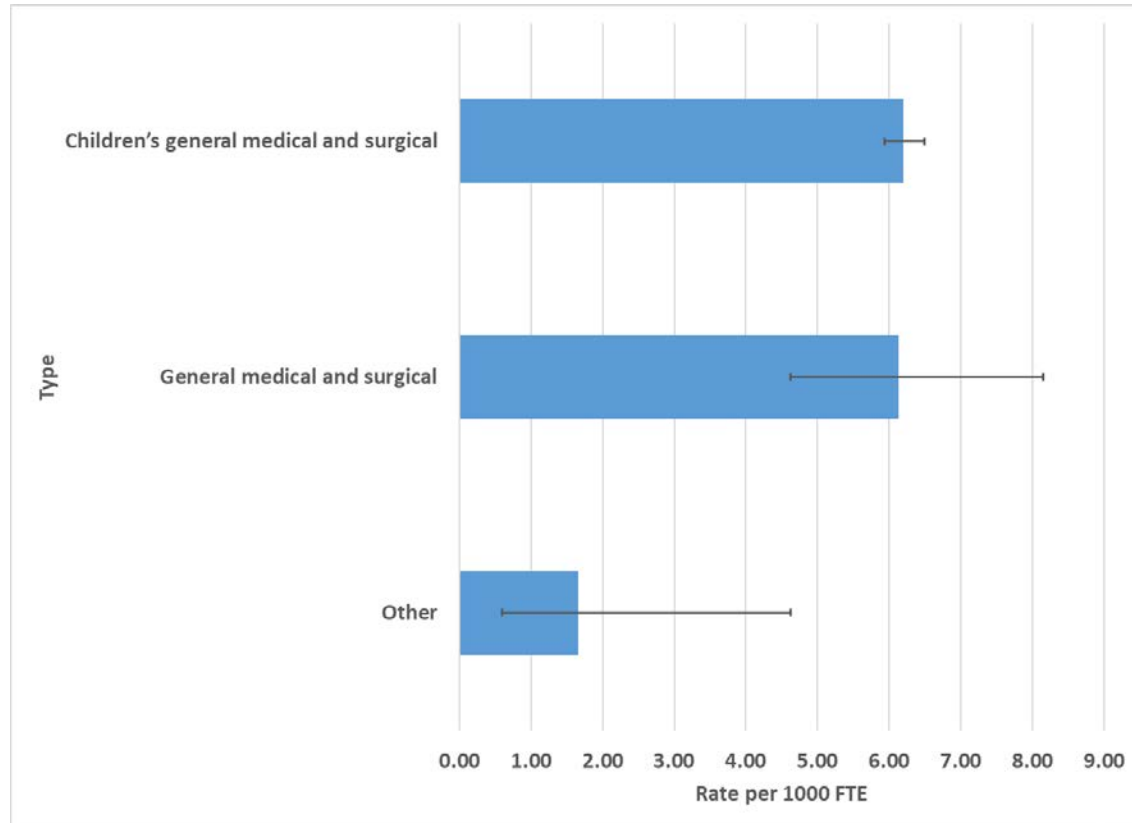
WPV Injury Incidence Rates and 95% CIs by Occupation in 105 OHSN Participating Hospitals, 2012 - 2015



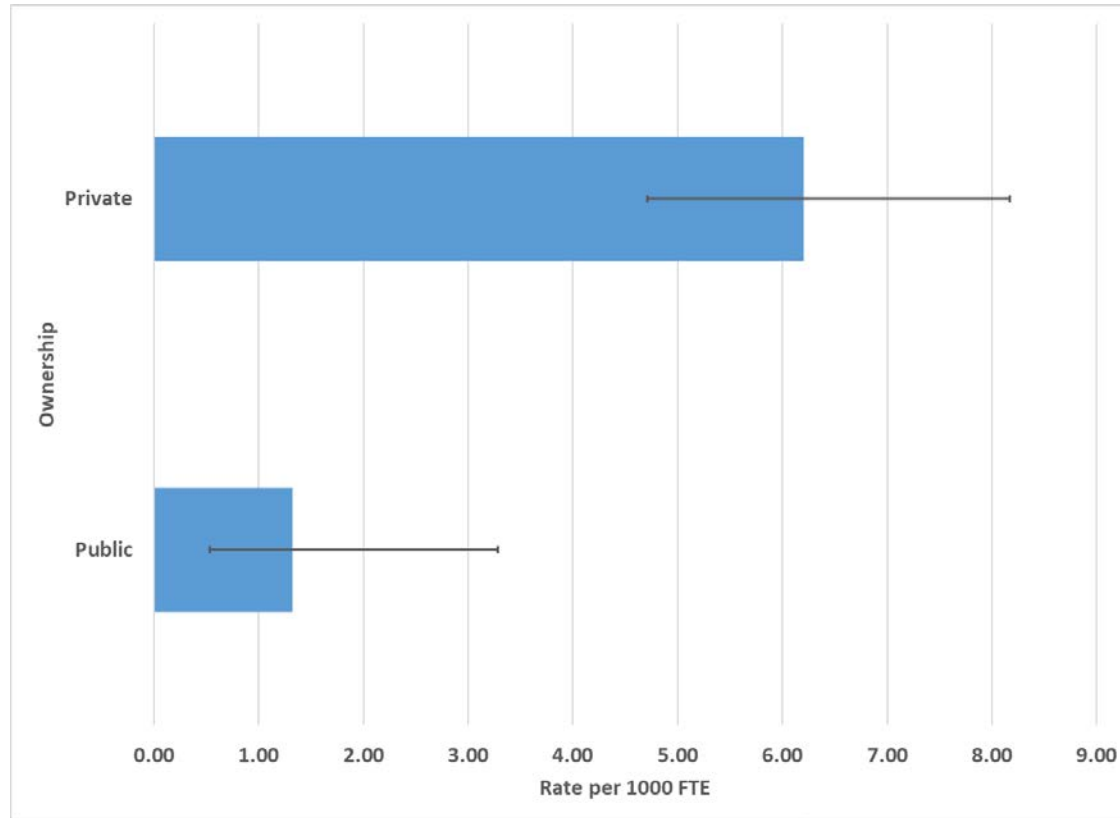
WPV Injury Incidence Rates and 95% CIs by Year in 105 OHSN-Participating Hospitals, 2012 - 2015



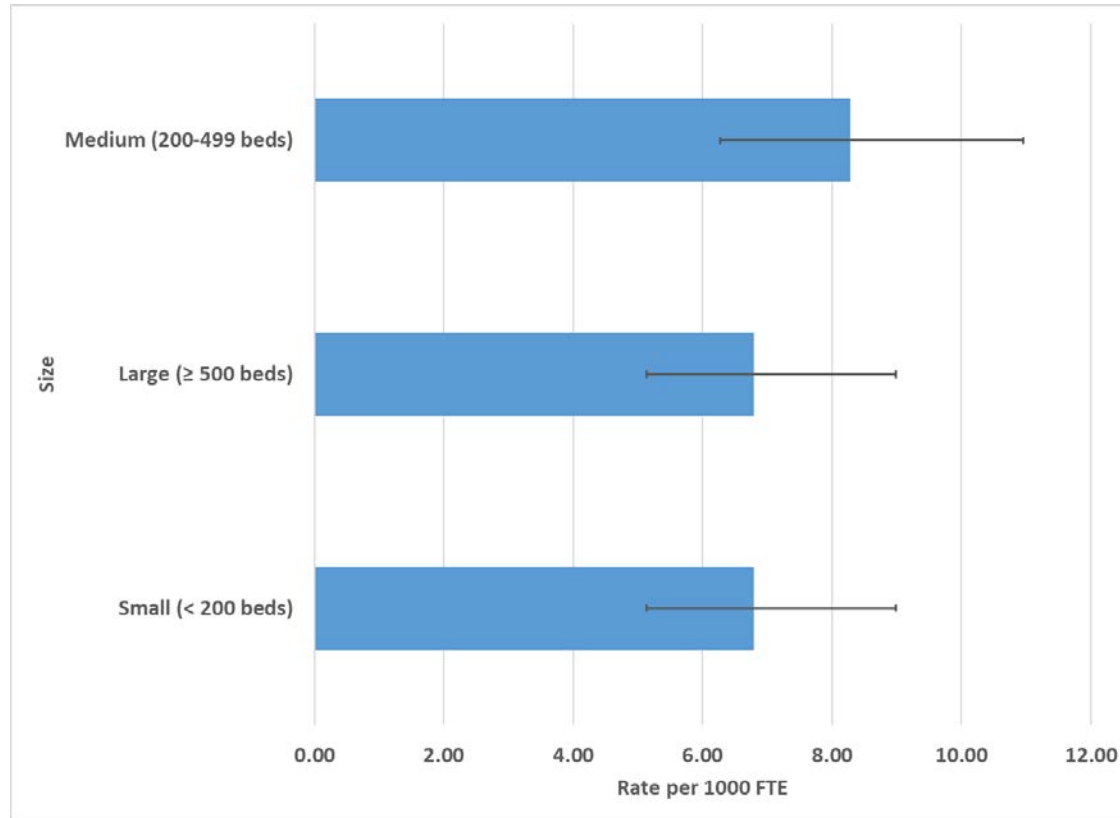
WPV Injury Incidence Rates and 95% CIs by Hospital Type in 105 OHSN-Participating Hospitals, 2012 - 2015



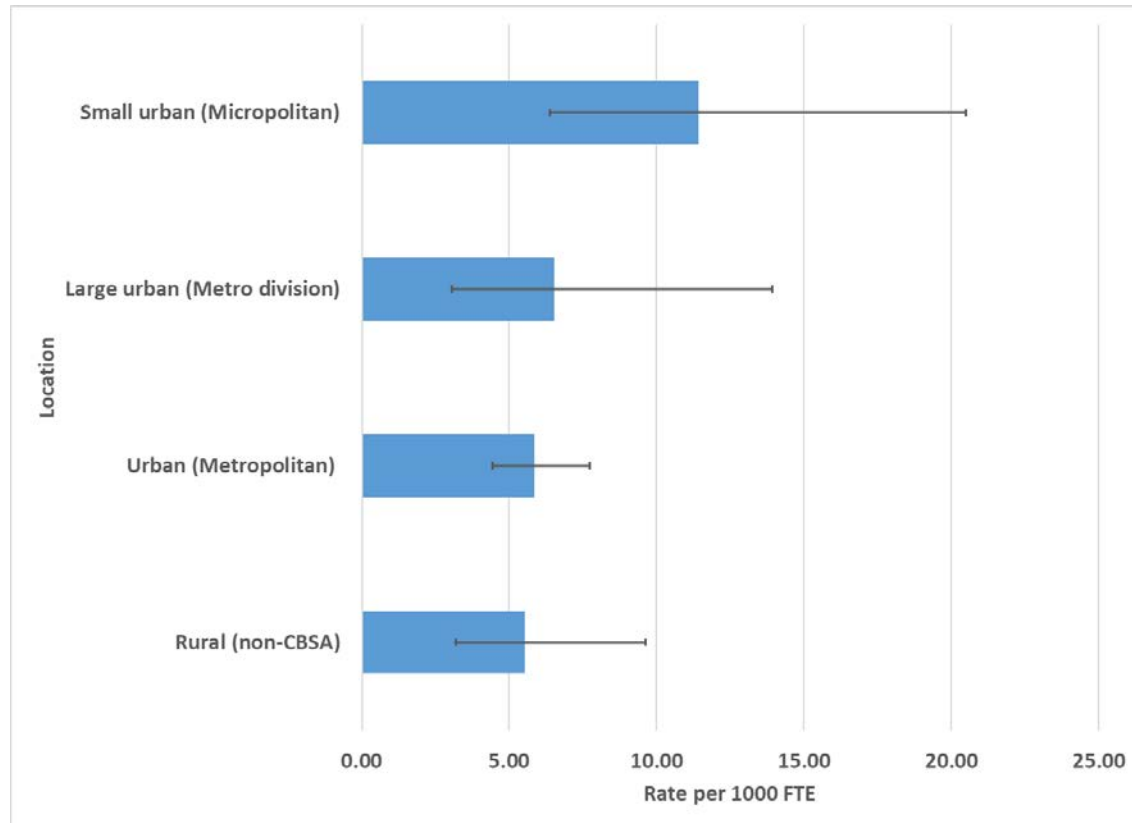
WPV Injury Incidence Rates and 95% CIs by Hospital Ownership in 105 OHSN-Participating Hospitals, 2012 - 2015



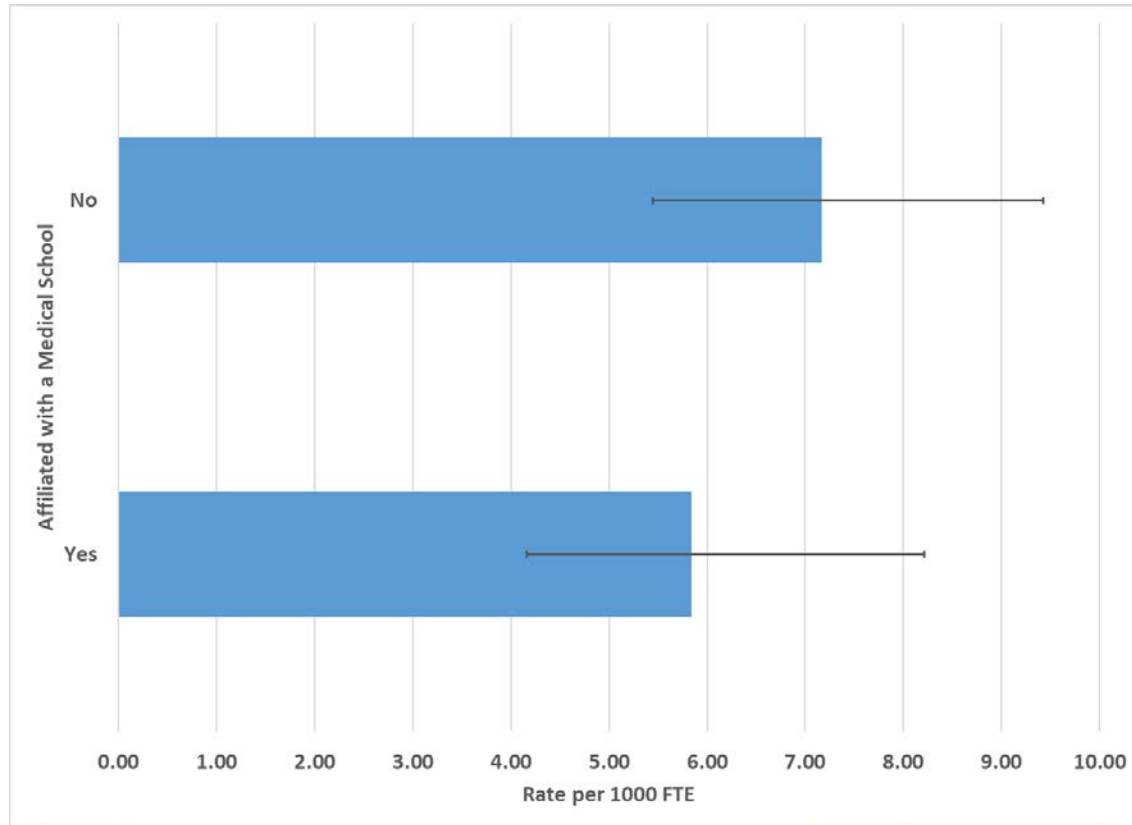
WPV Injury Incidence Rates and 95% CIs by Hospital Size in 105 OHSN-Participating Hospitals, 2012 - 2015



WPV Injury Incidence Rates and 95% CIs by Hospital Location in 105 OHSN-Participating Hospitals, 2012 - 2015



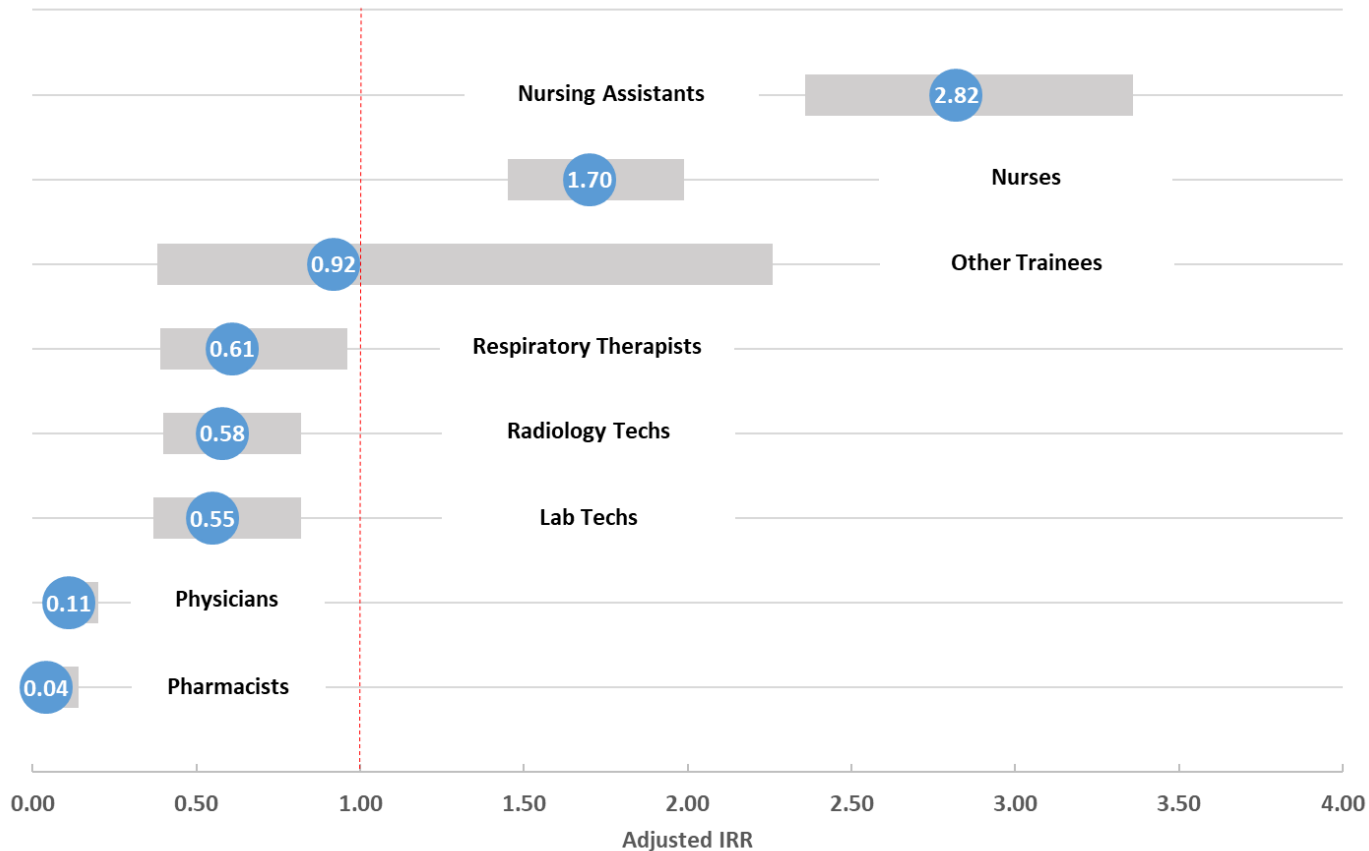
WPV Injury Incidence Rates and 95% CIs by Medical School Affiliation in 105 OHSN-Participating Hospitals, 2012 - 2015



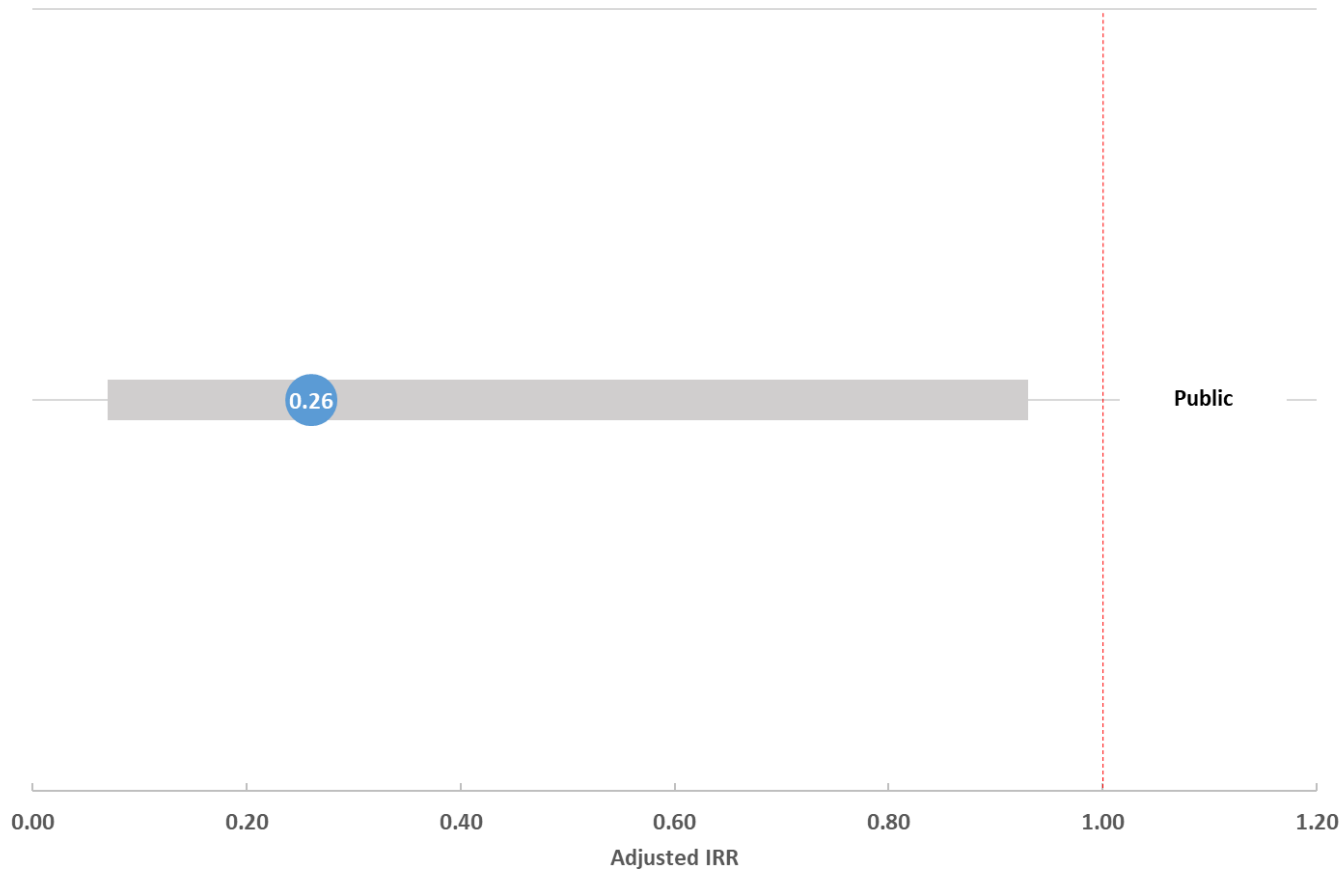
Results

Multivariable-Adjusted Incidence Rate Ratios

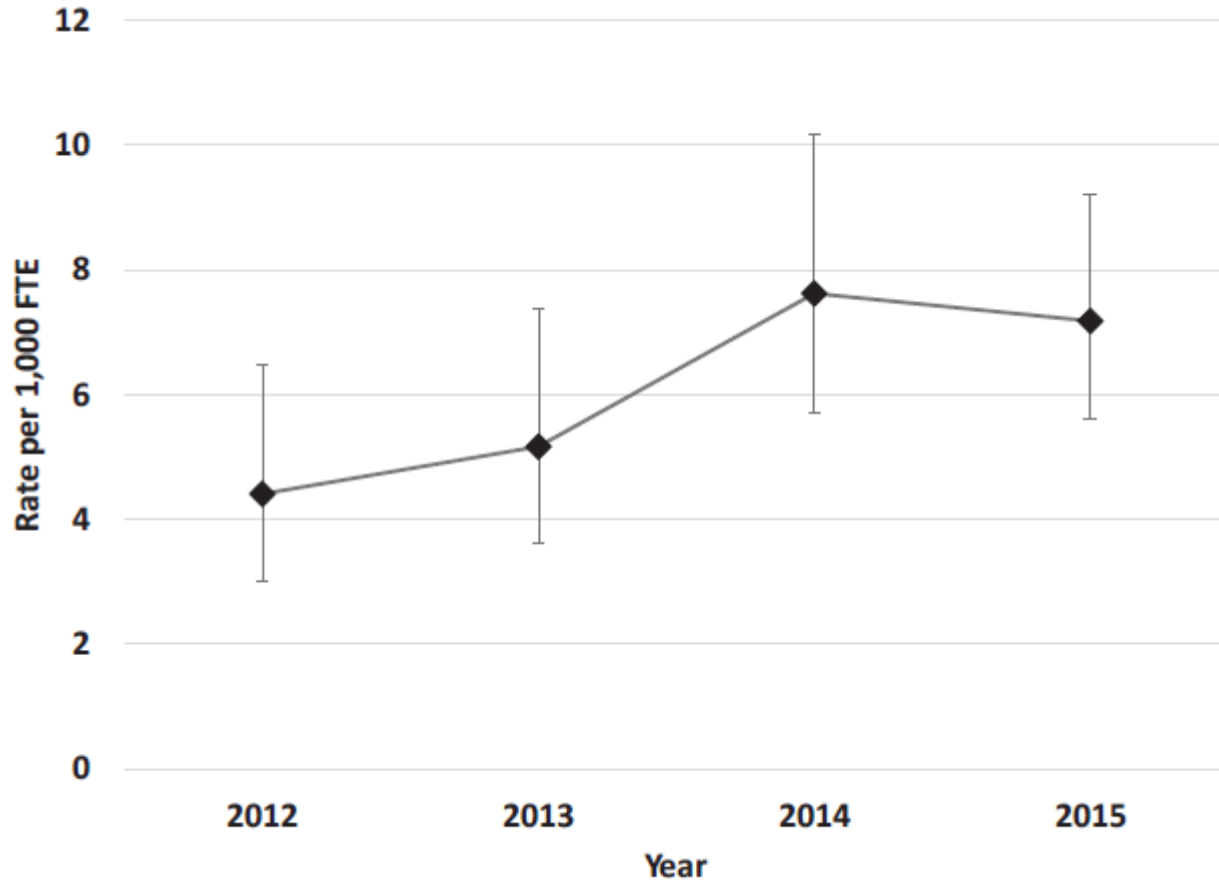
Multivariable-adjusted WPV Incidence Rate Ratios and 95% CIs for Occupation
(Ref=Others, including non-patient care personnel) in 105 OHSN-Participating Hospitals,
2012 - 2015



Multivariable-adjusted WPV Incidence Rate Ratios and 95% CIs for Hospital Ownership
(Ref=Private) in 105 OHSN-Participating Hospitals, 2012 - 2015



Adjusted IRR for Event Year = 1.23 (1.15-1.31)



Conclusions

Conclusions

- WPV is a serious and increasing hazard in OHSN hospitals
 - 23% increase in incidence each year during the study period
- Nursing assistants and nurses were at highest risk of WPV injury
 - Nursing assistants had highest risk
 - Nurses had highest number
- Improved data collection is needed for effective surveillance (and, therefore prevention)

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

