Hepatitis C Prevention through Injection Safety

Evelyn McKnight, president
www.HONORReform.org
Unsafe injections spread disease
The only national advocacy organization dedicated to safeguarding the medical injection process

Our vision is a world in which healthcare providers always follow fundamental injection safety
What happened to the victims?

99 cases of HCV

6 deaths

89 lawsuits


$16 M from NELF
What happened to the doctor?
“Patient turns a harsh light on dangerous medical error.”
—as seen in USA Today

A NEVER EVENT
Exposing the Largest Outbreak of Hepatitis C in American Healthcare History

Evelyn V. McKnight
and Travis T. Bennington

ANeverEvent.com

Special today!
electronic version available from
www.amazon.com
for $2.99
(please post a review to the site)
Does this really still happen?

- > 48 recognized outbreaks
- 90% in outpatient settings
- Primary breach was syringe reuse to access shared medication vials

Unsafe injections result in:

- Untold human suffering
- Distrust in healthcare system
- Bloodborne viruses, bacterial and fungal infections
- Malpractice suits and other legal actions
Unsafe injections result in:

- Patient to patient transmission
  - as described in *A Never Event*
- Patient to provider transmission
- Provider to patient transmission
Preventing patient/patient transmission

- www.cdc.gov/injectionsafety
- Bloodborne pathogens training activity
- Brochures, posters, videos
- FAQ’s
- Single dose/multi dose vial guidance
Preventing patient/patient transmission

- Never use the same syringe for more than 1 patient, even if the needle is changed.
- Do not enter vial, bag or bottle with used syringe/needle.
- Never use single dose vial for more than one patient.
- Always use aseptic technique.

Safe Injection Practices Coalition
www.ONEandONLYcampaign.org
II. Injection Practices (injectable medications, saline, other infusates)

Additional Instructions:

Observations are to be made of staff who prepare and administer medications and perform injections (e.g., anesthesiologists, certified registered nurse anesthetists, nurses).

<table>
<thead>
<tr>
<th>Practices to be Assessed</th>
<th>Was practice performed?</th>
<th>Manner of confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Needles are used for only one patient</td>
<td>1 Yes 2 No 3 N/A</td>
<td>4 Observation 5 Interview 6 Both</td>
</tr>
<tr>
<td>B. Syringes are used for only one patient</td>
<td>1 Yes 2 No 3 N/A</td>
<td>4 Observation 5 Interview 6 Both</td>
</tr>
<tr>
<td>C. Medication vials are always entered with a new needle</td>
<td>1 Yes 2 No 3 N/A</td>
<td>4 Observation 5 Interview 6 Both</td>
</tr>
<tr>
<td>D. Medication vials are always entered with a new syringe</td>
<td>1 Yes 2 No 3 N/A</td>
<td>4 Observation 5 Interview 6 Both</td>
</tr>
</tbody>
</table>

*JAMA*. 2010; 303:2273-79

### Infection Prevention Checklist

#### Section I. Administrative Policies and Facility Practices

<table>
<thead>
<tr>
<th>1. Facility Policies</th>
<th>Practice Performed</th>
<th>If answer is No, document plan for remediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Written infection prevention policies and procedures are available, current, and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>based on evidence-based guidelines (e.g., CDC/HICPAC), regulations, or standards</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>(Note: Policies and procedures should be appropriate for the services provided by</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>the facility and should extend beyond OSHA bloodborne pathogen training)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SINGLE-DOSE OR MULTI-DOSE?

Not all vials are created equal.

Dozens of recent outbreaks have been associated with reuse of single-dose vials and misuse of multiple-dose vials. As a result of these incidents, patients have suffered significant harm, including death. CDC and the One & Only Campaign urge healthcare providers to recognize the differences between single-dose and multiple-dose vials and to understand appropriate use of each container type.

This information can literally save a life.
DO YOU MULTI-DOSE?

A SINGLE-DOSE VIAL (SDV) is approved for use on a single patient for a single procedure or injection.

SDVs typically lack an antimicrobial preservative. Do not save leftover medication from these vials. Harmful bacteria can grow and infect a patient.

DISCARD after every use.

A MULTI-DOSE VIAL (MDV) is recognized by its FDA-approved label. Although MDVs can be used for more than one patient when aseptic technique is followed, ideally every MDV is used for only one patient.

MDVs typically contain an antimicrobial preservative to help limit the growth of bacteria. Preservatives have no effect on bloodborne viruses (e.g., hepatitis B, hepatitis C, HIV).

Discard MDVs when the beyond-use date has been reached, when doses are drawn in a patient treatment area, or anytime the sterility of the vial is in question.

MDVs: Beguiling, Safe Preserver for Medical Injections:
www.candycane.com/campaign/
www.candycane.com/ground/triannal-promotions-joep
FOLLOW THESE INJECTION SAFETY STEPS FOR SUCCESS!

BEFORE THE PROCEDURE
- Carefully examine the seal of the vial of medication.
- If it says single-dose and it has already been accessed (e.g., needle-punctured), throw it out.
- If it says multiple-dose, double-check the expiration date and the beyond-use date if it was previously opened, and visually inspect to ensure no visible contamination.
- When in doubt, throw it out.

DURING THE PROCEDURE
- Use aseptic technique.
- Use a new needle and syringe for every injection.
- Be sure to clean your hands immediately before handling any medication.
- Disinfect the medication vial by rubbing the dispensing with alcohol.
- Draw up all medications in a clean medication preparation area.

AFTER THE PROCEDURE
- Discard all used needles and syringes and sharps after the procedure is over.
- Vials should be discarded when:
  - The beyond-use date has been reached
  - Doses are drawn in a patient treatment area
  - Any time vial stability is in question

Regarding safe P and use for medical injections
www.cdc.gov/hiv/pdf/factsheets/clinical-guidelines/...
INFECTIONS CAN BE COSTLY.

EDUCATE YOUR TEAM
Make sure your team is aware of the potential risks associated with the use of single-use syringes and multiple-dose vials properly. Preventing re-use of medicine puts your patients at risk.

RISKY BUSINESS
Some, do no harm. Improper use of single-use vials has caused patient infection and deaths.

REALIZE WHAT'S AT STAKE
- A person's life and well-being
- Accreditation status
- Clinic license or certification

HAVE YOU CONSIDERED...

- Always using single-use syringes
- Educating patients
- Having a designated clean medication area
- Reusing single-use vials
- Properly disposing of used needles
- Reusing single-use vials

Are your single-use vials properly labeled and stored? If not, could there be a risk of cross-contamination?

Prevent contamination by using single-use vials only in designated areas. Always dispose of needles and vials immediately after use.

Is your clinic licensed to handle single-use vials? If not, you may be at risk of legal action.
**50 Outbreaks and Counting**

Since 2001, at least 50 outbreaks involving unsafe injection practices were reported to CDC.

- **Bacterial Infections**
  - 90% (n=46) occurred in outpatient settings.
  - Many hundreds of infected patients.
  - Over 130,000 patients notified and tested.

- **Viral Infections**
  - 6% of U.S. health professionals have admitted to using single-dose vials for more than one patient.
  - A recent study showed that 37% of new hepatitis infections in older adults may be due to unsafe medical injections.

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**3 Questions Every Patient Should Be Encouraged to Ask**

As a provider, be prepared to answer your patients' questions about safe injection practices.

1. Did you wash your hands?

2. Did you use a clean needle and syringe to draw up this medication?

3. Is this medication from a single-dose vial? Have you used this vial or medication on another person?
Knowing how to properly identify single-dose and multiple-dose vials will prevent infections and can save lives. Following basic safe injection procedures is not something to take for granted – there is too much at stake. Educate yourself and those around you.

Do your part to make healthcare safe... One injection at a time.

AT THE END OF THE DAY WE’RE ALL PATIENTS.
CDC estimates 385K sharps-related injuries annually in hospital settings, 600K in all medical settings
5.6M workers at risk of exposure to bloodborne disease
Nurses sustain half of all needlesticks but also MD’s, housekeeping, maintenance, technicians, administrators

http://www.safeincommon.org/needlestick-statistics
Preventing patient-provider transmission

- http://www.cdc.gov/niosh/stopsticks/
- Informational campaign to reduce sharps injuries
- Raise awareness about exposure to HBC, HCV, HIV
- Resources for education, prevention, evaluation and response
Risk of transmission

- 600,000 sharps-related injuries annually in the US
- Average risk of bloodborne infection is 1.8% when exposed to HCV+
- HCV is most common bloodborne disease in US
- Approx 4.1M people or 1.6% of US population has HCV

http://www.cdc.gov/niosh/stopsticks/
Sharps injuries often result of using *dangerous equipment in a fast-paced, stressful, and understaffed environment.*

http://www.cdc.gov/niosh/stopsticks/
Preventing sharps injuries

- Activate sharps safety features immediately after use
- Dispose of all sharps promptly
- Watch disposal container fill levels
- Access size of container for large sharps
- Replace full disposal containers

http://www.cdc.gov/niosh/stopsticks/
Preventing sharps injuries

A *safety culture* reflects the shared commitment of management and employees toward ensuring the safety of the work environment.

http://www.cdc.gov/niosh/stopsticks/
• Wash sticks and cuts with soap and water
• Evaluate exposure
• Give post-exposure prophylaxis
• Perform follow-testing and counseling

http://www.cdc.gov/niosh/stopsticks/
OSHA reporting requirements

- Confidential info about the injury
- Type and brand of device
- Department or work area
- Information about source patient
- How the exposure occurred

http://www.bd.com/safety/epinet/forms/
Needlestick Safety & Prevention Act

- Review new technology that reduces risk annually
- Maintain sharps injury log
- Solicit input from employees

http://www.govtrack.us/congress/bills/106/hr5178
Provider to patient transmission

• “If you look, you will find it”
• “Addiction comes to work”
• Prevention beyond education and infection control
• Safety-engineered devices and comprehensive approach
A growing problem

- As prescription drug addiction increases, so does diversion
- Focus on high risk areas (e.g. anesthesia, ED, procedural areas) but keep in mind unusual areas (e.g., animal research, clinical laboratory)
- Requires co-operation among administration, pharmacy, providers, management, and potentially law enforcement

https://www.premierinc.com/safety/topics/drug_diversion/index.jsp

Annual Numbers (in Millions) of New Nonmedical users of Pain Relievers aged 12 or older: 1970-2001
from National Survey on Drug Use and Health, May 21, 2004
Health Care–Associated Hepatitis C Virus Infections Attributed to Narcotic Diversion

Walter C. Hellinger, MD; Laura P. Bacalis, RN; Robyn S. Kay, MPH; Nicola D. Thompson, PhD, MS; Guo-Liang Xia, MD, MPH; Yulin Lin, MD; Yury E. Khudyakov, PhD; and Joseph F. Perz, DrPH

Background: Three cases of genetically related hepatitis C virus (HCV) infection that were unattributable to infection control breaches were identified at a health care facility.

NS5B sequence homology with the HCV strains of the 3 case patients. Quasi-species analysis showed close genetic relatedness with variants from each of the case patients and more than 97.9% nucleotide identity. The employee acknowledged parental eosin.
Resources for prevention

• Premier Safety Institute drug diversion website: https://www.premierinc.com/safety/topics/drug_diversion/index.jsp#Resources

• Contains webinar slides/recording, sample policies, tools and references
Resources for prevention

https://www.premierinc.com/safety/topics/drug_diversion/index.jsp#Resource

Mayo Clinic protocol – 77 Best Practices for:
storage, security, procurement, ordering, prescribing, preparation, dispensing, administration, inventory, recordkeeping, surveillance, investigation, education, QI
Resources for prevention

http://www.health.state.mn.us/patientsafety/drugdiversion/index.html

- Minnesota Department of Health: roadmap, toolkit, training, sample policies, report flowchart
- Best Practices examples: camera surveillance, key count, secured passcodes, barcodes for tracking, secured drug carts, tamper resistant packaging
Calling for Reform

- HONOReform, NHHHS, NADDI and NHHA collaboration
- Medical technician registry bill in NH
- Systematic change to prevent drug diversion
- Approaching HHS to implement NH bill as a national model
A patient’s story

“How do you go to a hospital and then walk out of the hospital with Hepatitis C from a dirty needle?”

- Lauren Lollini

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Recommend *A Never Event* to others