

Sharps Injuries among Nurses in Massachusetts Hospitals, 2002-2004

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Preliminary data not to be duplicated, cited, quoted or published.



MDPH Sharps Injury Prevention Regulations

105 CMR 130.1001 *et seq.*

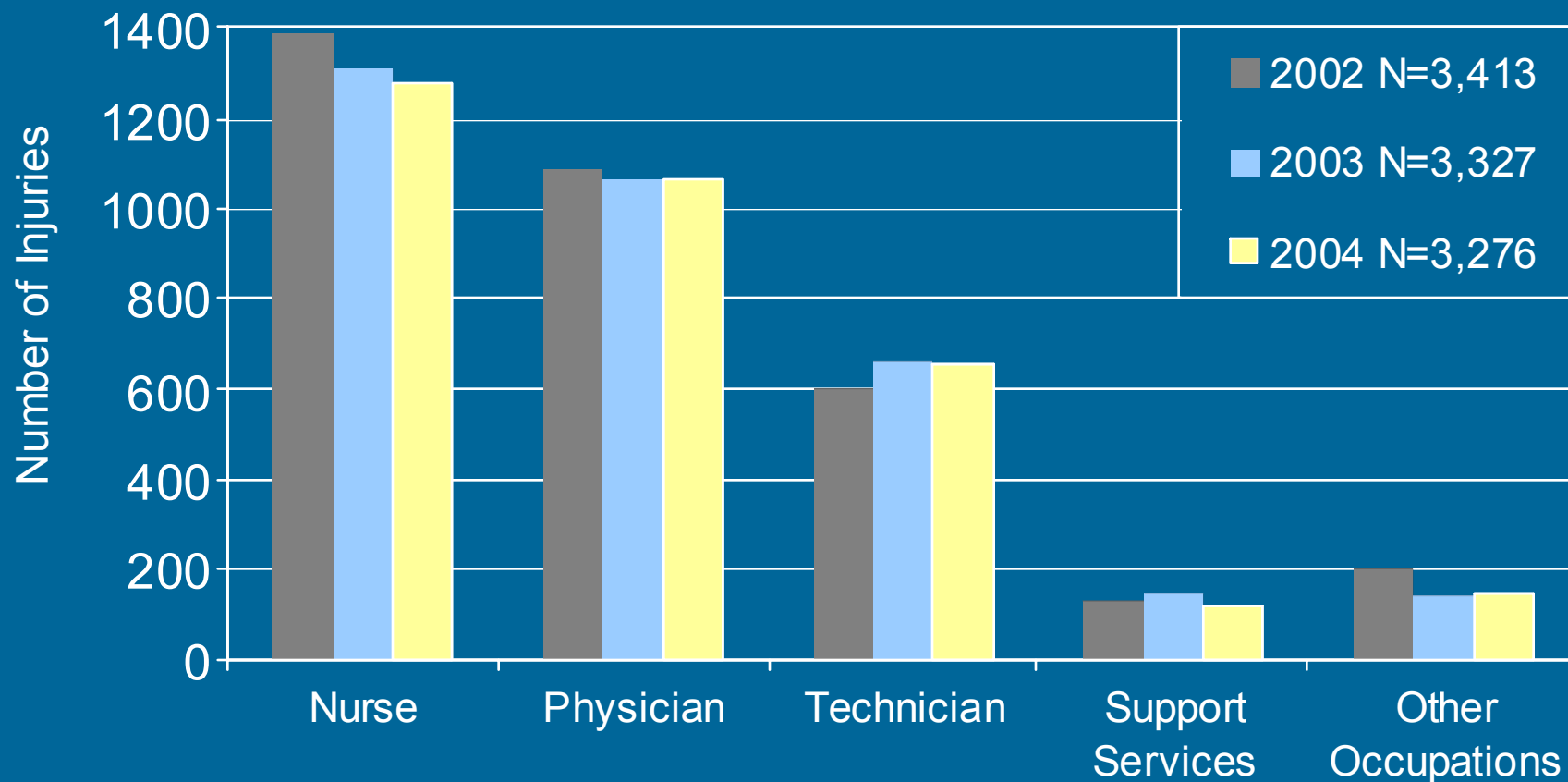
Requires hospitals to:

- Incorporate the use of safe needle / sharps devices
- Maintain a written exposure control plan
 - with procedures for selecting safe devices
- Maintain a Sharps Injury Log
- Report to MDPH annually

Methods

- Population under surveillance: All health care workers in Massachusetts hospitals licensed by MDPH
- Reportable exposure incident: BBP exposure that is the result of events that pierce the skin or mucous membranes
- Reporting period: January 1 – December 31
- Data elements:
 - Date of exposure
 - Unique exposure ID
 - Employment status
 - Occupation
 - Department
 - Device
 - Was it a safety device?
 - Brand / model of device
 - Purpose or procedure
 - How the injury occurred

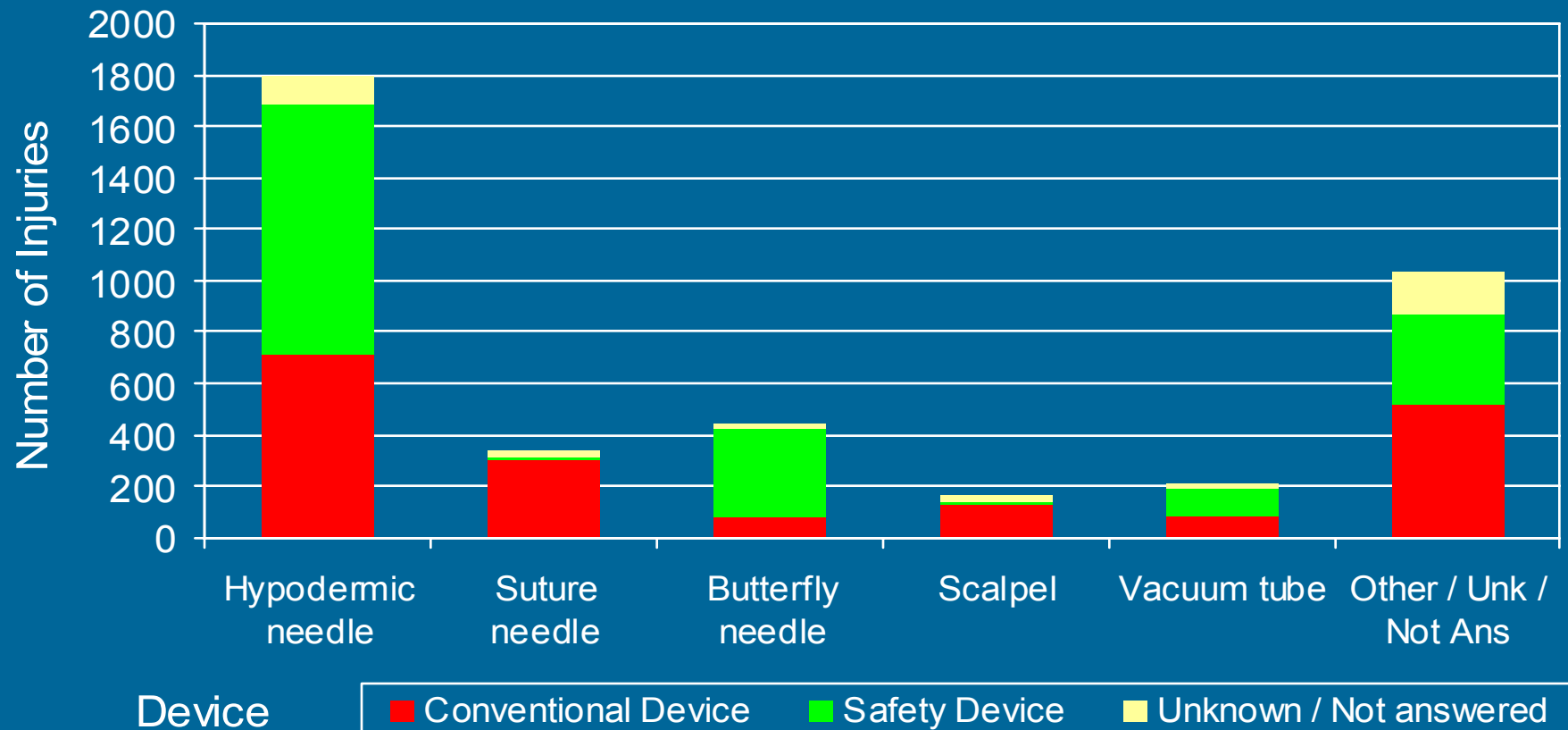
Sharps Injuries among Massachusetts Hospital Workers by Occupation, 2002-2004, N=10,016



Data Source: MDPH Annual Summary of Sharps Injuries, 2002-2004
Preliminary Data; Do not cite or quote.



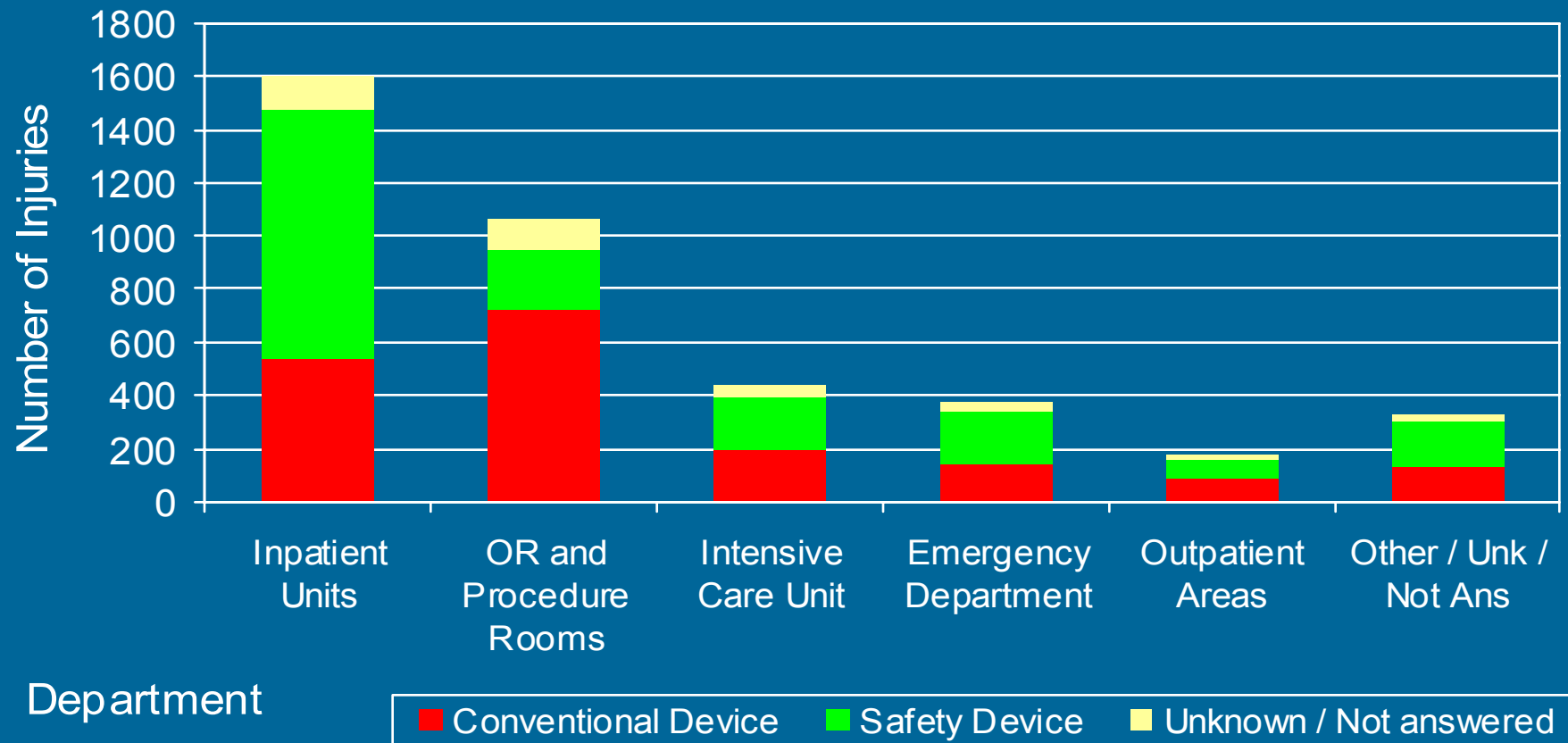
Sharps Injuries among Nurses by Device involved in the Injury, Massachusetts, 2002-2004, N=3,977



Data Source: MDPH Annual Summary of Sharps Injuries, 2002-2004
 Preliminary Data; Do not cite or quote.



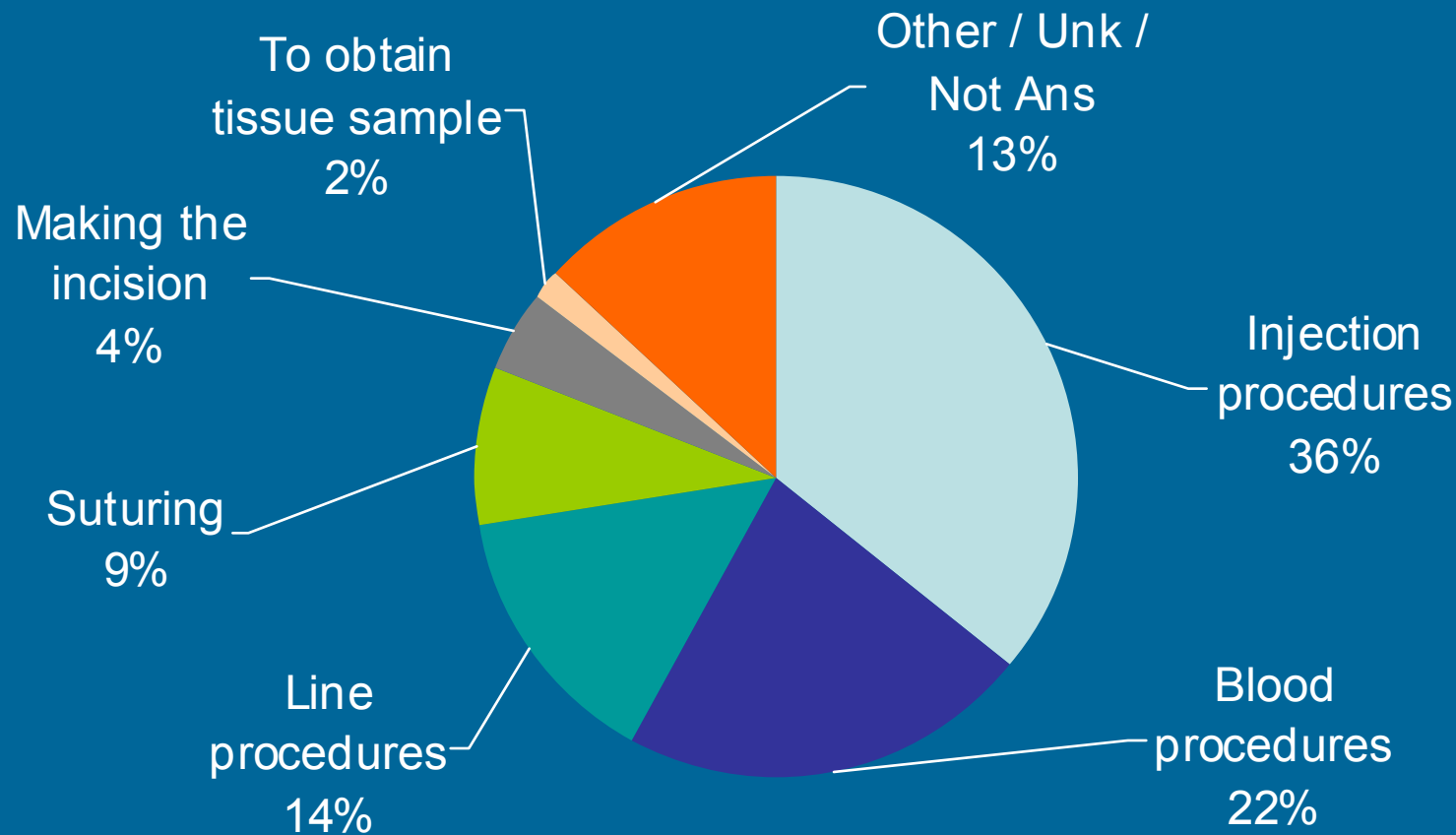
Sharps Injuries among Nurses by Department, Massachusetts, 2002-2004, N=3,977



Data Source: MDPH Annual Summary of Sharps Injuries, 2002-2004
 Preliminary Data; Do not cite or quote.



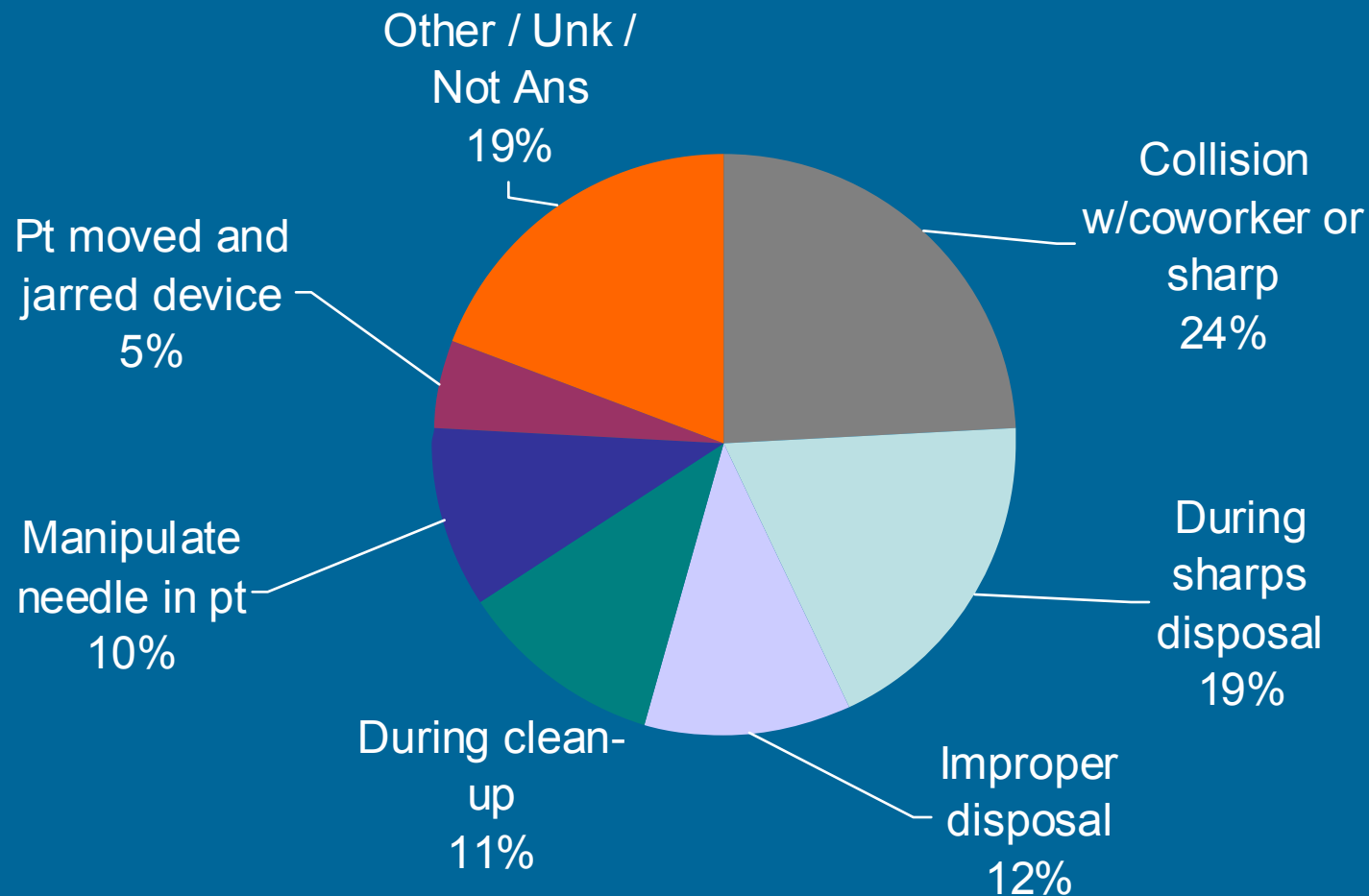
Sharps Injuries among Nurses by Procedure, Massachusetts, 2002-2004, N=3,977



Data Source: MDPH Annual Summary of Sharps Injuries, 2002-2004
Preliminary Data; Do not cite or quote.



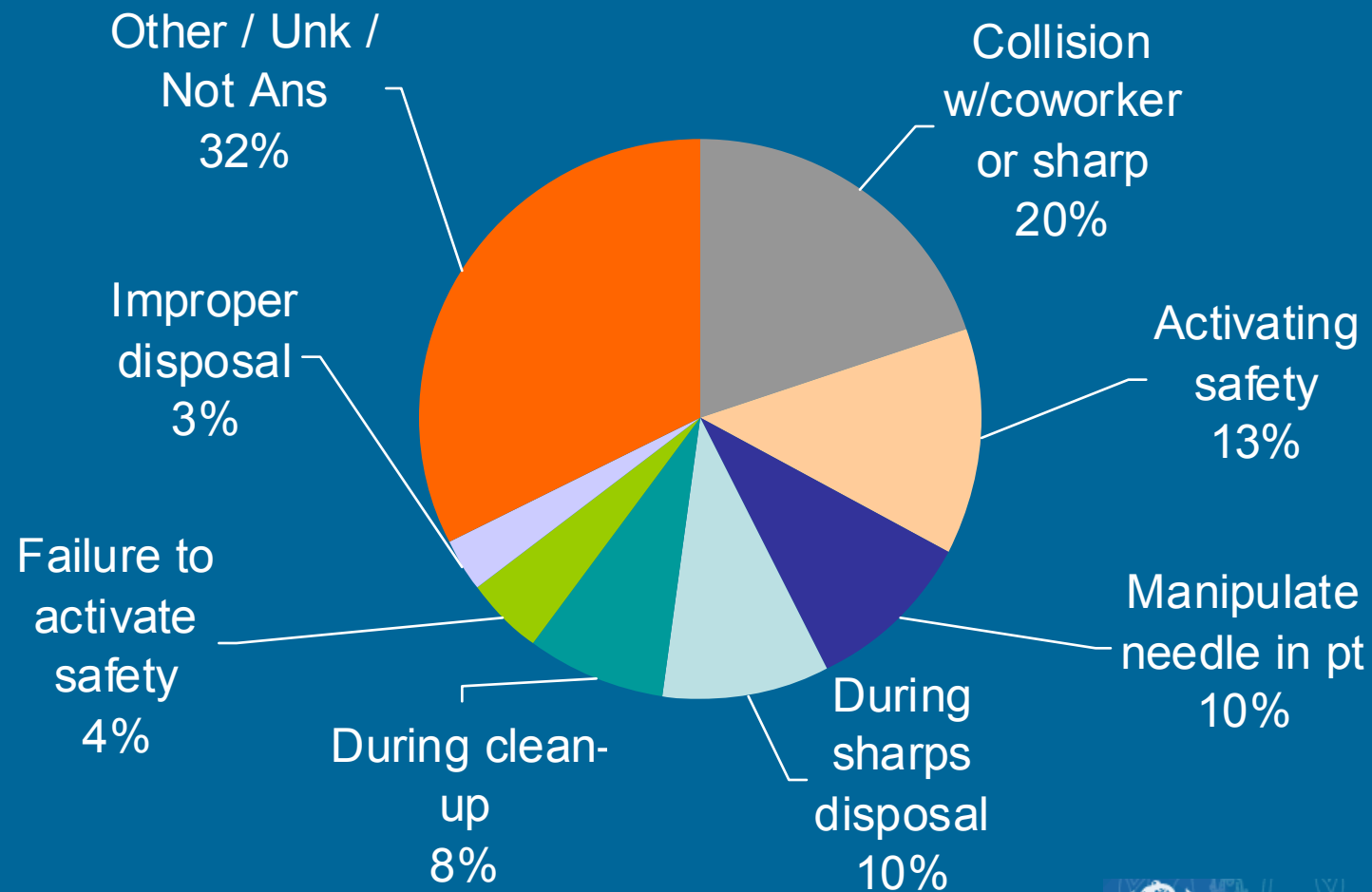
Sharps Injuries among Nurses during Blood Procedures with Conventional Devices, Massachusetts, 2002-2004, N=286



Data Source: MDPH Annual Summary of Sharps Injuries, 2002-2004
Preliminary Data; Do not cite or quote.



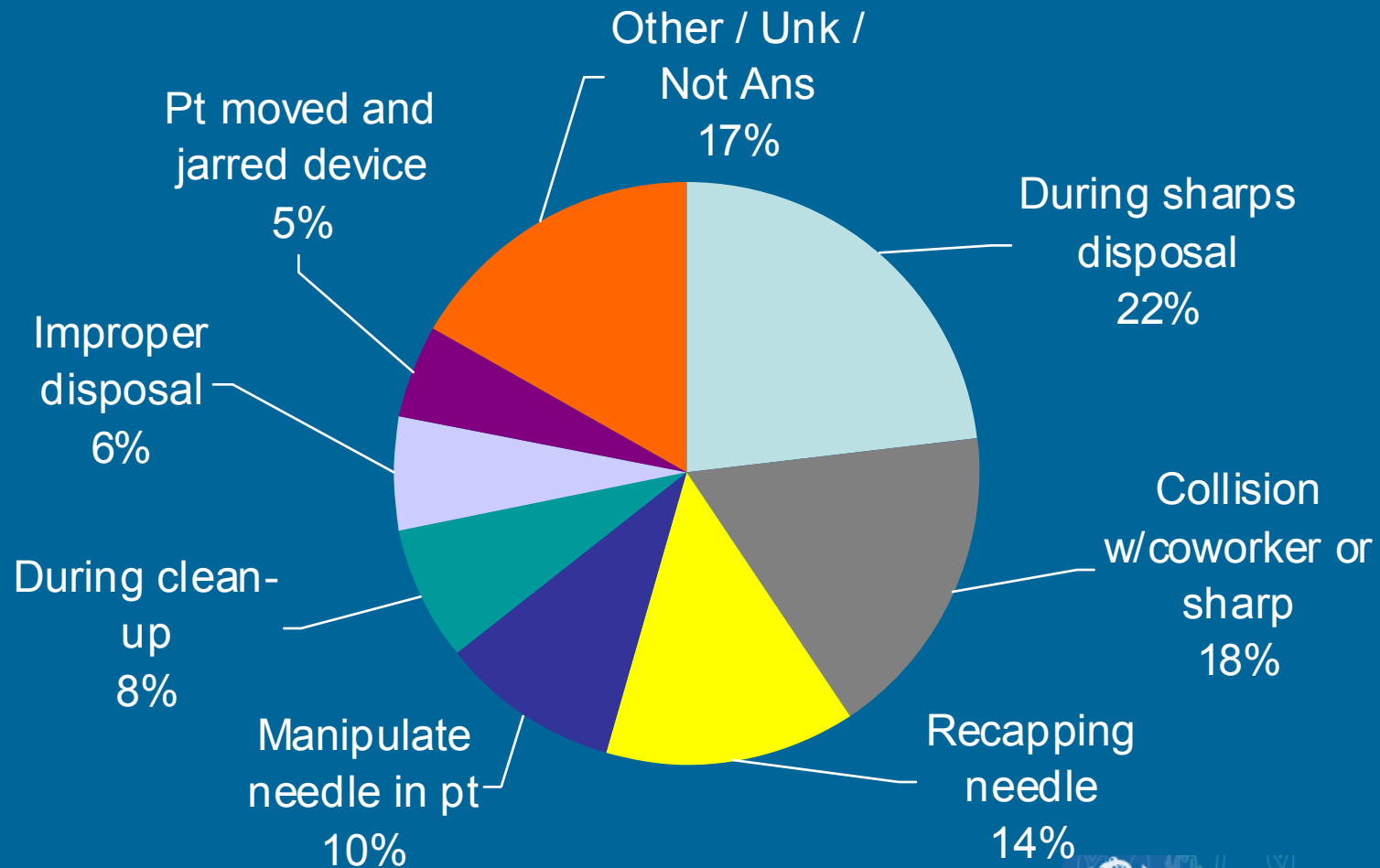
Sharps Injuries among Nurses during Blood Procedures with Safety Devices, Massachusetts, 2002-2004, N=539



Data Source: MDPH Annual Summary of Sharps Injuries, 2002-2004
Preliminary Data; Do not cite or quote.



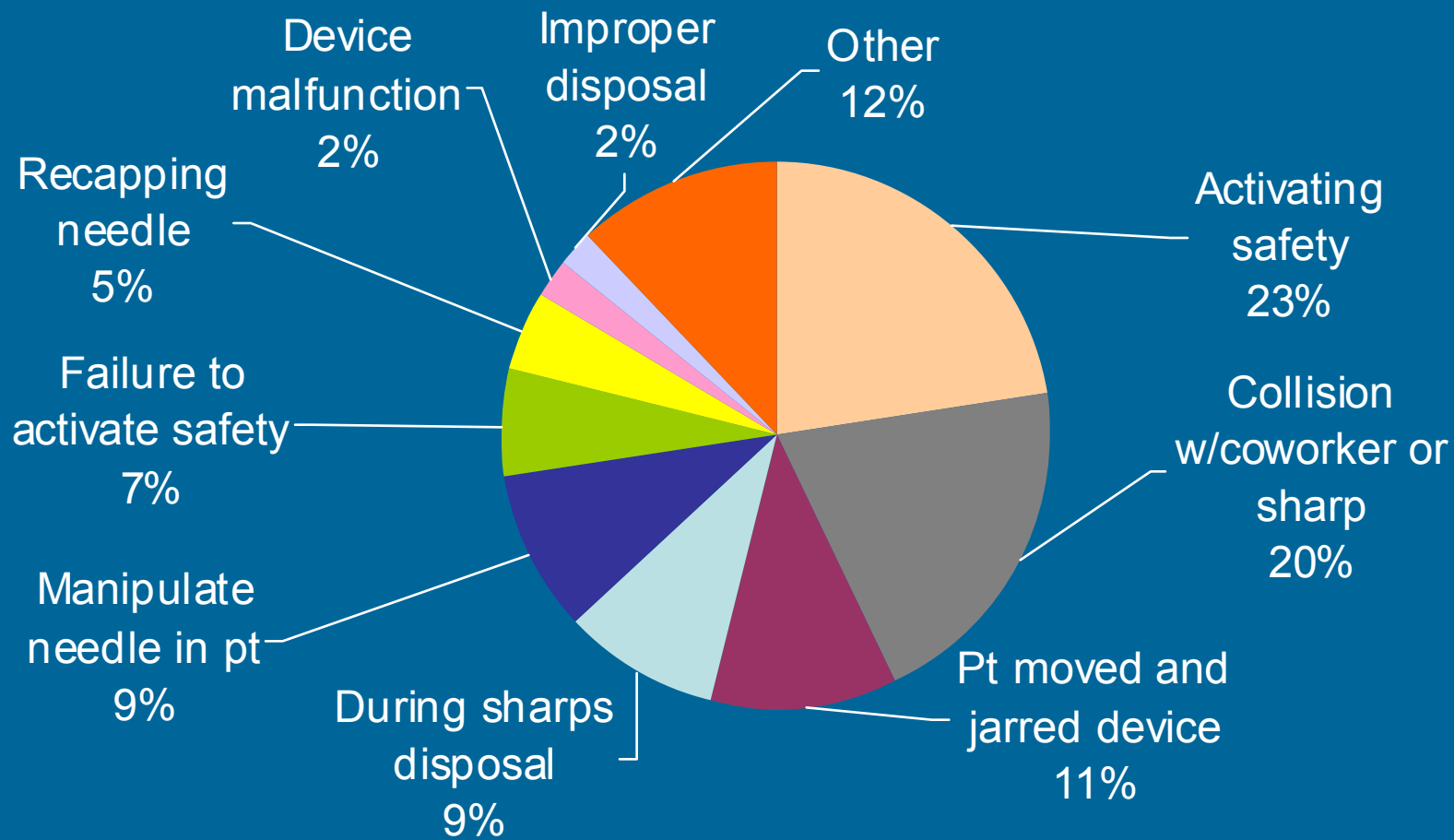
Sharps Injuries to Nurses during Injection Procedures with Conventional Devices, Massachusetts, 2002-2004, N=528



Data Source: MDPH Annual Summary of Sharps Injuries, 2002-2004
Preliminary Data; Do not cite or quote.



Sharps Injuries to Nurses during Injection Procedures with Safety Devices, Massachusetts, 2002-2004, N=828



Data Source: MDPH Annual Summary of Sharps Injuries, 2002-2004
Preliminary Data; Do not cite or quote.



Data Limitations

- Rate of underreporting is unknown and likely varies by hospital and occupation
- Statewide data on specific devices is difficult to interpret without purchasing information

Strengths

- Census of hospitals; not biased by voluntary reporting
- Concordance with federal requirements
- Provides a model to be used in other settings

Conclusions

- Many standard devices are still in use; e.g. hypodermic needles
- Percentage of injuries involving devices with safety features is increasing
- Sharps disposal continues to be an issue
- More information about under-reporting is needed
- Conversions:
 - conventional → safety
 - first generation ↔ second...fourth generation

Prevention

Elimination or Substitution

- suturing \Rightarrow glues
- injection with needles \Rightarrow
alternative delivery of medications

Engineering Controls

- IV systems \Rightarrow needleless IV systems
- conventional needles \Rightarrow retractable,
blunting or self-shielding needles

Prevention

Administrative Controls

- placement of sharps disposal containers
- purchasing policies
- injury reporting procedures

Work-practice Controls

- no recapping
- use of neutral zones

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Needlesticks and Other Sharps Injuries