Safe Injection Practices

Clean Hands-Safe Injections Initiative
Glendale
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Center for Health Care Quality
Objectives

- Discuss risks due to unsafe injection practices
- Describe safe injection practices
- Locate resources for a Safe Injection Practices program
Unsafe Practices That Lead to Infection

- Using the same needle on multiple patients
- Switching the needle in between patients but using the same syringe
- Reusing cartridges or reusing insulin pens
- Attempting to disinfect a needle with alcohol in between patients

http://www.cdc.gov/injectionsafety/providers.html
Common Reasons For Unsafe Injection Practices

• Lack of safe injection policies at healthcare facility
• Staff are poorly trained or unaware of safe injection practices
• Healthcare provider is rushed and takes a shortcut
• Healthcare provider learned safe injection practices at one time but has forgotten
Transmission of Hepatitis C in an Ambulatory Surgery Center (ASC)

- Occurred in New Jersey, 2011
- Patient, age 65, diagnosed with acute hepatitis C (HCV) infection
  - No traditional risk factors elicited
  - Had ambulatory gynecologic surgery during the incubation period
- Chart review conducted for all patients who had surgery on the same day
  - Identified a patient with known chronic HCV who had surgery prior to index case
Transmission of Hepatitis C in an ASC (continued)

- Commonalities of ASC care for the two patients included two surgical nurses, the anesthesiologist, the anesthesia cart, propofol
  - Only the anesthesiologist performed invasive procedures on both patients
  - The only common medication was propofol
  - The same anesthesia cart was used for both
Transmission of Hepatitis C in an ASC (continued)

Public health investigation revealed:
- ASC had no policies for stocking or cleaning carts between cases
- Preparation of medication in patient care area on top of cart
- No pharmacy accounting system to ensure appropriate use of single-dose vials

Recommendations:
- Do not prepare medications on potentially contaminated surfaces
- Ensure policies and procedures for cleaning environmental surfaces between patients
Transmission of Hepatitis C in an ASC (continued)
Hepatitis B and C Outbreaks Due to Unsafe Injection Practices

- 44 hepatitis outbreaks in non-hospitals settings reported to CDC from 2008-2014

**Common breaches of infection prevention practice from the reported HBV/HCV outbreaks**

- Failure to properly sterilize equipment in between patients
- Using the same finger stick device on more than one patient
- Reusing syringes on multiple patients
- Using single-dose vials on multiple patients
- Not separating clean and contaminated equipment
- Using a single saline bag on more than one patient

CDC, 2015
Unsafe Injection Practices in California

- Six of the 44 HCV/HBV outbreaks reported to CDC were from California
  - 2678 people sent notices and tested
  - 27 cases of hepatitis B or C transmission
- Cause of CA outbreaks → injection safety breaches
  - Reuse of syringes on more than one patient
  - Contaminated medication vials used for more than one patient
  - Use of single-dose vials for more than one patient

Assessment of ASC Infection Control and Safe Injections Practices

- In 2008, a series of investigations were conducted at 68 ASCs in the US through the Centers for Medicare & Medicaid Services (CMS)
  - 57% of the centers were cited for infection control
  - Many citations were related to using single-dose vial medications on multiple patients
  - A high number of ASCs failed to clean and disinfect blood glucose meters after each use

Assessment of ASC Infection Control and Safe Injections Practices (Continued)

- 68% of ASCs had at least one lapse in infection control
- 18% of ASCs had lapses in >3 of the five infection control categories assessed

<table>
<thead>
<tr>
<th>Infection Control Category Assessed</th>
<th>% of ASCs with Lapses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand Hygiene and Use of Gloves</td>
<td>19%</td>
</tr>
<tr>
<td>Injection Safety and Medication Handling</td>
<td>28%</td>
</tr>
<tr>
<td>Equipment Reprocessing</td>
<td>28%</td>
</tr>
<tr>
<td>Environmental Cleaning</td>
<td>19%</td>
</tr>
<tr>
<td>Handling of Blood Glucose Monitoring Equipment</td>
<td>46%</td>
</tr>
</tbody>
</table>

JAMA. 2010; 303(22):2273-2279
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

Standard precautions also include

- Hand hygiene
- Personal protective equipment (gloves, gowns, masks)
- Safe handling of soiled equipment or surfaces
- Respiratory hygiene and cough etiquette
“Safe Injection = No Infection”

Injection safety includes

1. Safe production
   • Sterile medications from manufacturer

2. Safe preparation
   • Prepare in a clean area

3. Safe Administration
   • Follow standard precautions

4. Safe disposal
   • Minimize risks to the patient and healthcare provider
Needles and Syringes: **One Time Use Only**

- Use **needles** for only one patient
- Use **syringes** only one time
- Use manufactured prefilled syringes for only one patient
- Use cartridge devices for only one patient
- Use insulin pens for only one patient

www.oneandonlycampaign.org
Single-dose Vials: One Patient & Only Once

- Use single-dose medications for only one patient
- Read the label on medication vials carefully! Determine if single use
- Never enter a medication vial with a used syringe or needle
- If the vial says single-dose, throw it away after it has been accessed
- Do not store single use medications for future use
- Discard unused single-dose medications when expired

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 multi-dose vials 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...

For multi-dose vials used for more than one patient

- Keep in a medication area
- Never take into a patient treatment area
  - Patient rooms or cubicles
  - Operating rooms
- Date the multi-dose vial when first opened
- Discard within 28 days
  - Unless the manufacturer recommends a shorter expiration period
Aseptic Technique for Preparing Injected Medications

• Perform hand hygiene

• Draw up medications in a clean medication area
  ▫ The designated medication area should **not** be near areas where contaminated items are placed
Always Clean the Tops of Medication Vials Before Entry

- Cleanse the diaphragm of medication vials using friction with 70% alcohol
- Allow the alcohol to dry before inserting a needle or device into the vial

Note: Clean even if the vial comes with a hard lid or cap
- Manufacturers guarantee medications and solutions are sterile
- Do not guarantee the outside of the container or medication vial is sterile
Bags of Intravenous (IV) Solutions Should be Used for One Patient Only

- Do not use bags of IV 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
Special Considerations for Diabetic Patients

- Diabetic patients use needles frequently in the care and management of their disease
- Never allow reuse of insulin pens on more than one patient
  - It is not safe to change the needle on insulin pens for use on more than one patient
- Lancets used for blood glucose testing are designed for one patient only
  - Using lancets on multiple patients can lead to infections

Injection Safety for Diabetic Patients

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

• For glucose testing, clean the **glucometer** after every use
CDC Recommendations for Improving Injection Safety at Healthcare Facilities

- Designate a staff member to oversee infection control
- Develop written infection control policies
- Provide training
- Conduct 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
The Injection Safety Checklist

- Used to assess your facility’s injection safety practices
- Download and share the Injection Safety Checklist:

  www.cdc.gov/injectionsafety/PDF/SIPC_Checklist.pdf

### Injection Safety Checklist

<table>
<thead>
<tr>
<th>Injection Safety</th>
<th>Practice Performed?</th>
<th>If answer is No, document plan for remediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injections are prepared using aseptic technique in a clean area free from contamination or contact with blood, body fluids or contaminated equipment.</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>Needles and syringes are used for only one patient (this includes manufactured prefilled syringes and cartridge devices such as insulin pens).</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>The rubber septum on a medication vial is disinfected with alcohol prior to piercing</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>Medication vials are entered with a new needle and a new syringe, even when obtaining additional doses for the same patient.</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>Single dose (single-use) medication vials, ampules, and bags or bottles of intravenous solution are used for only one patient.</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>Medication administration tubing and connectors are used for only one patient.</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>Multi-dose vials are dated by HCP when they are first opened and discarded within 28 days unless the manufacturer specifies a different (shorter or longer) date for that opened vial. Note: This is different from the expiration date printed on the vial.</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>Multi-dose vials are dedicated to individual patients whenever possible.</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>Multi-dose vials to be used for more than one patient are kept in a centralized medication area and do not enter the immediate patient treatment area (e.g., operating room, patient room/cubicle). Note: If multi-dose vials enter the immediate patient treatment area they should be dedicated for single-patient use and discarded immediately after use.</td>
<td>Yes No</td>
<td></td>
</tr>
</tbody>
</table>
Summary

• Safe injection practices reduce the risk of infections
  • They protect both patients and healthcare providers

• Evaluate your facility’s injection safety practices
  • Use the injection safety checklist

• Always follow Standard Precautions
  • Every time
  • With every patient
Where Can I Learn More?

Safe Injection Practices Coalition
www.ONEandONLYcampaign.org
The California One & Only Campaign

www.cdph.ca.gov/HAI

Healthcare-Associated Infections (HAI) Program

The Healthcare-Associated Infections (HAI) Program is one of two programs in the Center for Health Care Quality of the California Department of Public Health. The Program was created by mandate to oversee the prevention, surveillance and reporting of healthcare-associated infections in California's general acute care hospitals. HAIs are the most common complication of hospital care. It is estimated that each year there are 722,000 infections, 75,000 deaths, and 1 in 25 hospital patients at any given time have an infection contracted during the course of their hospital care. HAIs result in an estimated $30 billion in excess healthcare costs nationally each year. Since 2010, the HAI Program has: produced annual public reports of hospital HAI data to inform choices of healthcare consumers and prompt providers to take actions to prevent infections; actively engaged in HAI prevention by performing site visits to hospitals with high infection rates; convening prevention collaboratives, and providing infection prevention education; and provided consultation and assistance to local public health for infection outbreaks that occur in healthcare facilities. The vision of the HAI Program is to eliminate HAIs for all Californians.

What You Can Do To Prevent HAI

Public Reporting - Preventing Hospital Infections

New HAI Information and Reports
2014 HAI Annual Report Now Published

New My Hospital's Infections Map
Interactive Map 2014 Data -- This map can be used with some mobile devices and tablets.

New Healthcare Personnel Influenza Vaccination Reports
Annual Report Now Published for 2014-2015 Respiratory Season

New Healthcare Associated Infections - Advisory Committee

New Pages
- California One and Only Campaign - Injection Safety
- California Campaign to Prevent Bloodstream Infections in Hemodialysis Patients
- Immediate Need for Healthcare Facilities to Review Procedures for Cleaning, Disinfecting, and Sterilizing Reusable Medical Devices
- CDC and FDA Alert issued 9/11/15

Resources
- Association of Professionals in Infection Control and Hospital Epidemiology (APIC) -- selected links
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
CDC summarized 44 healthcare-associated outbreaks of hepatitis B and C in non-hospital settings from 2008-2014. Six of the outbreaks occurred in California; 2700 people were notified of possible exposure and 27 patients were found to be infected. The outbreaks occurred in two skilled nursing facilities, two assisted living facilities, a pain management clinic, and an outpatient dialysis clinic. Unsafe injection practices that resulted in these infections included reusing
Preventing Unsafe Injection Practices

Safe Injection Practices are a set of recommendations within Standard Precautions, which are the foundation for preventing transmission of infections during patient care in all healthcare settings including hospitals, long-term care facilities, ambulatory care, home care and hospice. The most recent guideline outlining Standard Precautions is the Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007.

  - [PDF - 3.80 MB]
- Excerpt: Safe Injection Practices to Prevent Transmission of Infections to Patients

CDC Clinical Reminders
- Insulin Pens Must Never Be Used for More than One Person
- Spinal Injection Procedures Performed without a Facemask Pose Risk for Bacterial Meningitis
- Use of Fingerstick Devices on More than One Person Poses Risk for Transmitting Bloodborne Pathogens

www.cdc.gov/injectionsafety
www.cdc.gov/injectionsafety/1anOnly.html
Safe Injection Practices Coalition

- A partnership of healthcare, patient advocacy, industry partners, and public health
- Led by CDC

www.oneandonlycampaign.org/content/coalition
Cal/OSHA

- Protects workers from health and safety hazards on the job
- Laws for almost every workplace in California, including healthcare

www.dir.ca.gov/dosh/Safe%20Patient%20Handling%20FAQ.pdf
One and Only Campaign Resources

- Injection Safety Checklist
- Videos
- PowerPoints
- Brochures
- Articles
- Posters
- + More!

http://www.oneandonlycampaign.org/content/print-materials
Questions?

For more information, please contact
The HAI Program at
HAIProgram@cdph.ca.gov

Thank you