
Part 2: Healthcare Worker Drug Diversion: Prevention and Response

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HAI Lunch and Learn webinar series
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Objectives

- Define healthcare personnel drug diversion and the risk it poses to patients
- Understand how diversion can involve unsafe injection practices and disease transmission
- Explain how healthcare facilities and public health agencies can prevent and respond to drug diversion
- Promote opportunities to demonstrate commitment to safe injection practices and drug diversion prevention

**Injection Safety is
Every Provider's
Responsibility**



What is drug diversion?

- Removal or use of medications intended for patients
 - “Any criminal act or deviation that removes a prescription drug from its intended path from the manufacturer to the patient. This can include the outright theft of the drugs or it can take the form of a variety of deceptions such as doctor shopping, forged prescriptions, counterfeit drugs and international smuggling.”
- Commonly diverted medications include habit-forming medications or those sought for psychoactive effects
 - Anti-anxiety medications and sedatives, including benzodiazepines
 - Prescription pain medications, including opioids
 - Stimulants, including those used to treat attention deficit disorder and narcolepsy
 - Sleep aids
 - Anesthetics, such as Propofol

Activity

- Three drug diversion exercise scenarios
 - Developed by New Jersey Department of Health
 - Utilized by other state HAI Programs (New Hampshire, Washington)
 - Include diverse scenarios in various facility settings (ASC, hospital, endoscopy center)
- Allow facilities and public health partners to
 - Explore the process of responding to a drug diversion incident by applying existing policies and protocols
 - Identify strengths and opportunities to improve existing policies and protocols
 - Identify ways to train/communicate with staff

Activity discussion questions

- How do the scenarios highlight strengths and identify gaps of existing policies and processes?
- How do the scenarios help identify ways to communicate and educate others regarding drug diversion?
- Name three actions you might take after participating in this activity

Healthcare facility response

- Alert the diversion response team
- Report to appropriate authorities
- Verify and analyze initial data
- Prevent further risk to patients at the facility by limiting duties and access
 - Patient contact
 - Medication cabinet access
 - Badge access

Healthcare facility response

- Collect additional data to inform understanding of risk
 - Interview HCP
 - Mechanism of diversion, particularly diversion of or access to injectable medications
 - Tampering with injectable medication and potential for patient exposure to HCP blood
 - Review medical and medication cabinet records to identify additional discrepancies
 - Perform case finding
 - Acute illness with no risk factors or increased number of HIV, HBV, HCV cases
 - Review microbiology records for clustering or unusual occurrence of bloodstream infections

Healthcare facility response

- Collect additional data to inform understanding of risk
 - Screen for drug use
 - Perform blood-borne pathogen testing based on evidence of tampering and risk
 - If testing is negative, test again after six months past the last date of employment to account for infection window period
 - If testing is positive, retain sample for typing and comparison to any additional cases
- Take appropriate human resources action
 - E.g., suspension pending conclusion of investigation
- Work with public health agencies to identify the need for and to perform patient notification

Healthcare facility response: Reporting

- Drug Enforcement Agency (DEA)
 - Federal regulations require that registrants notify the DEA Field Division Office in their area, in writing, of the theft or significant loss of any controlled substance within one business day of discovery of such loss or theft
 - The registrant shall also complete and submit to the Field Division Office in their area DEA Form 106: "Report of Theft or Loss of Controlled Substances" regarding the theft or loss. ([21 C.F.R. § 1301.76\(b\)](#))
 - <https://www.dea diversion.usdoj.gov/webforms/dtlLogin.jsp>
- Food and Drug Administration (FDA)
 - If tampering (e.g., any altering of a medication) is suspected, the event must also be reported to the FDA Office of Criminal Investigations per the 1983 Federal Anti-Tampering Act (FATA) for referral to the appropriate OCI field office.
 - <https://www.accessdata.fda.gov/scripts/email/oc/oci/contact.cfm>
 - FDA EOC: 866-300-4374

Healthcare facility response: Reporting

- State regulatory agencies
 - Applicable boards of licensure
 - If the HCP is a licensed professional in your facility's state, a complaint must be made to the regulatory agency that is responsible for licensing the HCP.
 - If the individual is a licensed professional in another state, the corresponding regulatory agency in that state should be contacted.
 - State survey agencies
- State and/or local law enforcement
- Staffing agency

Healthcare facility response: Reporting

- State public health department
 - Engagement of public health agencies in drug diversion events commonly occurs in ways other than reports made by a healthcare facility or system
 - Suspected HCP drug diversion should be reported to public health by the facility
 - Prompt reporting to public health promotes timely and appropriate response
 - Some state health departments have mandated this reporting by law, but reporting should occur regardless
- How to report in Oregon
 - Call the ACDP epidemiologist on call: (971) 673-1111
 - Ask to discuss a drug diversion event with someone on the HAI Team
 - ACDP will involve the LHD

Public health response

- All reports of HCP drug diversion involving injectable medication, regardless of whether transmission of the disease has been identified, should be investigated to assess patient risk.
- Each investigation may vary, including the mechanisms of diversion and the organisms implicated in disease transmission
- Specific steps taken will need to be modified or added appropriately
- As in outbreak investigations, these steps may be taken in a different order than provided, repeated when necessary, or eliminated altogether if they are unwarranted

Public health response

- Educate the facility regarding the investigative process
 - Why a communicable disease investigation is taking place
 - Public health legal or regulatory authority to conduct the investigation
 - Goals of the investigation
 - What steps may be taken as part of the investigation
 - Which public health agency/agencies and which particular agency staff will be involved in the investigation

Public health response

- Gather additional information from the facility
 - Details of the event, including medication(s), methods, and timeframe
 - Details related to the HCP suspected of diverting medications, including a description of diversion methods, unusual behaviors, and associations with patients and other HCP
 - Results of any drug testing done as part of the investigation
 - Details of any unusual bloodstream infection clusters or newly diagnosed hepatitis or HIV infections among the patient population
 - Results of any blood-borne pathogen testing of the HCP, or related testing of other HCP or patients post-drug diversion event

Public health response

- Gather additional information from the facility
 - If the HCP was an employee or contractor at the facility
 - Dates of employment or contract at the facility
 - Results of any pre-employment testing for blood-borne pathogens which may help to identify exposure time period and narrow patient notification window
 - HBV vaccination status
 - Names of other relevant HCP to be contacted or interviewed, such as coworkers, staff, or others that are aware of the context and drug diversion event

Public health response

- Attempt to interview the HCP if there might be a risk of blood-borne pathogen transmission
- Ask open-ended questions to collect relevant information, specifically:
 - Results and dates of any blood-borne pathogen testing (including HIV, HBV, and HCV)
 - Possible risk of blood-borne pathogen transmission from HCP to patients
 - Possible risk of blood-borne pathogen transmission between patients as a result of poor injection practices**
- Interview others at the healthcare facility where the event occurred, such as risk management staff, colleagues of the HCP, and others that might have relevant information
- Check public health communicable disease surveillance systems to obtain any results of blood-borne pathogen testing for the HCP

Public health response

- Activities related to the investigation will be influenced by two important pieces of information:
 - Blood-borne pathogen infection status of the HCP, determined by testing performed as part of their engagement with the investigation or by testing performed prior to the investigation
 - Risk of disease transmission to patients due to the method of diversion (for example, HCP reported injecting patients using syringes already used to self-inject diverted medication and refilled with a different substance)
- Regardless of known methods and potential risk, if the blood-borne pathogen status of the HCP is positive, public health may want to consider completing a full investigation.

What about bacterial infections?

- Blood-borne pathogen transmission risks are of primary concern
- Consideration should also be given to potential for bacterial infections
 - Bloodstream infections have been reported in association with diversion events, specifically as a result of tampering with patient-controlled analgesia (PCS) pumps or syringes
 - Infections identified during some of these investigations involved bacteria not commonly seen in typical hospital-associated bloodstream infections or were polymicrobial
 - For diversion events involving tampering with PCAs, or other forms of diversion involving substitution with non-sterile fluids, consider a review of microbiology records to rule out an increase of bloodstream infections in the unit or area where diversion was identified

Patient notification

- When there has been a breach in infection control or patients have been infected as a result of HCP drug diversion, patients may be notified of potential exposure to blood-borne pathogens
- Patient notification is recommended when the following three conditions are met:
 - Evidence of drug diversion in a healthcare facility
 - Methods of drug diversion may have placed patients at risk for infection with blood-borne pathogens (for example, injectable medications were diverted, or the methods of drug diversion are unknown)
 - Test results suggest the HCP was infected with a blood-borne pathogen while working at the facility

Patient notification

- When initial testing of the HCP is negative, but follow-up testing based on the infection window period yields positive results, additional discussion regarding patient notification should occur
- The CDC offers a general toolkit for health departments and healthcare facilities regarding patient notification after any infection control breach (including drug diversion) has been identified
 - Sample letters for patient and HCP notification
 - Advice regarding what information to include in a notification letter
 - Risk communication principles to be considered when crafting a notification letter

Patient notification

- Patient notifications should be accompanied by timely communications with the media. Strategies for communication are also found in the CDC toolkit, which includes information regarding
 - Media
 - Establishing communication resources
 - Best practices for conducting patient notification
- Public health agencies should also consider contacting CDC when discussing patient notification or if additional technical assistance is needed.

Legal considerations

- Laws addressing drug diversion in healthcare settings are diverse and complex
- Laws are aimed at different practice settings and specialties
- Laws may require reporting and notification as well as corrective action
- Those responding to a HCP drug diversion event should be aware of laws in their jurisdictions applying to these situations
 - Reaching out to all partners (including public health, regulatory, and law enforcement) local, state, and federal levels in advance of drug diversion events will facilitate coordinated response and completion of necessary reporting

Legal considerations

- Laws applicable to drug diversion may include requirements regarding
 - Facility reporting to state facility licensing agencies, survey agencies, or state public health officials
 - Professional licensure disciplinary measures for misappropriation or diversion of medications from the workplace
 - Facility CMS certification or licensure requirements aimed at preventing unlawful diversion of controlled substances (e.g., CMS Conditions of Participation require that abuses and losses of controlled substances must be reported to the responsible party in the pharmacy and to the chief executive officer of the facility)
 - Board of medical examiner guidelines, standards, and policies
 - Inventory maintenance record requirements
 - Reimbursement of payors for medications charged for but not actually received by patients
 - Random drug testing of HCP
 - Pharmacy controls against theft or diversion of medications or devices
 - Public health agencies may be required to report drug diversion events to state licensing boards of regulatory agencies
 - DEA rules cover corrective action for “illicit activities” by employees including state or federal prosecution and requires an employer to “immediately determine status of continued employment.”
 - Public health have the authority to access relevant communicable disease surveillance databases in a timely manner to ensure that the HCP is not already known to be infected with a blood-borne pathogen

Taking a quality improvement approach

- Both healthcare facilities and public health agencies can learn from experiences working on drug diversion events
- Take a quality improvement approach!
 - What strategies were successful, and what posed challenges?
 - How can policies and processes be improved?
 - After-action reports can help to strengthen relationships between partners and guide necessary process changes to enhance prevention and response

Free online and print resources via CDC-INFO

One & Only Campaign Materials For Order Via CDC-INFO

Safe Injection Practices DVD
Item 22-0087

Rx for Safe Injections Poster
Item 22-0696

It's Elementary Poster
Item 22-0697

Provider Brochure
Item 22-0702

Patient Brochure
Item 22-0701

Injection Safety Infographic
Item 22-1504

Single-Dose & Multi-Dose Vial Infographic
Item 22-1599

Injection Safety Pocket Card
Item 22-0713

Logo Poster for General Public
Item 22-0699

Injection Safety Dangerous Misperceptions Flyer
Item 22-1178

Injection Safety Healthcare Provider Checklist
Item 22-1176

Injection Safety Fact Sheet
Item 22-1502

Injection Safety Healthcare Provider Toolkit
Item 22-1177

Be Aware Don't Share Insulin Poster
Item 22-1503

Be Aware Don't Share Insulin Brochure
Item 22-1501

You Can Order 3 Ways

SCAN
Scan with your smartphone to access the ordering page

CALL
1-800-CDC-INFO

CLICK
www.cdc.gov/pubs/CDCInfoOnDemand.aspx
Select Injection Safety—One & Only Campaign to order materials

The One & Only Campaign is made possible by a CDC Foundation partnership with Eli Lilly and Company

INJECTION SAFETY CHECKLIST

The following Injection Safety checklist items are a subset of items that can be found in the *CDC Infection Prevention Checklist for Outpatient Settings: Minimum Expectations for Safe Care*.

The checklist, which is appropriate for both inpatient and outpatient settings, should be used to systematically assess adherence of healthcare providers to safe injection practices. Assessment of adherence should be conducted by direct observation of healthcare personnel during the performance of their duties.

Injection Safety	Practice Performed?	If answer is No, document plan for remediation
Proper hand hygiene, using alcohol-based hand rub or soap and water, is performed prior to preparing and administering medications.	Yes No	
Injections are prepared using aseptic technique in a clean area free from contamination or contact with blood, body fluids, or contaminated equipment.	Yes No	
Needles and syringes are used for only one patient (this includes manufactured prefilled syringes and cartridge devices such as insulin pens).	Yes No	
The rubber septum on a medication vial is disinfected with alcohol prior to piercing.	Yes No	
Medication vials are entered with a new needle and a new syringe, even when obtaining additional doses for the same patient.	Yes No	
Single-dose or single-use medication vials, ampules, and bags or bottles of intravenous solution are used for only one patient.	Yes No	
Medication administration tubing and connectors are used for only one patient.	Yes No	
Multi-dose vials are dated by healthcare 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.	Yes No	
Multi-dose vials are dedicated to individual patients whenever possible.	Yes No	
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.	Yes No	

The *One & Only Campaign* is a public health effort to eliminate unsafe medical injections. To learn more about safe injection practices, please visit OneandOnlyCampaign.org.

For the latest news and updates, follow us on Twitter @injectionsafety and Facebook/OneandOnlyCampaign.



This material was developed by CDC. The *One & Only Campaign* is made possible by a partnership between the CDC Foundation and Lilly USA, LLC.

Injection and Needle Safety Toolkit

Although injections and needle use in professional settings are generally safe, unsafe practices do happen and may cause serious harm.

Unsafe practices, like reusing vials or syringes, have the potential to spread disease by cross-contaminating body fluids. Since 2001, more than 150,000 people in the U.S. have been notified of potential exposure to viral hepatitis and HIV due to lapses in injection and needle safety.

Do your part. Three ways to help stop these infections!

1. **Join the One & Only Campaign!** This campaign is led by the Centers for Disease Control and Prevention (CDC) and the Safe Injection Practices Coalition (SIPC) and raises awareness about safe injection practices.
2. Learn about best practices by using this toolkit.
3. Share what you learn from the toolkit with those in your workplace.

Disclaimer: The resources below contain overlapping information on best practices, but are by no means comprehensive, as new resources continually emerge. In addition, the links provided do not serve as an endorsement of the organizations.

<https://www.oregon.gov/oha/PH/DISEASES/CONDITIONS/COMMUNICABLEDISEASE/HAI/PREVENTION/Pages/one-and-only.aspx>

Toolkit Contents

For the Public

- [What to know about receiving healthcare involving needles](#)
- [At-home injections and needle use](#)

For Health Professionals

- [Guidelines and Recommendations](#)
- [Aseptic Technique](#)
- [Needle Safety](#)
- [Medication and Treatment Management](#)
- [Diabetes Care](#)
- [Reports of Disease Transmission](#)
- [Specialty Specific Resources](#)
- [Additional Resources](#)
- [References](#)

Feedback

- We want to hear from you! Let us know what you think about this toolkit by completing this quick [feedback form](#).

Join the Oregon One & Only Campaign

Who can be a member? Anyone!

- Professional and nonprofit organizations
- Healthcare systems and facilities
- Provider groups
- Private companies
- Individuals interested in promoting injection safety

What do members do?

- Raise awareness
- Share materials
- Receive updates

To join, email roza.p.tammer@state.or.us

February 19, 2019



OREGON ONE AND ONLY CAMPAIGN

Issue 1

In this issue:

- Happy birthday to Oregon Administrative Rule 333-019-0061
- Free injection safety resource highlight
- HAI Lunch and Learn Series
- Updates to our Safe Injections and Needle Use Toolkit
- Membership update
- Contact us

Greetings,

Thank you for partnering with us to help end infections from unsafe injection practices and needle use! We hope these quarterly newsletters will support you in the work.

Please feel free to share this information with your patients, clients, and colleagues.

Thank you for your commitment to patient safety!

Respectfully,
The Oregon Health Authority Healthcare-Associated Infections Program



More opportunities

- Read the injection safety CD Summary
 - www.healthoregon.org/cdsummary
- Follow us on Facebook
 - <https://www.facebook.com/Oregon.aware>



TAKING A SHOT AT INJECTION SAFETY



Resources & references – drug diversion

- Minnesota Controlled Substance Diversion Prevention Coalition, Toolkit and Final Report
 - <http://www.mnhospitals.org/Portals/0/Documents/ptsafety/diversion/drug-diversion-final-report-March2012.pdf>
 - <http://www.mnhospitals.org/quality-patient-safety/collaboratives/drug-diversion-prevention>
- New Hampshire Department of Health and Human Services Hepatitis C Outbreak Investigation Report
 - <http://www.dhhs.nh.gov/dphs/cdcs/hepatitisc/documents/hepc-outbreak-rpt.pdf>
- Maryland Department of Health and Mental Hygiene, Public Health Vulnerability Review: Drug Diversion, Infection Risk, and David Kwiatkowski's Employment as a Healthcare Worker in Maryland
 - <https://health.maryland.gov/pdf/Public%20Health%20Vulnerability%20Review.pdf>
- CDC, Risks of Healthcare-Associated Infections from Drug Diversion
 - <https://www.cdc.gov/injectionsafety/drugdiversion/>
 - <http://www.oneandonlycampaign.org/content/risks-healthcare-associated-infections-drug-diversion>
- Missouri Bureau of Narcotics & Dangerous Drugs. (2016). Drug Diversion in Hospitals: A Guide to Preventing and Investigating Diversion Issues
 - <http://health.mo.gov/safety/bnodd/doc/drugdiversion.doc>
- Colorado Department of Health and Environment video depicting how drug diversion can cause patient harm
 - <https://www.youtube.com/watch?v=IT03XIJnB0Q>
- Council of State and Territorial Epidemiologists
 - <https://www.cste.org/page/Drug-Diversion-Toolkit>

Resources & references – drug diversion

- New Jersey [DOH](#) Drug Diversion Table Top Exercises
 - http://www.oneandonlycampaign.org/sites/default/files/upload/image/Drug%20Diversion%20Exercise%20Slides_FINAL.pdf
- CDC Patient Notification toolkit
 - <https://www.cdc.gov/injectionsafety/pntoolkit/>
- American Association of Nurse Anesthetists (AANA) resources
 - <https://www.aana.com/practice/health-and-wellness-peer-assistance/about-health-wellness/wellness-in-the-workplace>
 - <https://www.aana.com/practice/health-and-wellness-peer-assistance/About-AANA-Peer-Assistance/getting-peer-assistance-help-for-yourself-and-others>
- Utah Health Status Update: Hepatitis C and Drug Diversion
 - https://ibis.health.utah.gov/pdf/opha/publication/hsu/2017/1704_HepCDrugDiv.pdf
- Berge KH, Dillon KR, Sikkink KM, Taylor TK, Lanier WL. Diversion of Drugs Within Health Care Facilities, a Multiple-Victim Crime: Patterns of Diversion, Scope, Consequences, Detection, and Prevention. *Mayo Clinic Proceedings*. 2012;87(7):674-682. doi:10.1016/j.mayocp.2012.03.013.
- ONDCP. *Prescription Opioid Misuse, Heroin, and Fentanyl*. Accessed May 30, 2017. <https://www.whitehouse.gov/ondcp/key-issues/prescription-opioid-misuse>
- Schaefer MK, Perz JF. Outbreaks of Infections Associated With Drug Diversion by US Health Care Personnel. *Mayo Clinic Proceedings*. 2014;89(7):878-887. doi:10.1016/j.mayocp.2014.04.007.
- Schuppener LM, Pop-Vicas AE, Brooks EG, et al. *Serratia marcescens* Bacteremia: Nosocomial Cluster Following Narcotic Diversion. *Infection Control & Hospital Epidemiology*. 2017;38(09):1027-1031. doi:10.1017/ice.2017.137

Resources & references – safe injections

- World Health Organization: <http://www.who.int/infection-prevention/campaigns/injections/en/>
- Centers for Disease Control and Prevention
 - One and Only Campaign: <http://www.oneandonlycampaign.org>
 - Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings (2007) – III.A.1.b, IV.H (1-8): <https://www.cdc.gov/infectioncontrol/guidelines/isolation/index.html>
 - Info on Demand: <https://www.cdc.gov/pubs/cdcinfoondemand.aspx>
 - Injection safety website: <https://www.cdc.gov/injectionsafety/index.html>
- Oregon Health Authority
 - Oregon’s One and Only Campaign partner state web page: <http://www.oneandonlycampaign.org/partner/oregon>
 - CD Summary:
<http://www.oregon.gov/oha/PH/DISEASESCONDITIONS/COMMUNICABLEDISEASE/CDSUMMARYNEWSLETTER/Documents/2017/ohd6607.pdf>
 - Injection safety website:
<http://www.oregon.gov/oha/PH/DISEASESCONDITIONS/COMMUNICABLEDISEASE/HAI/PREVENTION/Pages/one-and-only.aspx>
- Oregon Patient Safety Commission
 - Infection Prevention & Control Toolkit (Safe Injection Practices 5.00-5.02): <https://oregonpatientsafety.org/resource-center/opsc-resources/oregon-ambulatory-surgery-center-infection-prevention-control-toolkit/436>
 - Video: Preventing Infection During Blood Glucose Monitoring and Insulin Administration:
https://www.youtube.com/watch?v=dddSV0Tu_AE
- United States Pharmacopeia General Chapter 797:
<https://www.sefh.es/fichadjuntos/USP797GC.pdf>

Resources & references – safe injections

- Severe bloodstream infections: A population-based assessment
 - <https://www.ncbi.nlm.nih.gov/pubmed/15071391>
- Overall burden of bloodstream infection and nosocomial bloodstream infection in North America and Europe
 - <https://www.sciencedirect.com/science/article/pii/S1198743X1461507X#bib1>
- One needle, one syringe, only one time? A survey of physician and nurse knowledge, attitudes, and practices around injection safety
 - [http://www.ajicjournal.org/article/S0196-6553\(17\)30680-6/pdf](http://www.ajicjournal.org/article/S0196-6553(17)30680-6/pdf)
- US Outbreak Investigations Highlight the Need for Safe Injection Practices and Basic Infection Control
 - [http://www.liver.theclinics.com/article/S1089-3261\(09\)00085-3/pdf](http://www.liver.theclinics.com/article/S1089-3261(09)00085-3/pdf)
- Nonhospital Health Care-Associated Hepatitis B and C Virus Transmission: United States, 1998-2008
 - <http://annals.org/aim/article-abstract/744175/nonhospital-health-care-associated-hepatitis-b-c-virus-transmission-united?volume=150&issue=1&page=33>

Questions & discussion

Does your facility or health system have drug diversion policies that it is willing to share? Please send them to us!

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