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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
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
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

- Children's general medical and surgical
- General medical and surgical
- Other
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 Hospital Ownership (Ref=Private) in 105 OHSN-Participating Hospitals, 2012 - 2015

Adjusted IRR

Public

0.26
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.