

# Stuck visiting the ED: Emergency department treated sharps injuries among healthcare workers

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# Background

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- Sharps injuries to healthcare workers can lead to occupationally acquired diseases.
  - Potential costs of sharps injuries
  - Limited national estimates
  - NORA HCSA objective #6
    - Improve sharps injury surveillance
  - Project objective
    - Use existing national surveillance dataset to describe ED-treated, sharps injuries to healthcare workers
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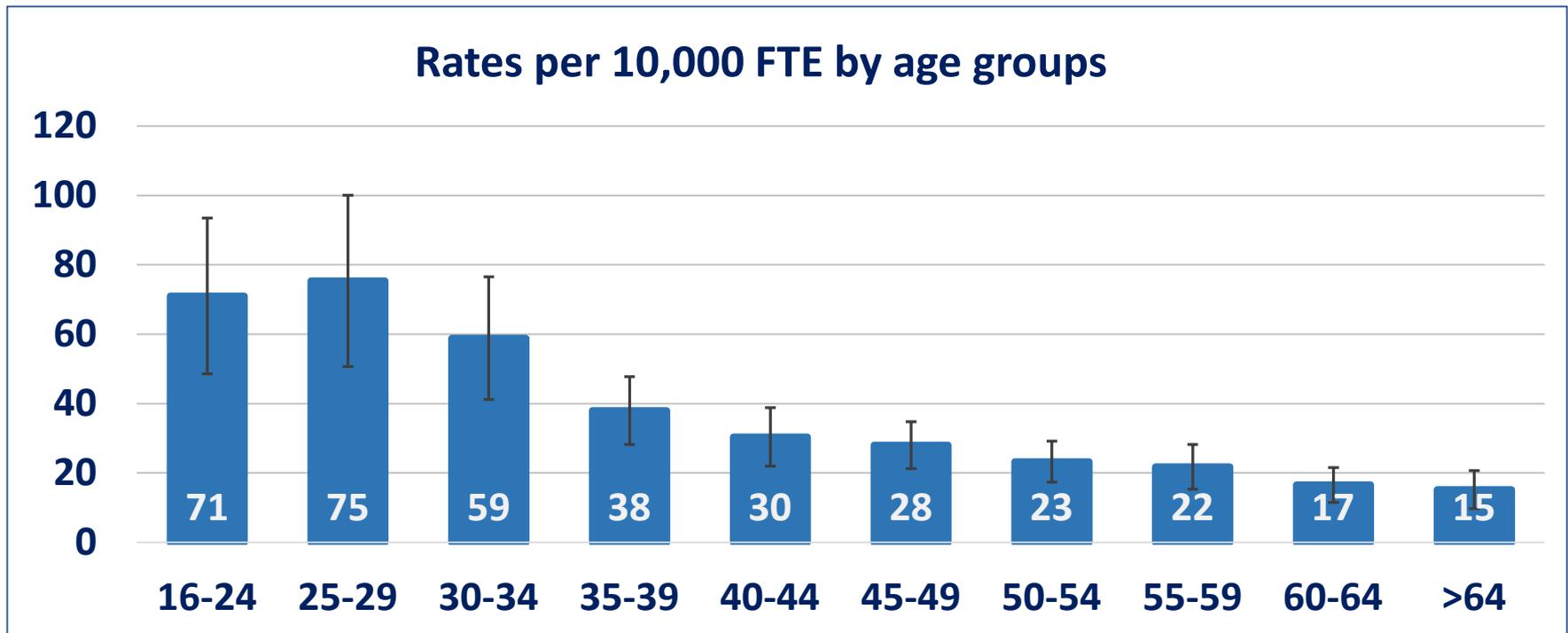
# Data

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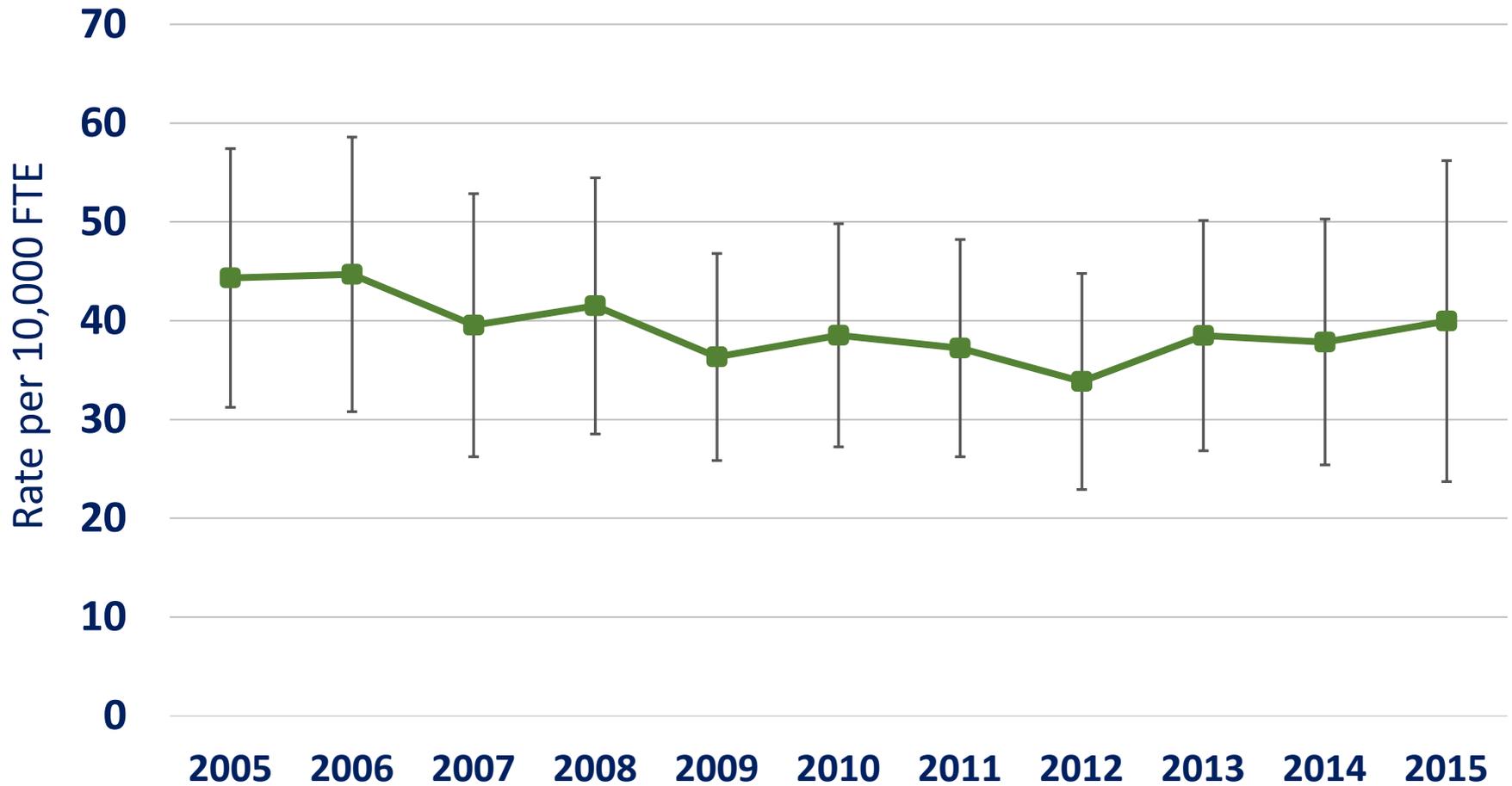
- Occupational supplement to the National Electronic Injury Surveillance System (NEISS-Work)
    - National stratified sample of ED-treated injuries
  - BLS Current Population Survey
    - Denominator data
  - 2005-2015 NEISS-Work sharps injuries subset
    - Needlesticks and other percutaneous injuries caused by medical and surgical instruments
    - OIICS event and source codes
    - Census industry and occupation codes
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# Sharps injuries in healthcare, 2005-2015

- **625,000** ED-treated sharps injuries (CI  $\pm$  167,600)
- **39** per 10,000 full-time equivalents (FTE) (CI  $\pm$  10)
- **76%** were female (CI  $\pm$  4); **24%** were male (CI  $\pm$  4)
- **22%** were 25-29 y.o. (CI  $\pm$  3); **17%** were 30-34 y.o. (CI  $\pm$  2)



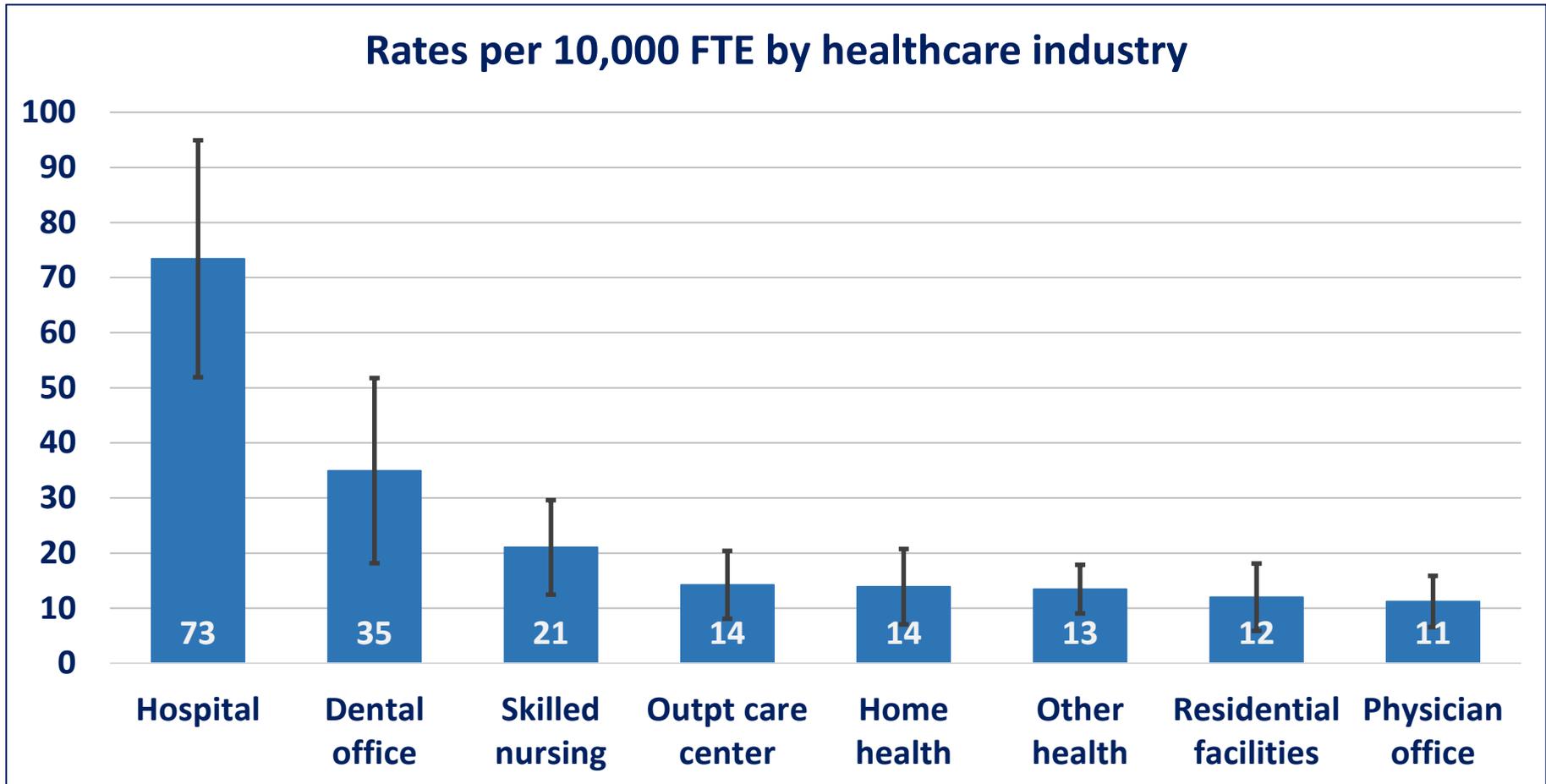
# Sharps injury rates in healthcare, 2005-2015



2005-2012: 3.3 annual rate decrease;  $\alpha < 0.05$   
2012-2015: 4.5 annual rate increase;  $\alpha = 0.12$

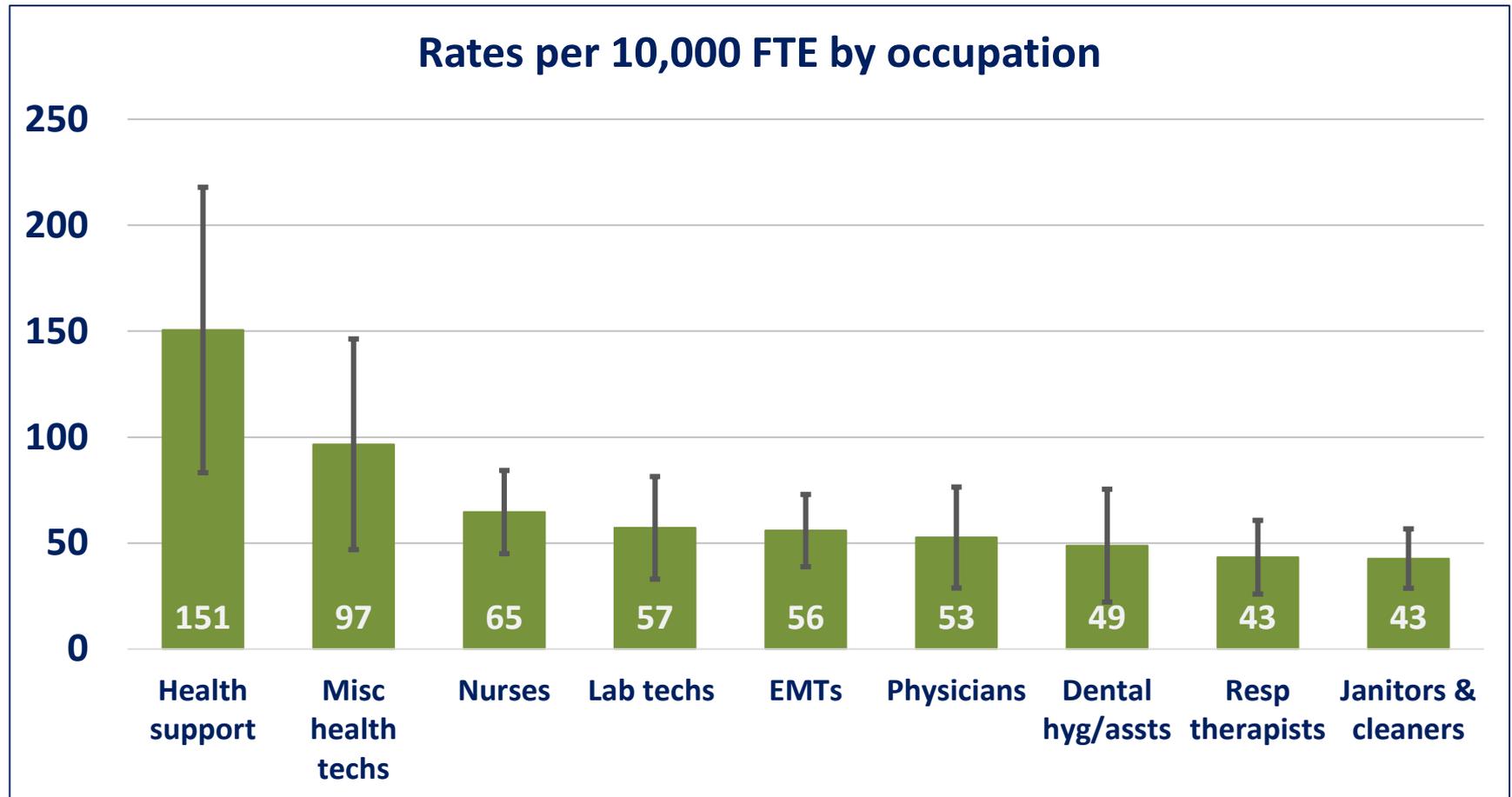
# Sharps injuries in healthcare industries

**76%** hospitals (CI  $\pm 6$ ); **6%** skilled nursing (CI  $\pm 2$ ); **4%** dental offices (CI  $\pm 2$ )

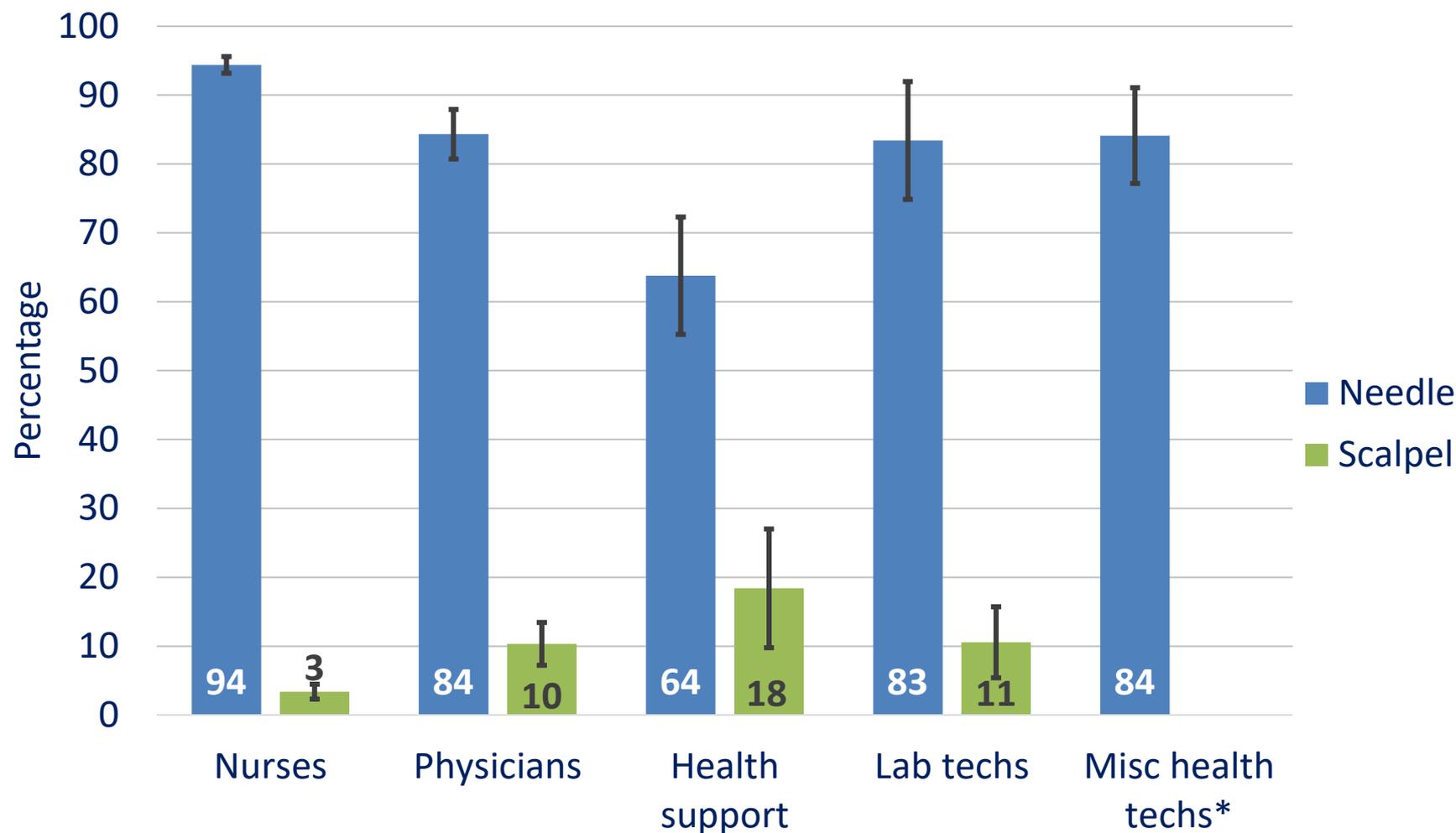


# Sharps injuries in healthcare occupations

- **32%** nurses (CI  $\pm 5$ ); **10%** physicians (CI  $\pm 3$ ); **4%** health support techs (CI  $\pm 2$ )
- **30%** unknown occupation



# Needle and scalpel injuries by select occupations



\* Scalpel injuries were not reportable for miscellaneous health techs

# Sharps injuries in healthcare, 2005-2015

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## Limitations

1. Underreporting suspected
2. ED-treated sharps injuries only
3. Incomplete occupation coding
4. Bias towards hospital employees



# Sharps injuries in healthcare, 2005-2015

- Sharps injuries declined until 2012; possible increase in more recent years
- Greatest magnitude and rates
  - Younger workers
  - Hospitals, skilled nursing facilities, dental offices
- Highest rates
  - Health practitioner support techs, miscellaneous health techs, nurses



The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention.