Drug Diversion from the Health Care Workplace: A Multiple Victim Crime

Keith H. Berge MD

Tuesday, April 5, 2016
1:00 pm- 2:00 pm CST
Drug Diversion from the Health Care Workplace: A Multi-Victim Crime

Keith H. Berge MD

• Consultant in Anesthesiology- Mayo Clinic Rochester, MN
• Chair- Mayo Clinic Medication Diversion Prevention Committee
• Member- MN Board of Medical Practice
• Chair- ASA Task Force on Chemical Dependency
Disclosures

No conflicts to disclose
“Diversion” means:

• The transfer of a controlled substance from a lawful to an unlawful channel of distribution or use.  
  (Uniform Controlled Substances Act (1994))

• Any criminal act involving a prescription drug  
  (National Association of Drug Diversion Investigators)

• For the purposes of this discussion, we will mainly limit our comments to controlled substances
Introduction

• We have an ongoing epidemic of prescription drug diversion and abuse in America

• Some of those becoming addicted work in the health care setting

• Some of these addicted health care workers divert (steal) drugs from their patients and their employers to support their addiction
Faces of Drug Diversion

Capt. Jon Dale Jones, CRNA

16 confirmed Hepatitis C infections
Sentenced to 41 months in prison
Faces of Drug Diversion

Kristen Parker

• Surgical Tech, Gets 30 Years For Infecting Patients With Hepatitis
Faces of Drug Diversion

Steven Beumel

• Mayo Clinic radiation tech gets 30 years for 5 Hepatitis C infections
Faces of Drug Diversion

David Kwiatkowski

• Recently sentenced to 39 years for infecting at least 45 people with Hepatitis C
Outbreaks of Infections Associated With Drug Diversion by US Health Care Personnel

Melissa K. Schaefer, MD, and Joseph F. Perz, DrPH

Objective: To summarize available information about outbreaks of infections stemming from drug diversion in US health care settings and describe recommended protocols and public health actions.

Patients and Methods: We reviewed records at the Centers for Disease Control and Prevention related to outbreaks of infections from drug diversion by health care personnel in US health care settings from January 1, 2000, through December 31, 2013. Searches of the medical literature published during the same period were also conducted using PubMed. Information compiled included health care setting(s), infection type(s), specialty of the implicated health care professional, implicated medication(s), mechanism(s) of diversion, number of infected patients, number of patients with potential exposure to blood-borne pathogens, and resolution of the investigation.
2004-2013

• Six outbreaks of disease related to drug diverting health care workers
• Two outbreaks infected 34 patients with Gram Negative Bacteremias
• Four outbreaks infected 84 patients with Hepatitis C
Take Home Points

• Drug diversion puts our patients in danger

• The four HCW with HCV resulted in the required notification of

• Wait for it…..

• 30,000 patients who needed BBP testing

• This results in a large financial burden, and may bankrupt a healthcare facility
Diversion is a Crime

• While some call addiction a “victimless crime,” supporting that addiction by drug diversion from the healthcare workplace is a multi-victim crime
  • It puts at risk the patient
  • It puts at risk the addicted diverter
  • It puts at risk their co-workers
  • It puts at risk their employer
  • It puts at risk society in general
Why the Epidemic?

- Availability
- Perception of safety in relation to street drugs
- Profit motive
Availability

Total Number of Opioid Prescriptions Dispensed by U.S. Retail Pharmacies, 1991–2010

- Number of Opioid Rxs
- Hydrocodone
- Oxycodone

Number of Prescriptions (millions)

Source: SDI’s Vector One®: National (VONA)
Availability

Figure 1. Annual Numbers (in Millions) of New Nonmedical Users of Pain Relievers Aged 12 or Older: 1970-2001

Health 2004
Specific Illicit Drug Dependence or Abuse in the Past Year among Persons Aged 12 or Older: 2010

National Survey on Drug Use and Health- 2010
Opioid Pain Relievers

CDC Data
Leading cause of accidental death

Figure 1. Motor vehicle traffic, poisoning, and drug poisoning death rates: United States, 1980–2008

NOTE: In 1999, the International Classification of Diseases, Tenth Revision (ICD–10) replaced the previous revision of the ICD (ICD–9). This resulted in approximately 5% fewer deaths being classified as motor-vehicle traffic–related deaths and 2% more deaths being classified as poisoning-related deaths. Therefore, death rates for 1998 and earlier are not directly comparable with those computed after 1998. Access data table for Figure 1 at http://www.cdc.gov/nchs/data/databriefs/db81_tables.pdf/1.

## Abused Pharmaceutical Substances

**National Association of Drug Diversion Investigators, Inc.**

410-321-4600  www.naddi.org

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### Hydrocodone/Acetaminophen

<table>
<thead>
<tr>
<th>Brand</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorcet®</td>
<td>5 mg/500 mg</td>
</tr>
<tr>
<td></td>
<td>7.5 mg/650 mg</td>
</tr>
<tr>
<td></td>
<td>10 mg/650 mg</td>
</tr>
<tr>
<td></td>
<td>7.5 mg/750 mg</td>
</tr>
<tr>
<td></td>
<td>10 mg/750 mg</td>
</tr>
</tbody>
</table>

### Hydrocodone/Acetaminophen (Generic)

<table>
<thead>
<tr>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mg</td>
</tr>
<tr>
<td>4 mg</td>
</tr>
<tr>
<td>8 mg</td>
</tr>
<tr>
<td>10 mg</td>
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<tr>
<td>10 mg</td>
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### Hydromorphone

<table>
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<tr>
<th>Brand</th>
<th>Strength</th>
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<tbody>
<tr>
<td>Dilaudid®</td>
<td>2 mg</td>
</tr>
<tr>
<td></td>
<td>4 mg</td>
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<td></td>
<td>8 mg</td>
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### Methadone

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<th>Strength</th>
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<tbody>
<tr>
<td>5 mg</td>
</tr>
<tr>
<td>5 mg</td>
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<tr>
<td>10 mg</td>
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<td>10 mg</td>
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### Morphine

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<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 mg</td>
</tr>
<tr>
<td>10 mg</td>
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<tr>
<td>20 mg</td>
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### Oxycodone/Acetaminophen

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<tr>
<th>Brand</th>
<th>Strength</th>
</tr>
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<tbody>
<tr>
<td>Percocet®</td>
<td>2.5 mg/325 mg</td>
</tr>
<tr>
<td></td>
<td>5 mg/325 mg</td>
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<tr>
<td></td>
<td>7.5 mg/325 mg</td>
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<tr>
<td></td>
<td>10 mg/325 mg</td>
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</table>

### Oxycodone

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<thead>
<tr>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 mg</td>
</tr>
<tr>
<td>15 mg</td>
</tr>
<tr>
<td>30 mg</td>
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### Pentazocine/Naloxone

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<thead>
<tr>
<th>Strength</th>
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<tbody>
<tr>
<td>50 mg/0.5 mg</td>
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<tr>
<td>50 mg/0.5 mg</td>
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### Penternine

<table>
<thead>
<tr>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.5 mg</td>
</tr>
<tr>
<td>37.5 mg</td>
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### Tramadol

<table>
<thead>
<tr>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 mg</td>
</tr>
<tr>
<td>50 mg</td>
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</table>

### Ultracet®

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<th>Strength</th>
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</thead>
<tbody>
<tr>
<td>50 mg/500 mg</td>
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<td>50 mg/500 mg</td>
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</table>

### Ultracet® (tramadol/acetaminophen)

<table>
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<tr>
<th>Strength</th>
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<tbody>
<tr>
<td>37.5 mg/325 mg</td>
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</table>

### Zolpidem Tartrate

<table>
<thead>
<tr>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 mg</td>
</tr>
<tr>
<td>10 mg</td>
</tr>
<tr>
<td>6.25 mg</td>
</tr>
<tr>
<td>12.5 mg</td>
</tr>
</tbody>
</table>
OVER THE COUNTER

Guaifenesin with dextromethorphan (Robitussin® DM)
(Not shown actual size)

Dimenhydrinate (Dramamine®)

Chlorpheniramine with dextromethorphan (Coricidin® HBP cough cold)
(Not shown actual size)
Past Year Initiates for Specific Illicit Drugs, Ages 12+: 2005

Numbers in Thousands

- Marijuana: 2,193
- Heroin: 2,114
- Pain Relievers: 1,286
- Inhalants: 877
- Cocaine: 872
- Stimulants: 647
- Ecstasy: 615
- Sedatives: 247
- LSD: 243
- Heroin: 108
- PCP: 77
Source Where Psychotherapeutics Were Obtained for Most Recent Nonmedical Use among Past Year Users Aged 12 or Older: 2005

Percent of Past Year Users

- Pain Relievers
- Tranquilizers
- Methamphetamine
- Stimulants

- Other
- Bought on Internet
- Drug Dealer/Stranger
- 1 or More Doctors
- Bought/Took from Friend/Relative
- Free from Friend/Relative
### Number of Events of Theft or Loss by Drug

<table>
<thead>
<tr>
<th>Drug</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROCODONE</td>
<td>61</td>
</tr>
<tr>
<td>OXYCODONE</td>
<td>58</td>
</tr>
<tr>
<td>HYDROMORPHONE</td>
<td>47</td>
</tr>
<tr>
<td>MORPHINE SULFATE</td>
<td>45</td>
</tr>
<tr>
<td>FENTANYL</td>
<td>26</td>
</tr>
<tr>
<td>MEPERIDINE</td>
<td>14</td>
</tr>
<tr>
<td>ZOLPIDEM</td>
<td>13</td>
</tr>
<tr>
<td>LORAZEPAM</td>
<td>10</td>
</tr>
<tr>
<td>METHADONE</td>
<td>8</td>
</tr>
<tr>
<td>MIDAZOLAM</td>
<td>7</td>
</tr>
<tr>
<td>CODEINE</td>
<td>6</td>
</tr>
<tr>
<td>AMPHETAMINE ASPARTATE</td>
<td>6</td>
</tr>
<tr>
<td>METHYLPHENIDATE</td>
<td>5</td>
</tr>
<tr>
<td>SUFENTANIL</td>
<td>4</td>
</tr>
<tr>
<td>D-AMPHETAMINE</td>
<td>4</td>
</tr>
<tr>
<td>ALPRAZOLAM</td>
<td>4</td>
</tr>
<tr>
<td>PROPOXYPHENE</td>
<td>3</td>
</tr>
<tr>
<td>DEXTROAMPHETAMINE</td>
<td>3</td>
</tr>
<tr>
<td>CLONAZEPAM</td>
<td>3</td>
</tr>
<tr>
<td>ZALEPLON</td>
<td>2</td>
</tr>
<tr>
<td>TESTOSTERONE</td>
<td>2</td>
</tr>
<tr>
<td>DIAZEPAM</td>
<td>2</td>
</tr>
<tr>
<td>COCAINE</td>
<td>2</td>
</tr>
<tr>
<td>OTHER</td>
<td>10</td>
</tr>
</tbody>
</table>

MN Dept of Health/DEA from DEA form 106 data
Addiction comes to work

- Any health care facility which houses controlled substances is at risk for diversion
- Any employee is capable of diversion
- Vigilance is mandatory
- Diversion often happens by seducing co-workers into policy violations e.g. “virtual witnessing” of waste
- Often these are otherwise stellar employees
Medication Diversion Prevention Coordinator

- Initial point of contact for all suspected diversions
- Coordinates the preliminary investigation
- Initiates and coordinates meetings with Drug Diversion Response Team (DDiRT)
- Participates in intervention
- Interfaces with law enforcement when needed
- Oversees diversion surveillance program and team members
- Maintains database of cases
- Assures proper reporting to authorities before case closed
Mayo Clinic Medication Diversion Prevention
Current Program

Reporting Process

• Established “Hot Line” – 24x7 pager
• Institutional compliance line
• Signage posted on Pyxis machines & other locations
• Anonymous reporting if desired
Mayo Clinic Medication Diversion Prevention
Current Program

Surveillance Program

• Report generation & data analytics
  • ADM data utilized
  • 26 + reports (daily, weekly, monthly)
  • Analytics tool (vendor, inhouse)

• Waste collection & analysis
  • CS waste returned to pharmacy in anesthesia areas, ED, GI Labs (expand to other areas?)
  • Randomly assayed (Quantitative vs Qualitative)
  • Strict reconciliation of records

• Audits
  • Order vs removal vs administration vs pain scales
  • Manual vs electronic

• Review of Paper CS Inventory & Disposition records

• Camera Surveillance (High volume areas, “For Cause” surveillance)
Drug Diversion Response Team (DDiRT)

- A multidisciplinary team to provide expert consultation and direction regarding suspected medication diversion cases
- Meets within 24 hours – includes applicable manager, HR partner, etc.
- Reviews and discusses available evidence to determine if potential diversion exists
- Recommends next steps (e.g. further monitoring, immediate intervention, employee interview, etc.)
- Internal / External reporting
- Ensures consistent, standardized approach
Mayo Clinic Medication Diversion Prevention
Current Program

Elements of Best Practice

- Developed by Pharmacy with consensus input from others
- Purpose to establish core structure & processes that would optimize the detection and minimize the occurrence of controlled substance diversion
- 77 elements. Ongoing review.
- Categorized as Tier 1 / Tier 2
- Used as foundation for independent assessments across other sites
- Green-Yellow-Red stop light assessment grid to allow tracking of progress
## Tier 1 - Essential Element and should be in place

1. The chain of custody and individual accountability of CS's are maintained at all times.
2. Organizational policy(s) exist that address all aspects of the CS medication use processes, are regularly reviewed and compliant with federal and state regulations.
3. Organizational policy(s) are adhered to by all staff.

## Tier 2 - Recommended element. Progress toward implementation should be made over time

4. CS's are securely stored in a locked location (Pyxis Medstation, Pyxis CII Safe, locked cabinet/drawer) at all times unless in the direct physical control of an authorized individual.
5. CS's under the control of an authorized individual are not placed where their view may be obscured or where a distraction may prevent direct observation at all times.
6. Access to CS storage areas is minimized and limited to authorized staff.
7. CS's brought in by a patient that cannot be returned home are inventoried by two authorized healthcare staff, and stored in a locked, limited access area.

## CORE PRINCIPLES

1. The chain of custody and individual accountability of CS's are maintained at all times.
2. Organizational policy(s) exist that address all aspects of the CS medication use processes, are regularly reviewed and compliant with federal and state regulations.
3. Organizational policy(s) are adhered to by all staff.

## STORAGE & SECURITY

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6. Access to CS storage areas is minimized and limited to authorized staff.
7. CS's brought in by a patient that cannot be returned home are inventoried by two authorized healthcare staff, and stored in a locked, limited access area.

## PROCUREMENT

8. All CS's are obtained from Pharmacy.
9. Only authorized Pharmacy staff can purchase CS's.
10. The number of individuals authorized to order CS's is minimized.
11. Separation of duties exist between the ordering and receipt of CS's.
12. Two individuals count and check in CS's received (order, invoice and product received match).
13. CS inventory levels are based upon usage (minimize excess stock).
14. Pyxis CII safe technology is utilized.
15. Electronic CS Ordering System (CSOS) is utilized (eliminates paper DEA 222 forms).
16. A process is in place to identify unusual "peaks" in quantity or frequency of CS's ordered.
17. All CS procurement paperwork is reviewed for completion and filed according to applicable laws and regulations.
Experiences / Lessons Learned

• This is a journey….not a destination
• It’s all about the details
• Focus on high risk areas first (e.g. anesthesia, procedural areas, ED) but don’t forget about the unusual areas (e.g. animal research, clinical laboratory)
• Robust surveillance is critical
• Educate and be transparent…solicit the help of the 99.9%
• Requires strong, active multidisciplinary leadership
• Optimize technology
• Requires resources
MN Coalition to Prevent Drug Diversion

- MN Department of Health
- MN Hospital Association

When/How to involve Law Enforcement?

- MN Coalition identified this as a contentious issue
- Recommended establishing contact with local LE before the need arises
- Real world: We still struggle with this
- “Significant Loss” must be reported to DEA within one business day
- ANY THEFT must be reported to DEA
In Summary

• Theft of controlled substances is common in the health care workplace

• If you look, you will find it

• Many divert, even employees with “no access to drugs”

• Learn from each episode- diverters are often very clever

• Waste stream is under constant attack
Desperation
Questions?
Upcoming Webinars

Navigating Wisconsin’s Prescription Drug Monitoring Program (PDMP) and Controlled Substances Board
Wednesday, April 27 *** 10:00-11:30 am

HCAHPS, Patient Satisfaction & Opioid Prescribing: Debunking the Myths
Wednesday, June 1 *** 12:00-1:00 pm (Tentative date/time)

Visit www.wha.org for more information and to register.
Questions?

Need more information?
Contact: Steve Rush
608-274-1820
srush@wha.org