

BUILDING AN OCCUPATIONAL INFECTION PREVENTION & CONTROL PLAN

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BLOODBORNE PATHOGENS ENFORCEMENT AT THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION: THE FIRST 25 YEARS

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BLOODBORNE PATHOGENS STANDARD

SIMILARITIES TO INFECTIOUS DISEASE
& CORONAVIRUS

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SPECIFIC SECTIONS OF THE STANDARD

- EXPOSURE CONTROL PLAN including annual updates (c)(1)(i); (c)(1)(iv);
 - Frontline employee feedback on device evaluation, selection
- ENGINEERING CONTROLS (safer medical devices); (c)(1)(iv)(B); (c)(1)(v); (d)(2);
- PPE (d)(3) (g)(2);
- WORK PRACTICE controls (d)(2); (e)(2)(ii);
 - Labeling of biohazards (d)(2)(xiii)(A);
 - Proper disposal (d)(4)(iii)(C);
- VACCINATIONS (HBV) (f);
 - Post-Exposure Prophylaxis (f)(1);(f)(3)(vii)
- TRAINING (g)(2);
- RECORDKEEPING, Sharps Injury Log (h)

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METHODS & ANALYSIS

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OVERVIEW

- The authors analyzed enforcement data for OSHA Bloodborne Pathogens Standard citations issued between 1991 and 2015.
- OSHA conducted 31,066 inspections resulting in 77,142 citations.
- Broad trends were evident in two high-level standard categories, Exposure Control Plans and Recordkeeping, with increasing numbers of citations for those two domains.
- Overall, examining OSHA enforcement data may be a useful method of determining changes in safety practices for other infectious diseases.

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CODING

OSHA Information System:

POTH = Planned Other
 PP = Program Planned
 PREL = Program Related
 M = Monitoring
 FU = Follow-up

The others, triggered from the outside, included:

C = Complaint
 F = Fatality
 FC = Fatality/Catastrophe
 REF = Referral
 UNP = Unprogrammed
 UNPREL = Unprogrammed Related
 UNPOTH = Unprogrammed Other

Inspections were assigned a temporal grouping code, by five-year time periods

- (1) 1991-1995,
- (2) 1996-2000,
- (3) 2001-2005,
- (4) 2006-2010, and
- (5) 2011-2014.

Since OSHA reauthorized the BPS, incorporating the NPSA in 2001, therefore time periods 2 and 3 represent a major policy intervention.

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RESULTS

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TOTAL NUMBER OF INSPECTIONS WITH CITATIONS BY TIME PERIOD

Time Period	Years in time period	Number of Inspections	Percent
1	1991-1995	7,657	24.6
2	1996-2000	6,226	20.1
3	2001-2005	7,478	24.1
4	2006-2010	5,664	18.2
5	2011-2014	4,041	13.0
TOTAL	ALL	31,066	100.0%

Major Event
NPSA

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TOTAL NUMBER OF CITATIONS FOR OSHA BLOODBORNE PATHOGENS STANDARD BY MAJOR PARAGRAPH, 1991-2014

Paragraph	Number of Inspections with at least one citation	Percentage of Inspections with at least one citation	Number of Citations	Percent of Total Citations	Citations per Total Inspections
C. Exposure Control Plan	20,871	67.2	26,239	33.99	0.84
D. Engineering and Work Practice Controls	9,242	29.7	14,891	19.29	0.48
E. HIV/HBV Research Laboratories and Production	9,281	29.9	76	0.1	0.00
F. HBV/Post-Exposure Prophylaxis	10,137	32.6	12,743	16.51	0.41
G. Communication of Hazards to Employees	12,791	41.2	15,987	20.71	0.51
H. Recordkeeping	4,985	16.0	7,206	9.33	0.23
TOTAL	31,066		77,142		2.47

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PERCENT CHANGE BY TIME PERIOD* OF CITATIONS OF HIGH INTEREST, 1991-2014



* Time Period 1 = 1991-1995; 2 = 1996-2000; 3 = 2001-2005; 4 = 2006-2010; and 5 = 2011-2014

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ENFORCEMENT & PROTECTION OF WORKFORCE

- OSHA enforcement is a necessary element in driving employers to provide the safest possible work environments to protect overall public health
 - What about what's next? Globally emerging pathogens like Zika and Ebola.
- Since new clusters of pathogens emerge annually in the communities, it is essential that we keep those caring for the sick, safe and well.
- An increase in vulnerable populations and reduced access to healthcare enhances the need for compliance programs – environmental justice and health disparities

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FUTURE RESEARCH & POLICY NEEDS FOR AN ETS OR ID STANDARD

- Does OSHA compliance with a standard mean protected workplaces?
- Do reduced numbers of citations mean employers are complying?
 – Do increased numbers of inspections mean they aren't?
- Why haven't we built better regulations and policy based on data already?
- Should facilities be compelled to report injuries/exposure to OSHA? BLS?

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MAKE DATA INFORMED DECISIONS FOR ASSESSING RISK

... but HOW?

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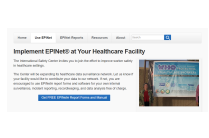
EPINet Sharps Injury and Blood and Body Fluid Data Reports

Since 1992, hospitals have submitted data on occupational exposures to blood and body fluids.

This group, known as the U.S. EPINet Sharps Injury and Blood and Body Fluid Exposure Surveillance Research Group (or EPINet Research Group), originally included three distinct groups of healthcare facilities.

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Sharp Object Injury Reports	Blood and Body Fluid Exposure Reports
<ul style="list-style-type: none"> 2019 Sharps Injury and Blood and Body Fluid Exposure Report 2018 Sharps Injury and Blood and Body Fluid Exposure Report 2017 Sharps Injury and Blood and Body Fluid Exposure Report 2016 Sharps Injury and Blood and Body Fluid Exposure Report 2015 Sharps Injury and Blood and Body Fluid Exposure Report 2014 Sharps Injury and Blood and Body Fluid Exposure Report 2013 Sharps Injury and Blood and Body Fluid Exposure Report 2012 Sharps Injury and Blood and Body Fluid Exposure Report 2011 Sharps Injury and Blood and Body Fluid Exposure Report 2010 Sharps Injury and Blood and Body Fluid Exposure Report 2009 Sharps Injury and Blood and Body Fluid Exposure Report 2008 Sharps Injury and Blood and Body Fluid Exposure Report 2007 Sharps Injury and Blood and Body Fluid Exposure Report 2006 Sharps Injury and Blood and Body Fluid Exposure Report 2005 Sharps Injury and Blood and Body Fluid Exposure Report 2004 Sharps Injury and Blood and Body Fluid Exposure Report 2003 Sharps Injury and Blood and Body Fluid Exposure Report 2002 Sharps Injury and Blood and Body Fluid Exposure Report 2001 Sharps Injury and Blood and Body Fluid Exposure Report 2000 Sharps Injury and Blood and Body Fluid Exposure Report 	<ul style="list-style-type: none"> 2019 Blood and Body Fluid Exposure Report 2018 Blood and Body Fluid Exposure Report 2017 Blood and Body Fluid Exposure Report 2016 Blood and Body Fluid Exposure Report 2015 Blood and Body Fluid Exposure Report 2014 Blood and Body Fluid Exposure Report 2013 Blood and Body Fluid Exposure Report 2012 Blood and Body Fluid Exposure Report 2011 Blood and Body Fluid Exposure Report 2010 Blood and Body Fluid Exposure Report 2009 Blood and Body Fluid Exposure Report 2008 Blood and Body Fluid Exposure Report 2007 Blood and Body Fluid Exposure Report 2006 Blood and Body Fluid Exposure Report 2005 Blood and Body Fluid Exposure Report 2004 Blood and Body Fluid Exposure Report 2003 Blood and Body Fluid Exposure Report 2002 Blood and Body Fluid Exposure Report 2001 Blood and Body Fluid Exposure Report 2000 Blood and Body Fluid Exposure Report

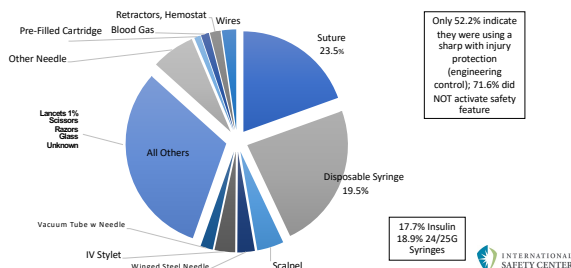


Needlestick and Sharp Object Injuries

Exposure Prevention Information Network (EPINet®)

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Sharp Object Injury & Needlestick Summary Data; N=36 US Health Systems, EPINet 2019



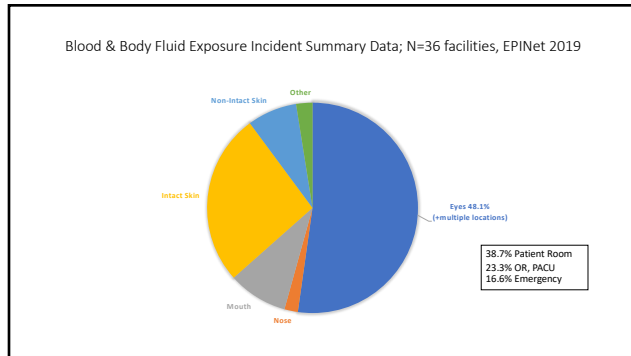
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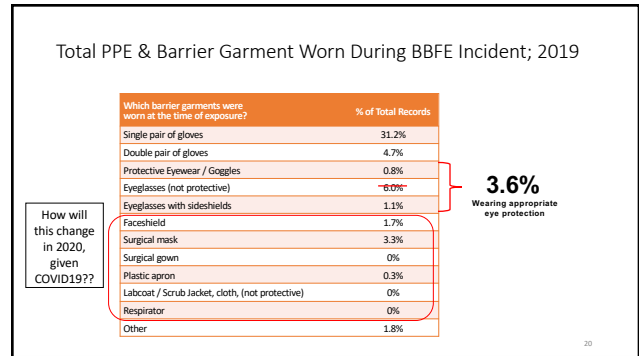
Blood & Body Fluid Exposure (BBFE) Incidents

Non-Sharps

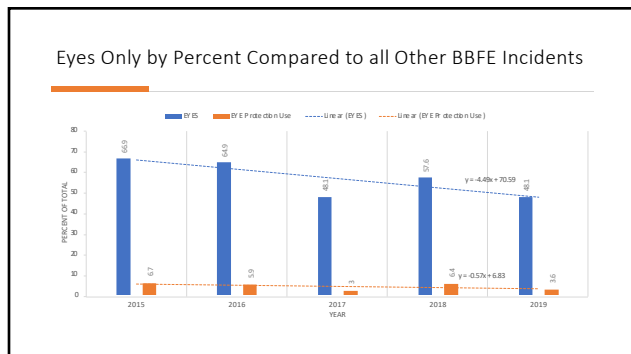
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LEARNING FROM THE PAST AND BUILDING FOR THE FUTURE

- Infection prevention and control programs based on hospital and patient models; not industry and worker models
- Similarities with SARS
 - Original epidemic in 2000s
 - Pandemic proportions in 2019/2020
- Largest percentage of citations were simply building an Exposure Control Plan!
- Huge failures in use of Engineering Controls & PPE, based on data already public.

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Honoring the 20th Anniversary of the Needlestick Safety and Prevention Act

Moving the Sharps Safety in Healthcare Agenda Forward in the United States: 2020 Consensus Statement and Call to Action. 20th Anniversary of the Needlestick Safety and Prevention Act.

[View Document](https://internationalsafetycenter.org/resources/)

<https://internationalsafetycenter.org/resources/>

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Table 2. Recommendations for Preventing Sharp Injuries

Device and/or Work Practice	Recommendation	Hierarchy of Controls per CDC/NIOSH
Disposable, Hypodermic Needs	Include devices with SSP features in pre-packaged kits and trays. Convert to devices with SSP features. Select the right gauge and length needle to fit hand and causing a possible exposure to the	EC EC
Suture Needle	Evaluate alternative methods of skin closure: adhesives, staples, suture clips, etc. to re-evaluate the use of blunt tip suture needles to	
Blunt and Specimen Collection	Increase the use of devices with SSP features. Increase the use of blunt and/or needleless blood transfer devices.	EC EC, NIP
Scalpel Blade	Increase the use of scalpels with retracting blades/handles.	EC
Hand-to-Hand Passing	Implement a hands passing to protect surgical teams. Use neutral zones.	EC, NIP NIP/AC
Double Gloving	Use two sets of gloves during invasive surgical procedures. Identify the outer gloves as a different color than the outer gloves to easily identify any tears.	PPE
Activation of SSP Feature	Increase training and provide opportunities for hands-on training to improve competence with SSP feature activation immediately following use. Increase placement of sharps containers, so that the containers are as close to the point of use as possible.	EC, EC, NIP/AC EC, NIP/AC
Disposal	Increase compliance with immediate disposal of devices.	NIP/AC

NIP = Needle-Injection Protection; NIP/AC = Needle-Injection Protection/Active Control; EC = Engineering Controls; PPE = Personal Protective Equipment

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Testimonials from critical care nurses

- "The infection control cart is no where nearby when I need it."
- "There is never the PPE on there that I need, when I need it."
- "Where's the eye protection? I don't even know where they keep it."
- "My other place was so much safer, there was PPE everywhere you turned. Here, at this new place, I have no idea where it is? How come that's ok?"
- "Sure, there are gloves in the room and sometimes gowns, but never safety devices or anything to protect my face. And, that's where I've gotten splashed before."

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Improving accessibility & visual cues

Not an Endorsement

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Innovations in textiles

Not an Endorsement

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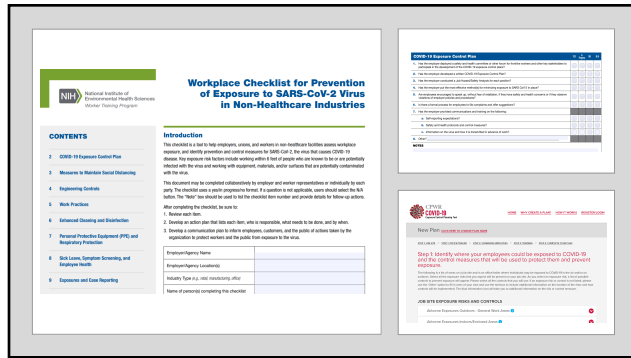
MAKE BUILDING & EXECUTING A PLAN CENTRAL TO PREVENTION

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Sample Plans

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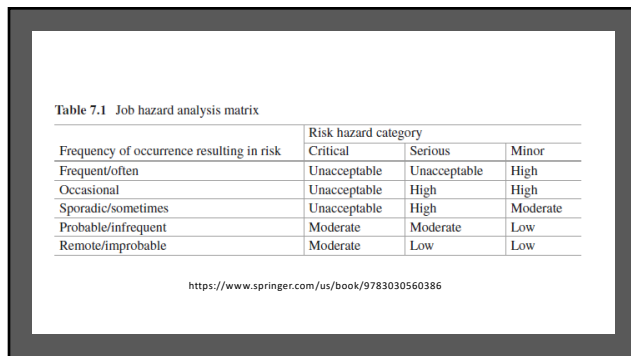
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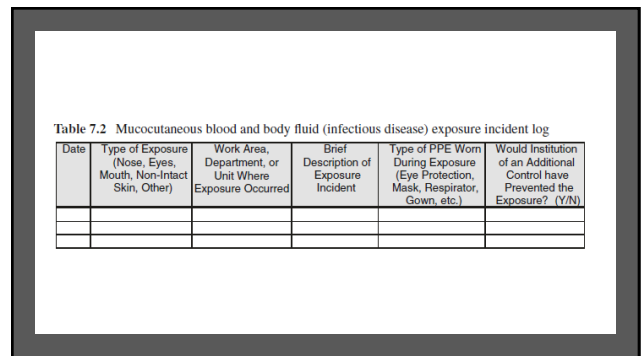
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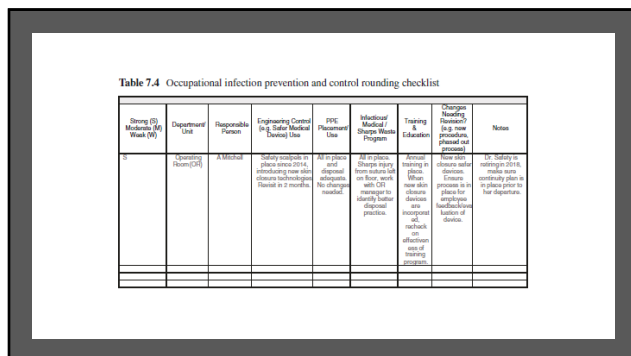
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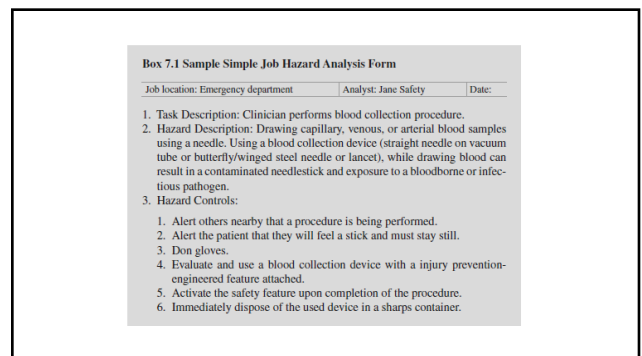
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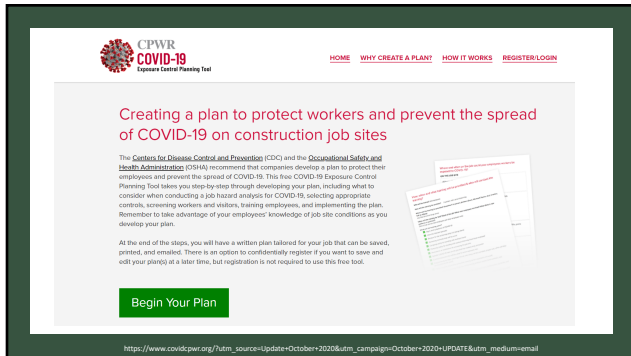


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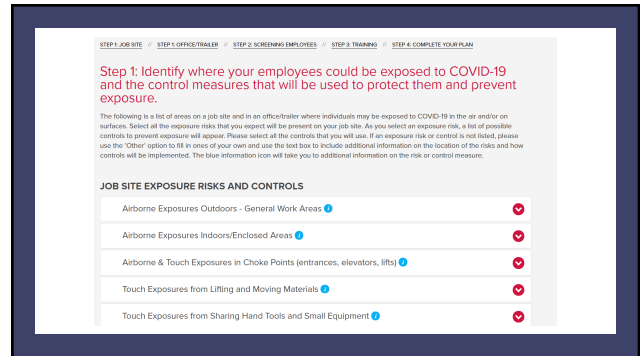


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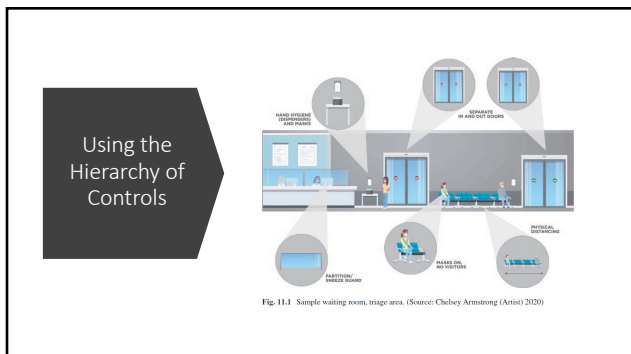
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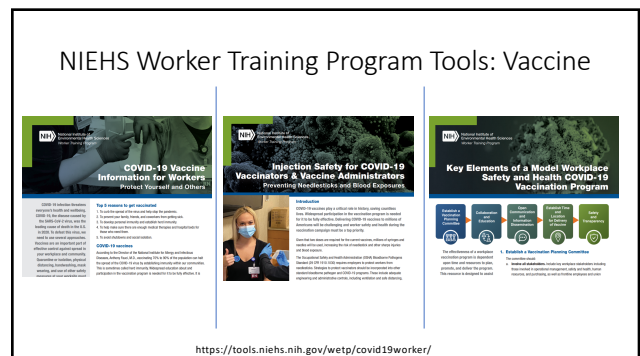
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