Injection Safety

Basics of Infection Prevention
2-Day Mini-Course
May 2017
Objectives

• Discuss the risks associated with unsafe injection practices
• Promote use of the Injection Safety Checklist
• Discuss a safety culture for healthcare workers
• Describe methods to create an institution-wide program for injection safety
• List resources for a SIP program
Hepatitis B and C Outbreaks Associated with Unsafe Injection Practices

- 44 outbreaks of hepatitis B and C were identified in non-hospital settings in the US from 2008-2014
- Of these, 6 outbreaks were in California
  - 2678 persons notified and screened
  - 27 cases of Hepatitis B or C identified
- The outbreaks occurred in:
  - 2 skilled nursing facilities
  - 2 assisted living facilities
  - A pain management clinic
  - An outpatient dialysis clinic
California Hepatitis Outbreaks - Cause

• According to CDC, the California outbreaks occurred because of injection safety breaches at the facilities, including:
  – Reuse of syringes
  – Contaminated medication vials used for more than one patient
  – Use of single-dose vials for more than one patient
What are Safe Injection Practices?

• A set of measures to perform injections in an optimally safe manner for patients, healthcare providers, and others
• Prevent transmission of infection from:
  – Patient to provider
  – Provider to patient
  – Patient to patient
Safe Injection Practices Are Part of Standard Precautions

• Hand hygiene
• Use of personal protective equipment
• Safe injection practices
• Safe handling of potentially contaminated equipment or surfaces in the patient environment.
• Respiratory hygiene/cough etiquette
“Safe Injection = No Infection”

Injection safety includes:

1. Safe production (sterile medication)
2. Safe preparation (right dose, prepare in a clean area)
3. Safe Administration (adherence to Standard Precautions)
4. Safe disposal (minimize risks to the patient and healthcare provider)
Aseptic Technique During the Preparation and Administration of Injected Medications

• Perform hand hygiene
• Medications should be drawn up in a designated clean medication area not adjacent to areas where potentially contaminated items are placed
Needles and Syringes – One Time Use Only

• Used for only one patient
• Includes manufactured prefilled syringes
  – Cartridge devices
  – Insulin pens
Injection Safety for Diabetic Patients

• Insulin pens that contain more than one dose of insulin are only meant for one person

• For glucose testing, clean the glucometer after every use
Always Clean the Tops of Medication Vials Before Entry

• Cleanse access diaphragms of medication vials using friction, with 70% alcohol, and allow the alcohol to dry before inserting a device into the vial.
• Clean the tops of the vials with alcohol even when they have lids or caps.
• Manufacturers guarantee the sterility of medications and IV solutions; this may not include a guarantee of sterility of the outside of the container or medication vial.
Single-dose Vials Are for One Patient & Only Once

- Single-dose medications should be used only for a single patient.
  - Carefully read the label of the vial of medication to determine if single use
- Never enter a medication vial with a used syringe or needle
- If vial says single-dose and has already been accessed, throw it away
  - Single use medications should not be stored for future use
  - Discard according to the manufacturer’s expiration date

*When in doubt throw it out!*
Limit the Use of Multi-dose Vials

• Limit the use of multi-dose vials
  – When possible, dedicate them to a single patient
• A multiple–dose vial is recognized by its FDA-approved label
• Discard MDVs when the beyond-use date has been reached
• Any time the sterility of the vial is in question, throw it out
When Multi-dose Vials Are Used...

- Multi-dose vials used for more than one patient must be kept in a centralized medication area.
- Multi-dose vials should never enter the immediate patient treatment area, including:
  - Patient rooms/cubicles and
  - Operating rooms
- Multi-dose vials should be dated by the healthcare worker when first opened and discarded within 28 days
  - Unless the manufacturer specifies a different (shorter) expiration date for an opened vial
Bags of Intravenous Solutions Should be Used for One Patient Only

• Do not use bags of intravenous solution as a common source of supply for more than one patient
  – Everything from the medication bag to the patient's IV catheter is a single interconnected unit
One and Only Injection Safety Checklist

- Used to audit your facility’s injection safety practices
Sharps Safety

- Contaminated sharps devices can puncture or cut skin
- Approximately 385,000 needle sticks and other sharps-related injuries occur in hospital-based healthcare personnel each year
If You Are Accidently Stuck By a Used Needle or Exposed to Blood or Other Bodily Secretions

• Wash the needle stick site or cut with soap and water until clean
• Flush splashes to the nose, mouth, or skin with water
• Irrigate eyes with clean water, saline, or sterile irrigant
• Report the incident to your supervisor immediately
• Immediately seek medical evaluation per your facility's policy
Why Sharps Injuries Occur in Healthcare

- Injuries occur most frequently due to inappropriate sharps disposal practices by healthcare workers, such as:
  - Insufficient maintenance of sharps containers in every area
  - Improper design of sharps disposal container
  - Inappropriate placement of sharps disposal container
  - Overfilling sharps disposal container
Sharps Disposal Containers

• Sharps disposal containers must:
  – Be puncture-resistant, durable during installation and transport, and of appropriate size and shape for the task
  – Be clearly visible
  – Be easy to access by being placed in an upright position and easy to operate
  – Have ease of storage and assembly, require minimal worker training requirements, be easy to operate, and have a flexible design

Reduce the Risk of Blood Contact

• Follow CalOSHA requirements & CDC guidelines
  – Establish an exposure control plan
  – Use labels and signs to communicate hazards
  – Provide information and training to workers
  – Make available hepatitis B vaccinations to all workers who may have occupational exposures to blood/body fluids
  – Identify and use engineering controls.
  – Implement the use of universal precautions
CDC Recommendations for Improving Injection Safety at Healthcare Facilities

- Designate someone to provide ongoing oversight for infection control issues
- Develop written infection control policies
- Provide training
- Conduct quality assurance assessments
- Establish a “culture of safety”
Establishing a Culture of Safety

- Introduce workers to a safety culture when they are first hired
- Have written safety guidelines and policies
- Engage worker participation in safety planning
- Make available appropriate safety devices and protective equipment. Include healthcare workers in the selection process
Organizational Steps to Ensure Safe Injection Practices

Step 1-2
- Develop Organizational Capacity
- Assess Program Operation Processes

Step 3-4
- Prepare Baseline Profile of Injuries and Prevention Activities
- Determine Intervention Priorities

Step 5-6
- Develop and Implement Action Plans
- Monitor Performance Improvement
Step 1: Develop Organizational Capacity

- Create an institution-wide injection safety program
- Engage a leadership team focused on eliminating unsafe injection practices
- Create an administration commitment to the program
- Involve senior-level management
- Involve a small core group of clinical staff on team
Step 2: Assess Program Operation Processes

- Assess the safety culture
- Analyze existing data
- Develop a feedback system
- Promote individual accountability for safety
- Determine educational needs of workers
Step 3: Prepare Baseline Profile of Injuries and Prevention Activities

• How many unsafe injection practices have been reported?
• In the past year, what proportion of injuries occurred due to the following circumstances?
  – Manipulating needle in patient
  – Manipulating needle in IV line
  – Recapping, discarding sharp into container, discarding sharps improperly
Step 4: Determine Intervention Priorities

- Injection safety should have priority attention
- Establish an action plan for performance improvement
- List priorities for improvement, as identified in the baseline assessment
- Specify which interventions will be used
- Identify performance improvement measures
- Establish time lines and define responsibilities
Step 5: Develop and Implement Action Plans

• The baseline profile will identify the strengths and weaknesses of the organization’s injection safety and injury prevention programs.

• Team can create a list of priorities for performance improvement and then decide how to accomplish the necessary tasks.

• Team should be sure that the areas for process improvement are clear and measurable.

• To increase the likelihood of success, only a few improvements should be taken on at a time.
Step 6: Monitor Performance Improvement

- Develop a checklist of activities
- Create and monitor a time line for implementation
- Schedule periodic reviews for assessing performance improvements
Summary

• Safe injection practices prevent the infection transmission / outbreaks of bloodborne diseases to both patients and healthcare providers

• Healthcare facilities should evaluate their injection safety practices and, as needed, implement a 6-step program to improve injection safety
Drug diversion

• Illegally obtaining or using prescription medications
• Increase in diversion events driven by opioid epidemic
• Diversion by healthcare workers may result in:
  – Substandard care delivered by an impaired healthcare provider,
  – Denial of essential pain medication or therapy, or
  – Risks of infection (e.g., with hepatitis C virus or bacterial pathogens) if a provider tampers with injectable drugs.
Outbreaks related to drug diversion events

Response to drug diversion events

• Assess harm to patients
• Consult with public health officials when tampering with injectable medication is suspected
• Promptly report event to law and other enforcement agencies (DEA, FDA)
Prevention of drug diversion

- Drug diversion monitoring program, including narcotic log
- Train staff to recognize signs of drug abuse, requirements to report misconduct, and what constitutes “significant loss” of medication
- Environmental controls
  - Where to store medications; who has access
  - How to handle unused medications
Resources

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People™

Injection Safety

Injected medicines are commonly used in healthcare settings for the prevention, diagnosis, and treatment of various illnesses. Unsafe injection practices put patients and healthcare providers at risk of infectious and non-infectious adverse events and have been associated with a wide variety of procedures and settings. This harm is preventable. Safe injection practices are part of Standard Precautions and are aimed at maintaining basic levels of patient safety and provider protections. As defined by the World Health Organization, a safe injection does not harm the recipient, does not expose the provider to any avoidable risks and does not result in waste that is dangerous for the community. Visit the page on CDC’s role in safe injection practices.

FREE Resources
Order injection safety educational materials today!

www.cdc.gov/injectionsafety
Resources, cont.

Workbook for Designing, Implementing, and Evaluating a Sharps Injury Prevention Program

A workbook designed for:
- Infection Control & Occupational Health Personnel
- Healthcare Administrators
- Sharps Injury Prevention Committees

Safe Injection Practices Coalition (SIPC)

The Safe Injection Practices Coalition (SIPC) is a partnership of healthcare-related organizations, patient advocacy organizations, industry partners, and other public health partners, led by the Centers for Disease Control and Prevention (CDC)
Cal/OSHA

The California Department of Industrial Relations Division of Occupational Safety and Health, better known as Cal/OSHA, protects workers from health and safety hazards on the job in almost every workplace in California through its research and standards, enforcement, and consultation programs.
One and Only Partner State

California

News & Events

Injection Safety Newsletter
Check out the California One and Only Campaign newsletter by clicking here.

Injection Safety is Everyone’s Responsibility
The Centers for Disease Control and Prevention (CDC) estimate that in recent years, unsafe injection practices have affected more than 150,000 patients in the United States, including 11,500 in California. CDC recommends that healthcare providers NEVER administer medications from the same syringe to more than one patient, even if the needle is changed. It is your right to know that your provider will use a new syringe and new needle every time.

The California One & Only Campaign encourages healthcare organizations and individuals to promote public awareness of safe injection practices. To become a member of the California One & Only Campaign, click here.

Hepatitis B and C Outbreaks in California

USE AN INJECTION SAFETY CHECKLIST
It is every patient’s right to receive a safe injection. Are healthcare workers always following safe injection practices at YOUR facility? Safe injection practices are a set of measures that define how to give injections in a safe manner for patients and healthcare providers.

The California One & Only Campaign encourages healthcare workers to review and use the Injection Safety Checklist to assess their practices. The checklist, developed by CDC and the Safe Injection Practices Coalition, includes nine observations to help healthcare workers ensure they are adhering to safe injection practices during the care of patients.

To download and share the Injection Safety Checklist, click here.

WHEN IN DOUBT, THROW IT OUT!

www.oneandonlycampaign.org/partner/california
Questions?