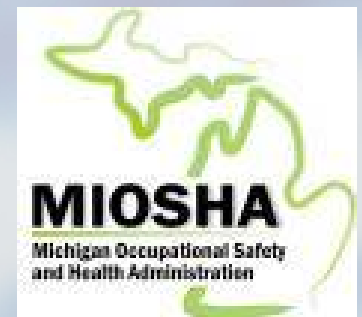


# MIOSHA and Michigan's Healthcare Industry



**Eric Zaban, CIH**  
Sr. Industrial Hygienist

MIOSHA Consultation Education and  
Training (CET) Division





# Contact MIOSHA with Questions

Industrial Hygienists with the Consultation Education and Training Division:

- Eric Zaban [zabane@michigan.gov](mailto:zabane@michigan.gov)
- Jenele Thellen [thelenj10@michigan.gov](mailto:thelenj10@michigan.gov)

Industrial Hygiene Specialist (TB / Infectious Diseases)  
with the General Industry Safety and Health Division:

- Matthew Macomber [macomberm@michigan.gov](mailto:macomberm@michigan.gov)



# Today's Agenda

- MIOSHA Services
- National outlook and injury sources
- Current Issues (GHS and workplace violence)
- Additional slides to support TB and exposure follow up questions



# Industrial Hygiene Rubrics

- Infectious Diseases
- Chemical Hazards
- Ergonomics
- Radiation
- Safety Hazards



# "State Plan State"

Michigan is one of 27 and territories operating complete State plans

States must set job safety and health standards that are "at least as effective as" comparable federal standards. (Most States adopt standards identical to federal ones.) States have the option to promulgate standards covering hazards not addressed by federal standards.

MIOSHA provide free on-site consultation to help employers identify and correct workplace hazards. Such consultation may be provided either under the plan or through a special agreement under section 21(d) of the Act.



# MIOSHA Organization

- Administration (517) 322-1814
- Appeals (517) 322-1297
- Consultation Education and Training (517) 322-1809
- Management & Technical Services (517) 322-1851
  - Management Information Systems Section
- Employee Discrimination Section (313) 456-3109

The two main enforcement Divisions are:

- Construction Safety & Health (517) 322-1856
- General Industry Safety & Health (517) 322-1831



# MIOSHA website redirects

Homepage	<a href="http://www.michigan.gov/miosha">www.michigan.gov/miosha</a>
Standards	<a href="http://www.michigan.gov/mioshastandards">www.michigan.gov/mioshastandards</a>
Policies & Procedures	<a href="http://www.michigan.gov/mioshapolicies">www.michigan.gov/mioshapolicies</a>
Employee Complaint forms	<a href="http://www.michigan.gov/mioshacomplaint">www.michigan.gov/mioshacomplaint</a>
Consultation Education & Training	<a href="http://www.michigan.gov/cet">www.michigan.gov/cet</a>
CET Publications	<a href="http://www.michigan.gov/mioshapublications">www.michigan.gov/mioshapublications</a>
CET Training Calendar	<a href="http://www.michigan.gov/mioshatraining">www.michigan.gov/mioshatraining</a>
Recordkeeping	<a href="http://www.michigan.gov/recordkeeping">www.michigan.gov/recordkeeping</a>
Laboratory & Equipment Services	<a href="http://www.michigan.gov/less">www.michigan.gov/less</a>
Telephone, mailing & e-mail address	<a href="http://www.michigan.gov/contactmiosha">www.michigan.gov/contactmiosha</a>
Asbestos	<a href="http://www.michigan.gov/asbestos">www.michigan.gov/asbestos</a>
MVPP	<a href="http://www.michigan.gov/mvpp">www.michigan.gov/mvpp</a>
MSHARP	<a href="http://www.michigan.gov/msharp">www.michigan.gov/msharp</a>
CET Grants	<a href="http://www.michigan.gov/mioshagrants">www.michigan.gov/mioshagrants</a>
CET RCA	<a href="http://www.michigan.gov/cetrca">www.michigan.gov/cetrca</a>
MIOSHA Training Institute (MTI)	<a href="http://www.michigan.gov/mti">www.michigan.gov/mti</a>
MIOSHA Variances	<a href="http://www.michigan.gov/mioshavariiances">www.michigan.gov/mioshavariiances</a>
DVD/Video Library Service	<a href="http://www.michigan.gov/mioshavidéos">www.michigan.gov/mioshavidéos</a>



# MIOSHA Training Institute

The MIOSHA Training Institute (MTI) provides affordable and informative seminars across the state to improve and advance safety and health in the workplace.





# MIOSHA Alliances and Partnerships

The Michigan Occupational Safety and Health Administration (MIOSHA) is interested in establishing alliances with organizations, employers, or employees committed to workplace safety and health. An alliance is a written agreement formalizing the opportunity for organizations and the agency to work together to reach out, to educate, and lead the state's employers and their employees in improving and advancing workplace safety and health.



# Michigan Society for Infection Prevention and Control (MSIPC)

MSIPC was one of the original MIOSHA Alliances.

The MSIPC Mission Statement: To develop a knowledge network, provide educational resources, and promote science-based practices in partnership with the community.





# MIOSHA Partnerships

Christman and MIOSHA Sign Partnership Agreement to Ensure Worker Safety at BWL Project in Lansing's REO Town; *Zero-Injury and Accidents Safety Goal Highlights Partnership Endorsed by Construction Team on \$182 Million Construction Project*

Partnerships are an important emphasis in MIOSHA's Strategic Plan to improve the health and safety of workers through cooperative relationships with groups, including trade associations, labor organizations, and employers. Partnerships move away from traditional enforcement methods and embrace collaborative resource sharing agreements.



2011 MDLARA Press Release



# Michigan Safety Conference

The MSC Healthcare Division provides two days of healthcare safety, health, and environmental programming during the annual Conference every spring. Future Conference dates:

**April 16-17, 2013, Grand Rapids, MI**

**April 15-16, 2014 Lansing, MI**

**April 14-15, 2015, Lansing, MI**

**April 19-20, 2016, Grand Rapids, MI**

[www.michsafetyconference.org](http://www.michsafetyconference.org)





# My 1000 foot view: MIOSHA CET

MIOSHA has included employers from NAICS code 622 Hospitals and 623 Nursing and Residential Care in our current and past strategic planning.

Examples of MIOSHA outreach events including Site Specific targeting: Mailing thousands of promotional letters reminding entire employer sectors of specific health and safety hazards and information about our free services (like Take a Stand Day).



# 30,000 foot view



UNITED STATES DEPARTMENT OF LABOR  
OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION

[www.OSHA.gov](http://www.OSHA.gov)

A-Z Index: [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

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## Nursing Home eTool

- ▶ Scope
- ▶ Site Map
- ▶ User Guide
- ▶ References
- ▶ Credits
- ▶ Comments

### Occupational Hazards in Long Term Care Nursing Home eTool

Today nursing homes and residential care facilities employ approximately 2.8 million workers at 21,000 work sites. Many nursing home tasks require considerable lifting and other strenuous physical labor. Historically the injury rate for workers in these facilities is double the injury rate for all full time workers in other occupations. This eTool<sup>SM</sup> is designed to assist employers and employees in identifying and controlling the hazards associated with nursing homes and residential care facilities.



This eTool addresses the following topics:

- Bloodborne Pathogens
- Pharmacy



# Nationwide OSHA Compliance

The healthcare sector is under-inspected / under represented relative to the number of workers.

For just hospitals in FY 2011, of almost 100,000 OSHA inspections only 371 occurred at hospitals. The average penalty was \$838 (top violations found were Bloodborne, Hazard Communication, and Electrical Safety).



# July 2012 BNA Article

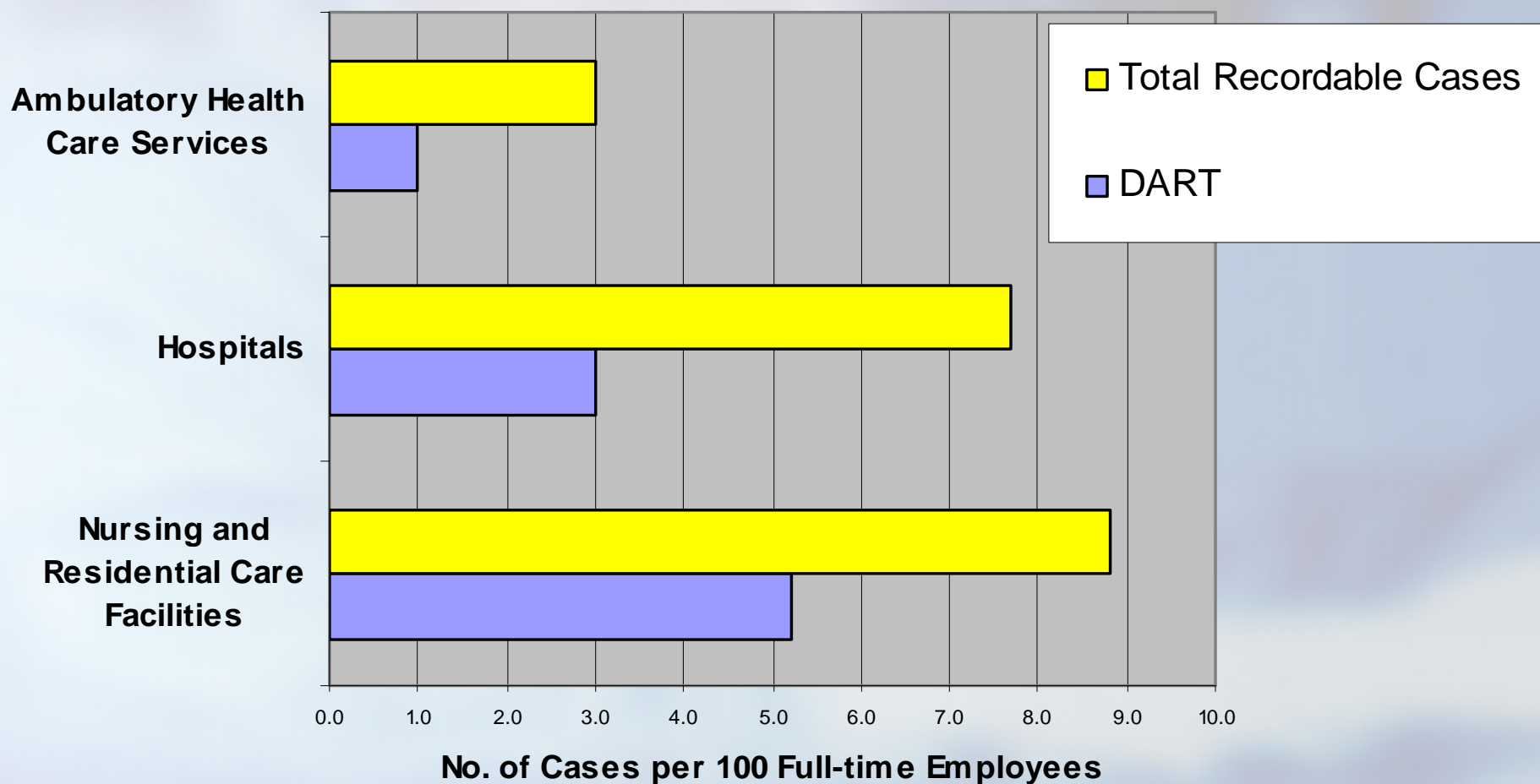
“OSHA recently took notice when it came to our attention that one in every five U.S. workers injured in the private sector is a health care worker,” Michaels said during the Seventh EU-US Joint Conference on Occupational Safety and Health in Belgium. “These workers should not be forced to risk injury while caring for others.”

David Michaels, assistant secretary of labor for occupational safety and health, July 11, 2012.



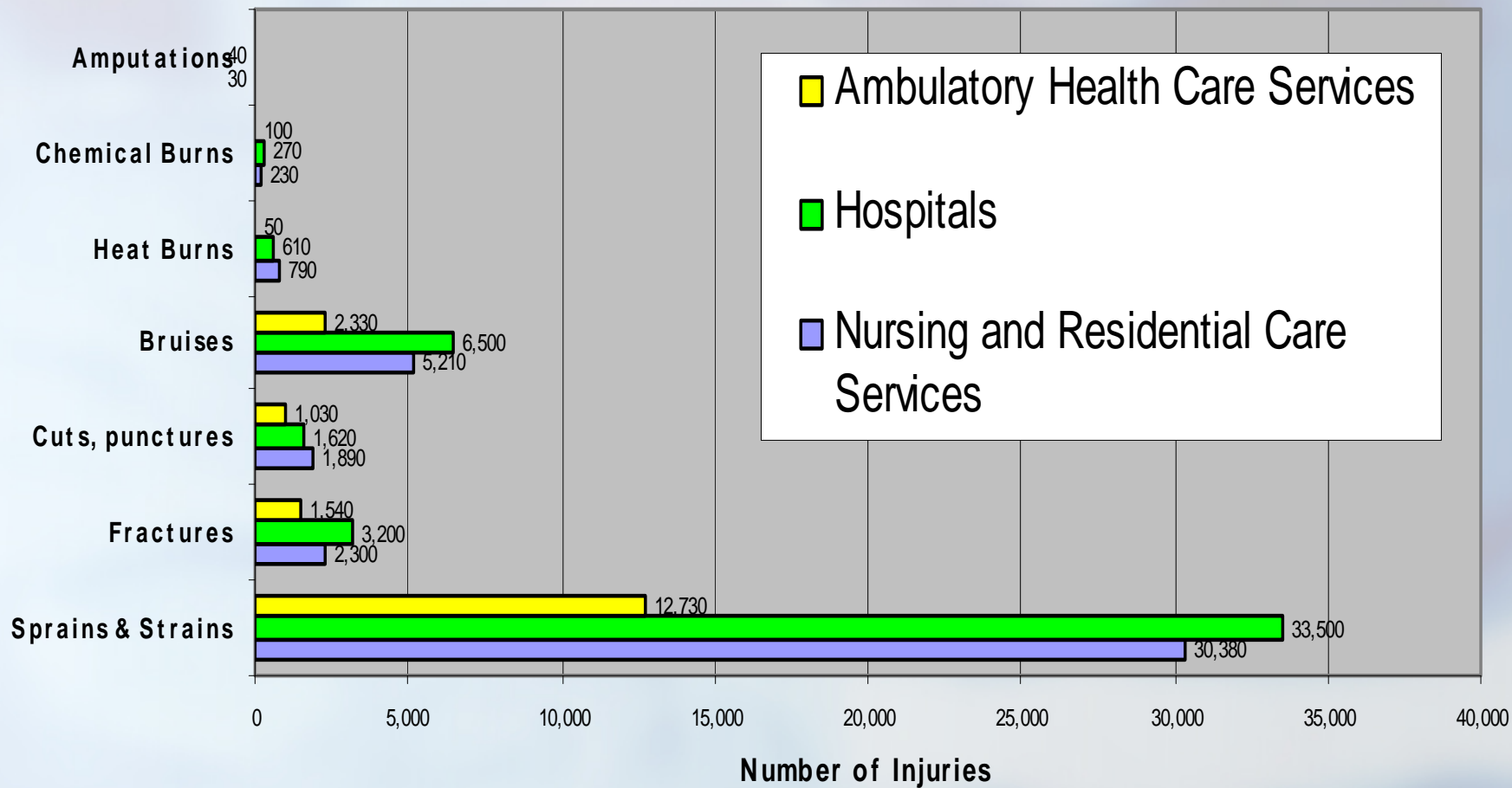


# 2007 BLS Injury and Illness



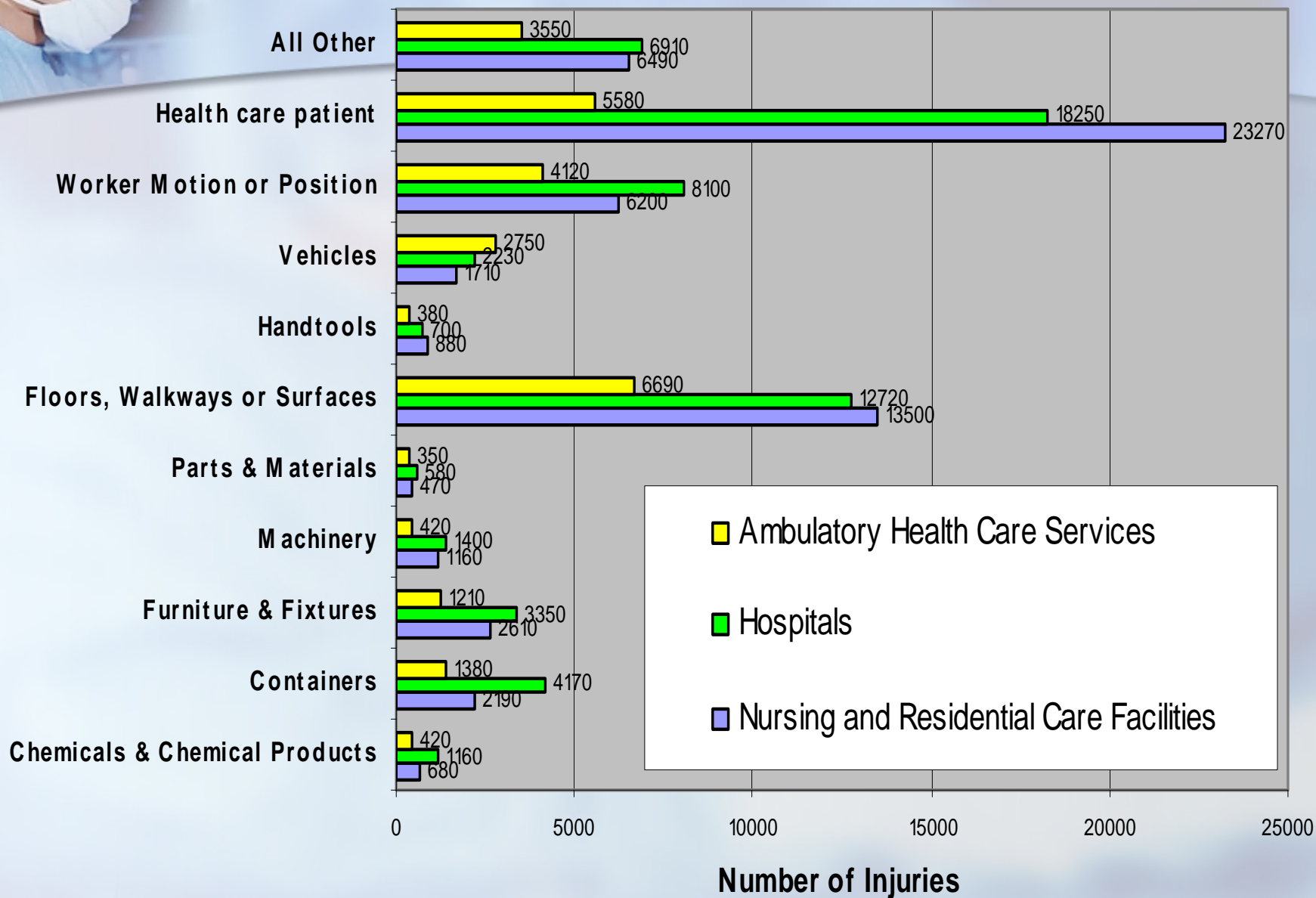


# Nature of Injury BLS 2007





# Injuries By Source BLS 2007





# Cause of Injury

Highest Injury Events Resulting in Days Away from Work in Health Care in 2007\*

- Overexertion (includes lifting)
- Fall on same level
- Contact with objects

\*same order for several years



# Who is my client?

Various health care functions may implement different programming

- Administration / HR
- Safety and Security
- Infection Prevention
- Maintenance
- Facilities Manager / Contractors



# MIOSHA Health Standards

Expanded Standards require exposure monitoring and other programming:

- Formaldehyde
- Ethylene oxide
- Lead
- Cadmium
- Sound



# Hazards found in Nursing Homes

- Hazard Communication written programming
- Personal Protective Equipment training and hazard assessment
- ANSI-approved eyewash facilities
- Bloodborne Infectious Diseases
- Safe Patient Handling  
(NIOSH recommendation)



# Current Issues Update

- Slip, Trip and Fall Hazards
- Radiation pucks
- GHIS
- Safe Medical Devices
- Workplace Violence





# Slip, Trip and Fall Hazards

Many STF injuries, a leading cause of workers' compensation claims, are preventable. A Comprehensive STF prevention program addresses:

- Minimize trip hazards
- Shared responsibility among hospital staff for maintaining safe floor conditions
- Written Housekeeping Programs
- Keep floors clean and dry
- Prevent access to wet floors
- Slip resistant shoes (dynamic friction coefficient DCOF > 0.3)
- Adequate lighting
- Stairs and handrails



# Hazardous Drugs

Hazardous drugs include those used for cancer chemotherapy, antiviral drugs, hormones, some bioengineered drugs, and other miscellaneous drugs.

As part of a site-specific, written, hazard communication program, employers should make their own list of hazardous drugs that employees may be exposed to.

**NIOSH List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings 2012** DHHS (NIOSH) Publication Number 2012–150 (Supersedes 2010–167) June 2012



# DHHS (NIOSH) Publication Number 2012–150

**Table 1. Sample List of Drugs that Should be Handled as Hazardous\***

Drug	Source	AHFS Pharmacologic-therapeutic classification
Acitretin	7	88:04 Vitamin A
Aldesleukin	4,5	10:00 Antineoplastic agents
Ambrisentan	7	24:12.92 Vasodilating agents, miscellaneous
Alefacept	6	84:92 Skin and mucous membrane agents, miscellaneous
Alitretinoin	3,4,5	84:92 Skin and mucous membrane agents, miscellaneous
Altretamine	1,2,3,4,5	10:00 Antineoplastic agents
Amsacrine	3,5	Not in AHFS (antineoplastic agent)
Anastrozole	1,5	10:00 Antineoplastic agents
Arsenic trioxide	1,2,3,4,5	10:00 Antineoplastic agents
Asparaginase	1.2.3.4.5	10:00 Antineoplastic agents



# Radiation Pucks

Radiology labs that fabricate their own pucks shall perform exposure monitoring for lead and likely cadmium. This is a task that is a source of lead surface and air contamination.



# Globally Harmonized System

- MIOSHA has aligned its hazard communication standard with the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.
- There are changes in the criteria for classifying physical and health hazards, new labeling requirements, and a standardized order of information on safety data sheets.



# GHS and Your Written Hazard Communication Program

## HAZCOM 1994

- Employers must have a written program:
  - Labels
  - SDSs
  - Information and training
  - List of Chemicals
  - Non-Routine Tasks
  - Multi-Employer Worksites
  - Available to employees

## HAZCOM 2012

- No changes.



# Labels and other forms of warning

## HAZCOM 1994

- Shipped containers to be labeled with:
  - Identity
  - Hazard warning(s)
  - Responsible party
- Performance-orientated with specifics left to discretion of chemical manufacturer or importer

## HAZCOM 2012

- Shipped containers to be labeled with:
  - Product identifier
  - Signal word
  - Hazard Statement
  - Pictograms
  - Precautionary Statements
  - Responsible party
  - Specifies information by hazard class and category



# Labels and Other Forms of Warning Signal Words

- Word used to indicate the level of severity of hazard and alert the reader to the potential hazard
  - “WARNING” (less severe hazard)
  - “DANGER” (more severe hazard)
- Specification approach to labels.
- Appendix C
  - Cookbook for labeling.
  - Lists label elements required based on:
    - Hazard Class
    - Hazard Category





# Labels and Other Forms of Warning Hazard Statements

Hazard statements describe the hazards associated with a chemical.

Examples:

- Flammable liquid and vapor
- Causes skin irritation
- May cause cancer



# Labels and Other Forms of Warning Precautionary Statements

- Precautionary statements describe recommended measures that should be taken to protect against hazardous exposures, or improper storage or handling of a chemical.

## Examples:

- Wear respiratory protection
  - Wash with soap and water
  - Store in a well ventilated place
- 
- Not a mandate for employers/employers to follow.



# Labels and Other Forms of Warning Pictograms

- A symbol plus other graphic elements intended to convey hazards.
- In the final rule, MIOSHA adopted 8 of 9 pictograms.
- All pictograms have red borders.
- All red diamonds (square on point) printed on a label or SDS must have a pictogram inside (no blank diamonds).





# Labels and Other Forms of Warning Pictograms Defined

## Physical



Oxidizer



Flammables  
Self Reactives  
Pyrophorics  
Self heating  
Emits flammable gas  
Organic peroxides



Explosives  
Self Reactives  
Organic peroxides



Corrosive to Metals



Gases under Pressure

## Health



Acute toxicity (severe)



Carcinogen  
Respiratory sensitizer  
Reproductive toxicity  
Target organ toxicity  
Mutagenicity  
Aspiration hazard



Irritant  
Dermal sensitizer  
Acute toxicity (harmful)  
Narcotic effects  
Respiratory tract irritation



Skin corrosion  
Serious eye damage/  
Eye irritation

## Environmental



Environmental tox  
(acute & chronic)

# Labels and Other Forms of Warning


## New Labels



Effective June 1, 2015, all shipping labels will be required to have:

- Product identifier
- Signal Word  
(Warning or Danger)
- Pictograms
- Hazard statement(s)
- Precautionary statement(s)
- Supplier identification

**SAMPLE LABEL**

<p style="text-align: center;"><b>PRODUCT IDENTIFIER</b></p> <p>CODE _____</p> <p>Product Name _____</p> <p style="text-align: center;"><b>SUPPLIER IDENTIFICATION</b></p> <p>Company Name _____</p> <p>Street Address _____</p> <p>City _____ State _____</p> <p>Postal Code _____ Country _____</p> <p>Emergency Phone Number _____</p> <p style="text-align: center;"><b>PRECAUTIONARY STATEMENTS</b></p> <p>Keep container tightly closed. Store in cool, well ventilated place that is locked. Keep away from heat/sparks/open flame. No smoking. Only use non-sparking tools. Use explosion-proof electrical equipment. Take precautionary measure against static discharge. Ground and bond container and receiving equipment. Do not breathe vapors. Wear Protective gloves. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Dispose of in accordance with local, regional, national, international regulations as specified.</p> <p><b>In Case of Fire:</b> use dry chemical (BC) or Carbon dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.</p> <p><b>First Aid</b> If exposed call Poison Center. If on skin (on hair): Take off immediately any contaminated clothing. Rinse skin with water.</p>	<p style="text-align: center;"><b>HAZARD PICTOGRAMS</b></p> <div style="text-align: center;"></div> <p style="text-align: center;"><b>SIGNAL WORD</b> <b>Danger</b></p> <p style="text-align: center;"><b>HAZARD STATEMENT</b></p> <p><b>Highly flammable liquid and vapor. May cause liver and kidney damage.</b></p> <p style="text-align: center;"><b>SUPPLEMENTAL INFORMATION</b></p> <p><b>Directions for use</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Fill weight: _____ Lot Number _____</p> <p>Gross weight: _____ Fill Date: _____</p> <p>Expiration Date: _____</p>
--	---

# Labels and Other Forms of Warning

## New Label



### New style Label (GHS)



XYZ... Chemical



#### WARNING

Flammable Liquid and vapor

Harmful if swallowed

May cause damage to organs (liver)

May cause damage to organs through prolonged or repeated exposure (heart)

Suspected of damaging fertility

Keep away from heat, sparks, open flames and hot surfaces - No smoking. Do not breathe vapors. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use protective equipment as required. Wear protective gloves and eye protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof electrical, ventilating, lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Store locked up in a well ventilated place. Keep cool. Dispose of contents and container in accordance with local, state and federal regulations.

#### First Aid:

If swallowed: Call a doctor if you feel unwell, Rinse mouth.

If on skin or hair: Remove immediately all contaminated clothing. Rinse skin with water.

If exposed or if you feel unwell: call a doctor.

#### Fire:

In case of fire: Use water spray foam, dry chemical or carbon dioxide (CO<sub>2</sub>) for extinction

GHS Company, 123 Global Drive, Cincinnati, OH

telephone (800) 555-8888



# Labels and Other Forms of Warning Labeling for Secondary Containers

- Secondary labeling systems are still permitted
- Must be consistent with the revised HCS
- No conflicting hazard warnings or pictograms.
- May use written materials (e.g., signs, placards, etc.) in lieu of affixing labels to individual stationary process containers.
- Employer can use GHS compliant labels (same as shipping).

HMIS Label



NFPA Label





# GHS vs. HMIS / NFPA 704



HEALTH	<input type="checkbox"/>
FIRE	<input type="checkbox"/>
REACTIVITY	<input type="checkbox"/>
PPE	<input type="checkbox"/>

NFPA & HMIS systems number "4" indicates a severe hazard.

Under GHS HazCom standard, a "4" will mean the least severe and "1" will mean the most severe. GHS category noted in SDS; NOT on container label.

Flammability Criteria	GHS Category	NFPA 704 Rating	HMIS Rating
Flash point < 73°F(23°C) and initial boiling point 100°F(37.8°C)	1 or 2	4	4
Flash point < 73°F(23°C) and initial boiling point 100°F(37.8°C) and Flash point > 73°F(23°C) and < 100°F(37.8°C)	2 or 3	3	3
Flash point ≥ 100°F(37.8°C) and < 200°F (93.4°C)	3 or 4	2	2
Flash point > 200°F(93.4°C) and will burn in air when exposed to a temperature of 1500°F(815.5°C) for a period of 5 min.	None	1	1





# Labels and Other Forms of Warning Hazards Not Otherwise Classified

- MIOSHA has included a “Hazards not otherwise Classified” (HNOC) hazard class.
- Warnings must be provided for those hazards that are not included in GHS.
  - Combustible dust
  - Simple asphyxiants
  - Pyrophoric gas
  - Others not otherwise classified



# Labels and Other Forms of Warning - Requirements for HNOC

## ■ Label Requirements:

Paragraph (f)(1) explicitly states that hazards not otherwise classified do not have to be addressed on container labels. Must be included in SDS Section 2

## ■ SDS Requirements

### Pyrophoric Gases

■ Signal Word: DANGER

■ Pictogram: Flame

■ Hazard Statement: Catches fire spontaneously if exposed to air



# Labels and Other Forms of Warning - Requirements for HNOC

## ■ Simple Asphyxiants

- Signal Word: WARNING
- Pictogram: None
- Hazard Statement: May be harmful if inhaled.
- Precautionary Statement: May displace oxygen in breathing air and lead to suffocation and death, particularly in confined spaces.

## ■ Combustible Dust

- Signal Word: WARNING
- Pictogram: None
- Hazard Statement: May form combustible dust concentrations in air





## Labels and Other Forms of Warning - Updating Labels

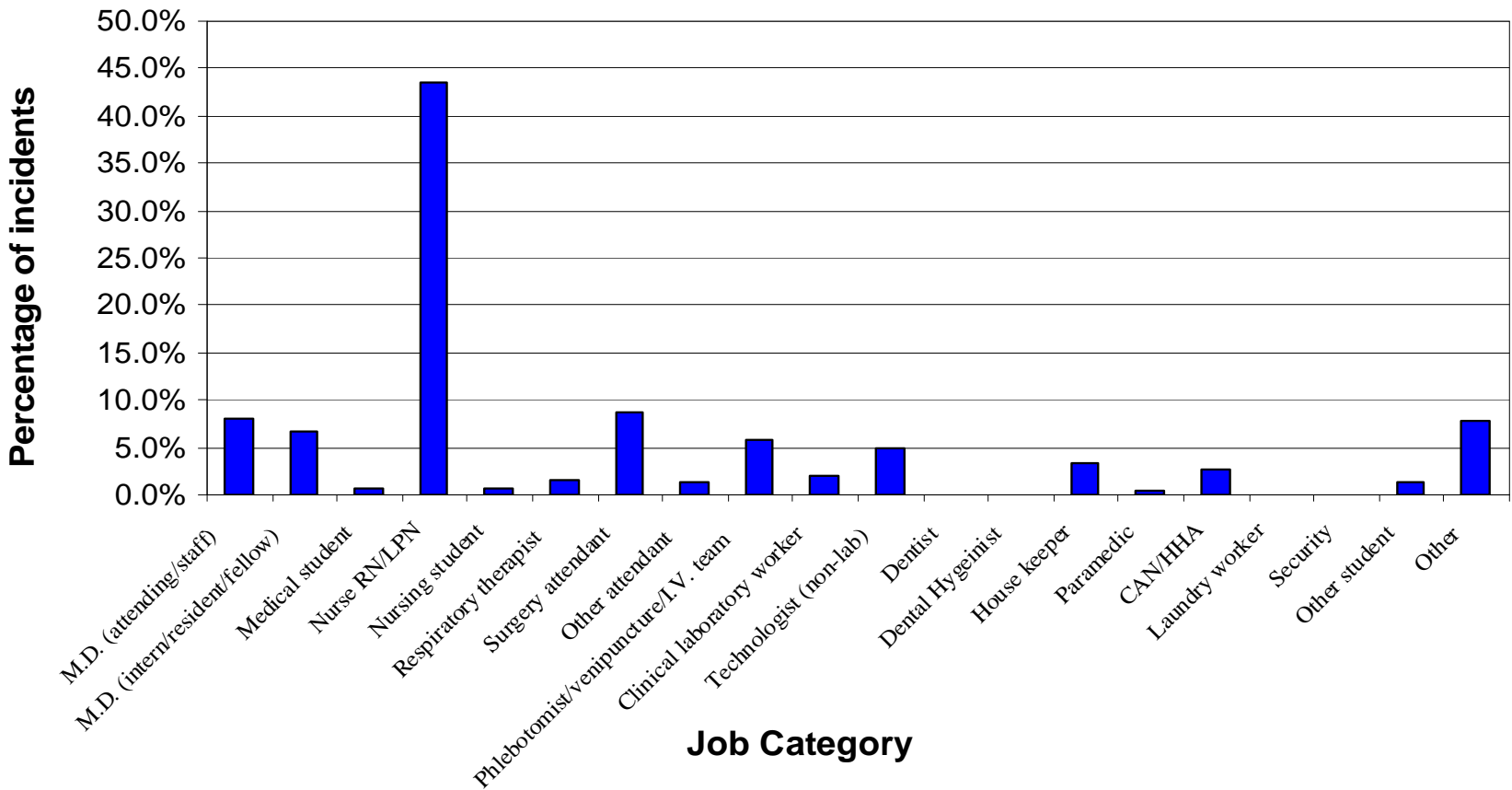
Product labels must be updated by manufacturers within 6 months when there is new and significant information about the hazards



# According to EPINet report

2001 Percutaneous Injury Rates, nurses are most at risk (43.6%) of sustaining sharps injuries.

Uniform Needlestick and Sharp-Object Injury Report U.S. EPINet Network, 2001, 58 Healthcare facilities.





# How does exposure occur?

- Most common: needlesticks
- Cuts from other contaminated sharps (scalpels, broken glass, etc.)
- Contact of mucous membranes (for example, the eye, nose, mouth) or broken (cut or abraded) skin with contaminated blood



# Engineering & Work Practice Controls

Devices currently being marketed for needlestick prevention can be divided into eight groups based on their intended use:

1. Needleless medication / vaccine injectors
2. Prefilled medication systems
3. IV Starters with catheters
4. IV medication connectors
5. Blood collection systems
6. Disposable syringes
7. Needle guards
8. Needle-recapping devices



# Engineering & Work Practice Controls

[www.healthsystem.virginia.edu/internet/epinet](http://www.healthsystem.virginia.edu/internet/epinet)

<http://www.cdc.gov/niosh/topics/bbp/safer/>

<http://www.cdc.gov/niosh/topics/healthcare/>

<https://www.premierinc.com/quality-safety/>





# BID Exposure Control Plan

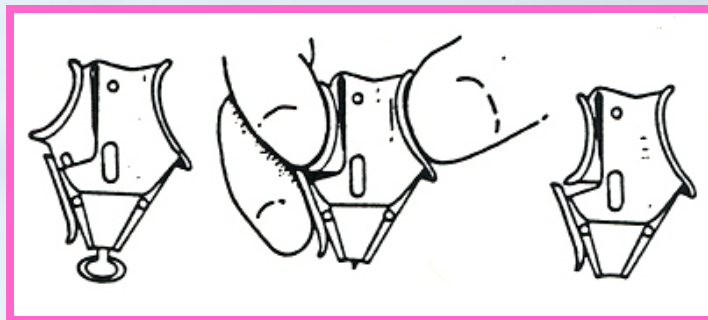
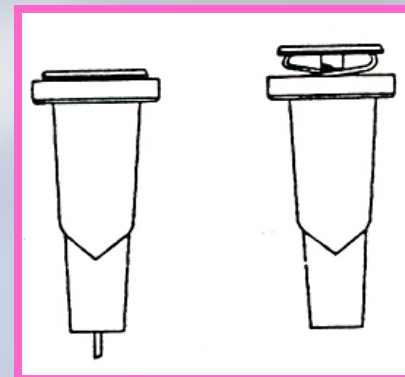
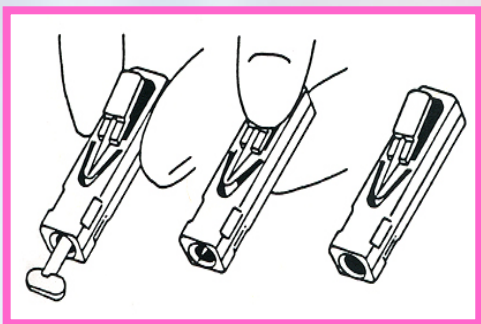
- Written plan required
- Plan must be reviewed at least annually to reflect changes in:
  - tasks, procedures, or assignments which affect exposure, and
  - technology that will eliminate or reduce exposure
- Annual review must document employer's consideration and implementation of safer medical devices
- Must solicit input from potentially exposed employees in the identification, evaluation and selection of engineering and work practice controls
- Plan must be accessible to employees



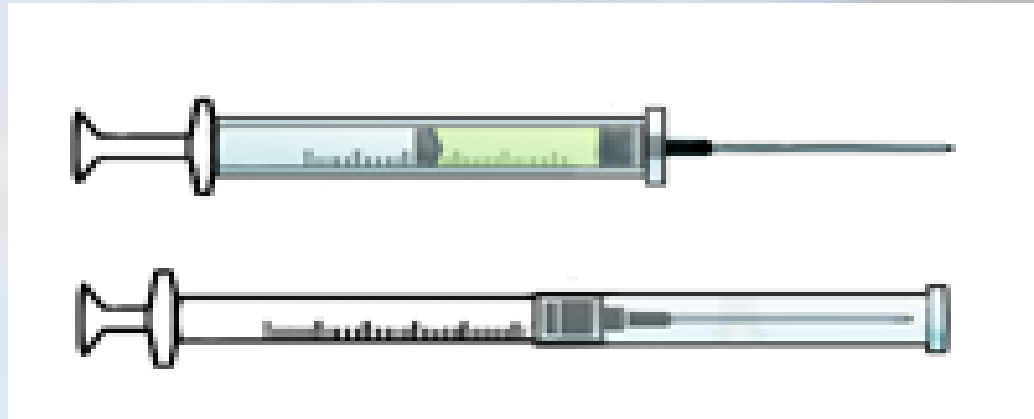
# Safer Medical Devices

- *Needless Systems*: a device that does not use needles for the collection or withdrawal of body fluids, or for the administration of medication or fluids
- *Sharps with Engineered Sharps Injury Protections (SESIPs)*: a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a **built-in** safety feature or mechanism that effectively reduces the risk of an exposure incident

# Safety Lancets



# Sheathing Needles



Some needlestick injuries would not occur if the (two-handed) safety mechanism had been activated immediately after the syringes were used. Investigate the feasibility of switching to a safe needle device that does not require two-handed activation.

# Passive Safety

## Passive Safety is “automatic” safety

- spring loaded safety syringe
- single-handed blade remover

## Active Safety requires user to “manually” do something

- sheath style safety syringe
- safety scalpel

## One-handed action is always better than two-handed

**CDC studies** show active safety devices might not be used enough to protect the staff using them





# Engineering Controls – Blunt Tip Suture Needles

The FDA, NIOSH, and OSHA strongly encourage health care professionals to use blunt-tip suture needles blunt-tip suture needles as an alternative to standard suture needles when suturing fascia and muscle to decrease the risk of needlestick injury.

Blunt-tip suture needles, which are not as sharp as standard (sharp-tip) suture needles, are designed to penetrate muscle and fascia and reduce the risk of needlesticks. Blunt-tip suture needles are regulated by the FDA and have been marketed in the U.S. for more than 25 years.

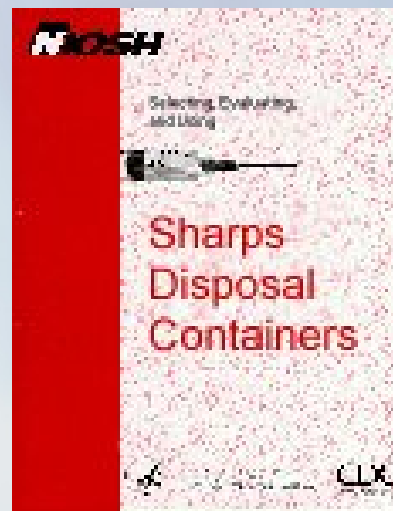


# Sharps Containers

## *Selecting, Evaluating, and Using Sharps Disposal Containers*

January, 1998 DHHS (NIOSH) Publication No. 97-111

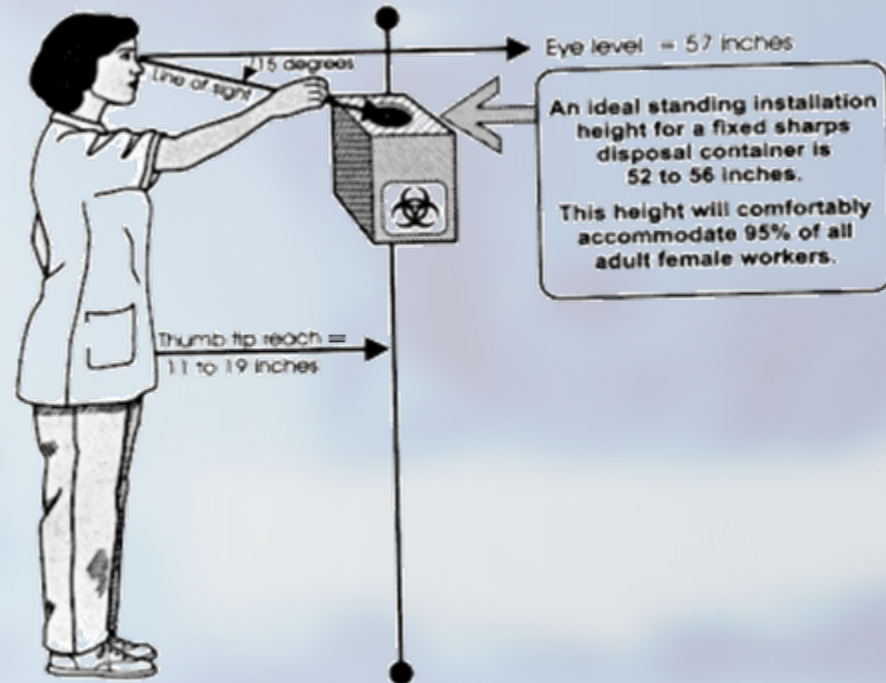
NIOSH will mail out hard copies of their publications for free upon request, call (800) CDC - INFO





# Sharps Container Installation

- Within Straight Arm's Reach from Point of Use
- Just below Eye Line
  - 56" – 52" for Standing Station
  - 42" – 38" for Sitting Station





# Engineering Controls



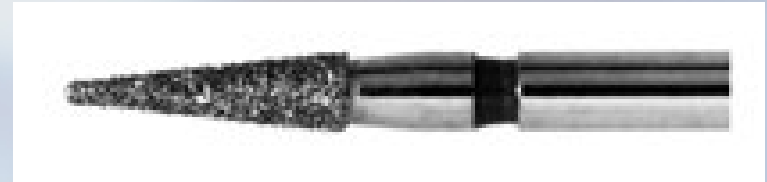
Sharps Container  
with Foot  
Activation





# Sharps Containers are Good For:

- Small Applicator Tips
- Sutures
- Needles
- Burs
- Carpules
- Scalpels
- Endodontic Files
- Broken Glass





# Workplace Violence

Workplace violence is a leading cause of occupational injury for healthcare workers, especially staff who provide direct patient care in

- Emergency rooms
- Psychiatric
- Geriatric
- Home care
- Forensic / criminal justice



# Workplace Violence

Workplace violence is a leading cause of occupational injury for healthcare workers, especially staff who provide direct patient care in

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# OSHA Guidelines

- Management Commitment
- Employee Involvement
- Worksite Analysis
- Hazard Prevention & Control
- Recordkeeping
- Evaluations





# OSHA Workplace Violence Webinar

Slides 63 - 86 courtesy:

Jane Lipscomb, RN, PhD  
Professor,  
University of Maryland



# Magnitude of the Problem in U.S.

- Approximately 15% of all non-fatal violence occurs in workplaces (DOJ, 2011)
- 521 homicides/year (BLS, 2009)
- 572,000 victimizations/yr. among public & private sector workers (DOJ, 2002)
- Nearly 60% of non-fatal assaults resulting in lost work days in the healthcare sector (BLS, 2010)
- 13% to 39% of RNs experience physical and non-physical violence per year (Gerberich, 2004)
- Rate of victimization 3 X higher in public vs. private sector



# “Iceberg” of Workplace Violence







# IH Hierarchy of Controls Applied to Workplace Violence

1. Elimination/Substitution
2. **Engineering Controls**
3. **Administrative Controls**
4. PPE



# Exposure

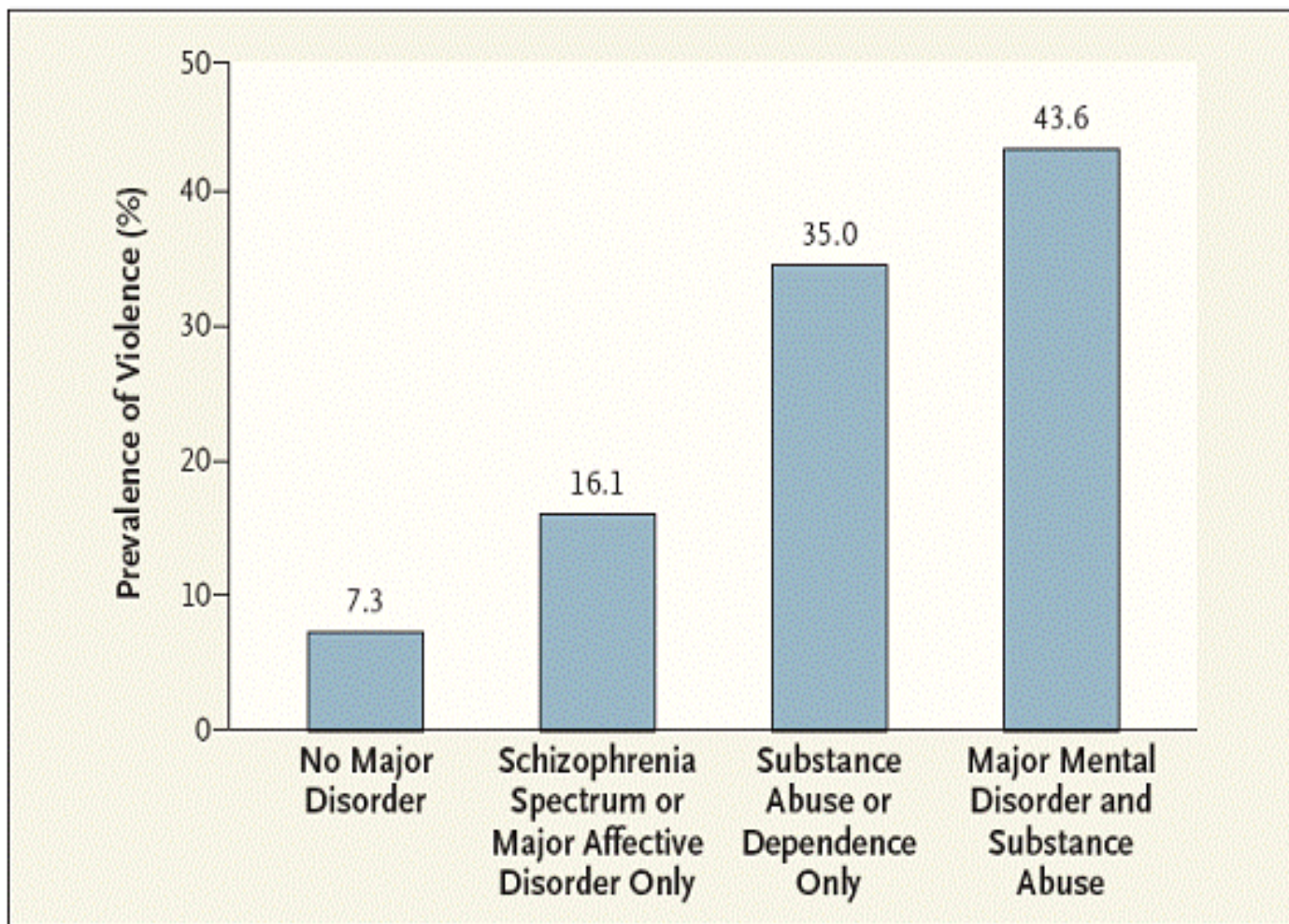
Exposure = patient/client/family/visitor/public

Dynamic and moderated by clinical management, work environment, work organization, worker skills/interactions



# Exposure: Client Characteristics

- **Mental illness**
  - Untreated psychotic symptoms
  - Risk factors associated with illness (e.g. substance abuse, homelessness, incarceration)
- **History of violence (history of trauma)**
- **Cognitive impairment**
  - Elderly, developmentally disabled
- **Substance abuse**
- **Individuals with access to weapons**



Lifetime Prevalence of Violent Behavior among Persons with or without Major Psychiatric Disorders and Substance Abuse.

Friedman, NEJM 2006



# Exposure: Setting Characteristics (Nachreiner, 2007)

- Nursing homes/LTC (OR = 2.6)
- Emergency dept (OR = 4.2)
- Psychiatric dept (OR = 2.0)
- Across settings, cases more likely to report:
  - High levels of work stress
  - Expectation that assault is “part of job”
  - No action taken in response to assault
  - Low morale, lack of respect and trust among personnel



# Risk Factors – Job Tasks

1= Hospital, 2= Community Setting, 3= Home Visiting

- Contact with the public (1,2,3)
- Exchange of money
- Delivery of passengers, goods, or services (2)
- Having a mobile workplace (e.g. taxicab, police cruiser)
- Working with unstable or volatile persons in health care, social service, or criminal justice settings (1,2,3)
- Working alone or in small numbers (2,3)
- Working late at night or during early morning hours (1,2)
- Working in high-crime areas (2, 3)
- Guarding valuable property or possessions (1)
- Working in community-based settings (2,3)

(Collins and Cox 1987; Davis 1987; Davis et al. 1987; Kraus 1987; Lynch 1987; NIOSH 1993; Castillo and Jenkins 1994)



VIOLENCE  
in the Workplace



# Health Care - Institutional Settings

- Institutions for the Developmental Disabled
- Psychiatric institutions (children, adult)
  - Forensic
  - Civil
- Long term care (nursing home, assisted living)
- Acute/tertiary care setting
  - Emergency Department
  - Psychiatric ED/in-patient
  - Geriatric
  - Neurology
  - Obstetrics



# Health Care and Social Services Community-Based Settings\*

- Group homes
  - Mentally ill
  - Developmentally disabled
- Home visiting
  - Mental health
  - Social workers
  - Nurses and aides
- Substance abuse treatment centers
- Homeless shelters
- Community mental health centers
- Clinics/urgent care centers

\* Lower prevalence of assault, but increased severity/risk of fatality





# Home Visiting

- Physical assaults less frequent than in institutional setting
- Risk of injury associated with driving, traveling in high crime areas
- Workers have less control over physical environment (guest in home)
- No support from coworkers
- Risk from firearms, drugs in home
- Visits involving involuntary admission, removal of children from home – very high risk





# Prevention Strategy Across Settings

- Comprehensive Violence Prevention Program
- Recognition of link between patient/staff safety as reflected in culture of safety for both
- Process for determination (and monitoring) of violence of behavioral contracts for high risk clients
- Use of behavioral contracts for high risk clients
- Enforce strict code of behavior and have consequences for violation of code (including pressing criminal charges)



# Safety Culture: What does it look like?

“The organizational commitment to safety is evidenced by the organization’s policies, procedures, management support, and resources dedicated to safety, which include access to effective, appropriate, and state of the art safety equipment.

An institutional commitment to a culture of safety establishes systems, policies, and practices to ensure that safety is the highest priority of the organization.

***If need be, productivity or efficiency are willingly sacrificed in order to maintain safety.”***

IOM 2008

**Patient and Employee Safety are equally valued.**



# Workplace Violence Prevention: What it Looks Like in Practice

- Joint labor/management team
- Ongoing review of incident/injury data
- Review, analyze and revision of policies
- Collect new data where needed (e.g. focus groups, interviews, staff surveys)
- Evaluate physical work environment
- Teamwork to implement changes

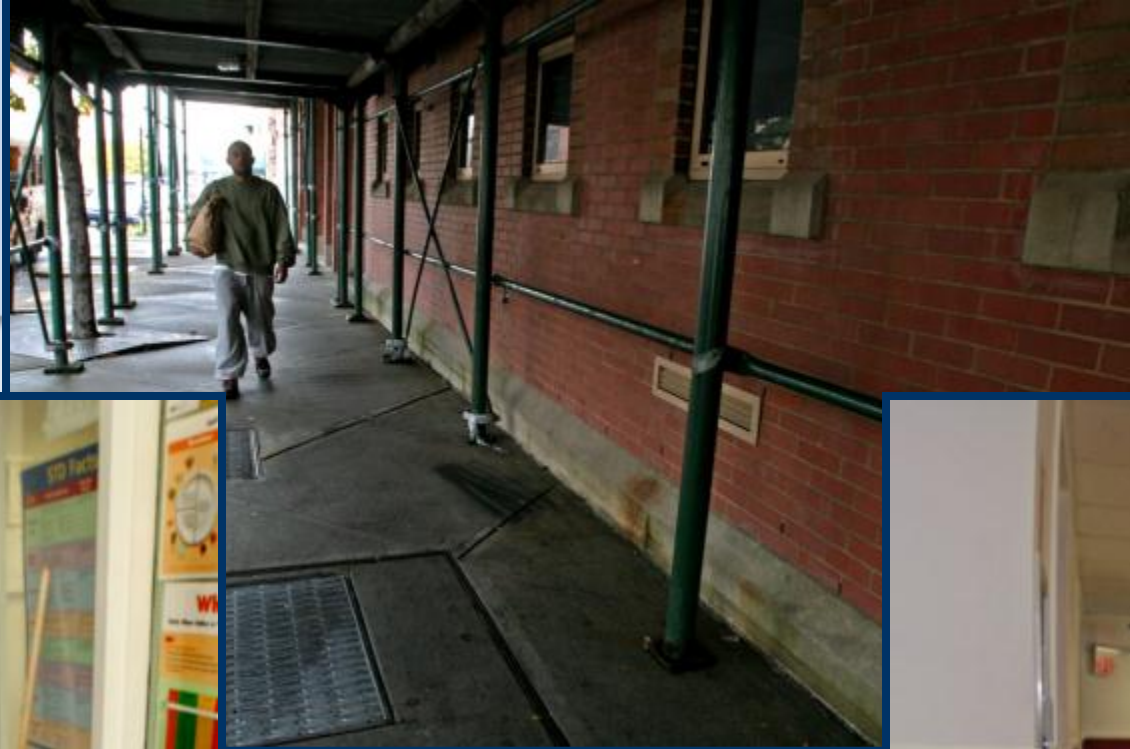


# Environmental Survey Checklist (K. Murrett)

- Lighting, noise, air quality
- Objects/furnishings as weapons
- Sharp edges, hard surfaces
- Access control
- Working in isolation, hidden areas
- Surveillance cameras
- Security hardware, alarm systems

# Environmental Risks







# Environmental Controls

- Arrange furniture to prevent entrapment
- Curved mirrors at hallway intersections
- Comfortable waiting areas for clients/visitors
- Adequate lighting
- Opportunity for passive surveillance
- Panic buttons, cell phones, alarms, cameras, etc.
- Assess construction/renovation plans



# Hazard Controls





# Administrative Controls

- Adequate staffing
- Liaison with police
- Reduce waiting time for clients/visitors
- No solo work in high-risk areas/jobs
- Report/record all incidents
- Availability of patient risk information




# Conducting an Inspection (1)

- Written WVPP?
- Joint labor/management WV or general H&S Committee?
- Designated security personnel?
- Process for hazard assessment?
  - Incident reporting and review
  - Post (critical) incident debrief process
  - Environmental survey/assessment



## Conducting an Inspection (2)

- Patient/client risk of violence determination?
- Communication of risk determination to direct care staff?
- Communication of change in patient behavior/violence risk?
- Availability of additional staff to assist with high risk patients?
- System for rapid communication when staff are threatened?



# Training: Necessary, but Usually Not Sufficient

- WVPP, system for reporting and follow-up
- Risk of particular patient population/setting
- Early intervention de-escalation techniques
- Policy for restraint and seclusion
- Physical intervention techniques (if early intervention fails)



# What Workers Have Reported Across Settings and States

- Patient rights movement creates a huge challenge to staff protection
- Culture that WV is “part of the job”
- Resistance/reprisal for filing criminal charges against patient/client
- Inadequate staffing - very high risk situation
  - Increases patient agitation
  - Makes staff easy targets
- Lack of regulations results in lack of WVP programming, even in high risk settings



# Other Resources

Safe Resident Lifting Program and using mechanical equipment can be found at:

<http://www.cdc.gov/niosh/topics/healthcare/>. Search for NIOSH Publication Number 2006 – 117 *Safe Lifting and Movement of Nursing Home Residents*.

Charney, W. et al. Handbook of Modern Hospital Safety, 2<sup>nd</sup> Ed., CDC Press 2010

Here is a photo of my kids so the presentation must be over







# Tuberculosis

- no specific MIOSHA standard for TB
- Current MIOSHA compliance activities are based on the 2005 CDC Guidelines.
- **MMWR December 30, 2005 / 54(RR17);1-141**



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# TB Risk Classification

- Low risk classification applies to settings in which persons with TB disease are not expected to be encountered, and, therefore exposure to *M. tuberculosis* is unlikely
- Medium risk classification applies to settings in which the risk assessment has determined that employees/health care workers will or will possibly be exposed to persons with TB



# TB Employee Protection

- No MIOSHA Standard but there remain expectations based on CDC guidance.
- The employer shall develop and implement an employer-paid medical surveillance program that includes TB screening program.
- The employer, in covered workplaces, shall offer baseline TB screening to all current employees and new employees who have potential exposure to *M. tuberculosis* using two-step tuberculin skin tests (TST) or a single blood assay for *M. tuberculosis* (BAMT). Baseline TB screening shall be offered within 10 days of hire, and prior to occupational exposure. TB screening, as well as post-exposure follow-up and treatment evaluations shall be offered at no cost to the employees, and at times and locations convenient to the employees.



# TB Screening (Frequency): Low Risk Settings

For low risk settings or  
employees/health care workers:

Annual TB screening is not required  
after baseline screening for  
employees/health care workers whose  
duties do not include contact with  
suspect or confirmed TB patients or  
laboratory/clinical specimens that might  
contain *M. tuberculosis*.



# TB Screening (Frequency): Medium Risk Settings

For medium risk settings or employees/health care workers: In addition to baseline TB screening, the employer shall offer tuberculin skin tests (TST) or blood assay *M. tuberculosis* (BAMT) annually to employees/health care workers who have negative baseline test results.



# TB Ongoing Transmission

In the event of a potential ongoing transmission, the employer shall offer affected employees TB testing to be performed every 8-10 weeks until the cause(s) of the transmission have been corrected, and no additional evidence of ongoing transmission is apparent.



# What to do if an exposure incident occurs?

- Wash exposed area with soap and water
- Flush splashes to nose, mouth, or skin with water
- Irrigate eyes with water or saline
- Report the exposure
- Direct the worker to a healthcare professional







# Regulated vs. Contaminated

- All regulated waste is contaminated.
- Still is best practice to dispose of all sharps in a sharps container.
  
- All contaminated waste is not regulated.
  - Regulated waste is all contaminated sharps, and anything where blood or OPIM can drip from or flake off.

