A Healthcare Facility responds to Opioids and Substance Use Disorder

- Diversion Prevention, Detection and Response
- Quality Improvement
- Changing the Culture

This presentation will cover

- The “Wake-up call”
- How we incorporated data analytics into our diversion detection and prevention program
- The constantly evolving process of diversion detection, prevention and response in healthcare
- Speaking up
A necessary part for all healthcare facilities

Controlled substance medications are used for legitimate medical purposes thousands of times daily at hospitals and healthcare facilities all across the country.

The options of not using controlled substances are “limited”.

A Wake-up Call to Action

Drug thefts at U-M hospital: A nurse's death, a doctor's overdose and 16,000 missing pills

“On a single day in 2013 a nurse and doctor both overdosed on stolen pain medication in different areas of the sprawling University of Michigan Health System.”

By John Counts | johncounts@mlive.com The Ann Arbor News
October 26, 2014
## Controlled Substance Management Timeline

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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</thead>
<tbody>
<tr>
<td><strong>ESTABLISH ACCOUNTABILITY STRUCTURE</strong></td>
<td>Creation of CS Safety &amp; Oversight Committee</td>
<td>Transition CS Management to Program</td>
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<tr>
<td><strong>DEVELOP</strong></td>
<td>Expansion of Impairment Policy to include at Medical School Faculty</td>
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<tr>
<td><strong>CS-RELATED POLICY &amp; PROCEDURES</strong></td>
<td>Hike CS Safety &amp; Compliance Manager</td>
<td>Hike Diversion Prevention Manager</td>
<td></td>
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<tr>
<td><strong>RESPOND</strong></td>
<td>Expansion of Impairment Policy to include at Medical School Faculty</td>
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<tr>
<td><strong>IMPAIRMENT &amp; DIVERSION RESPONSE</strong></td>
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### Data Analytics

**Suspicous Activity Monitoring**

- A method of continuous real time review
- Does not exist in an easily obtainable form
- Can be performed hourly, daily, weekly, monthly, etc...
- May lead to identifying suspicious activities
- May be used to verify suspicious behavior by adding historical data that is linked to medication dispensing and administration
- Helps to identify quality improvement opportunities

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**MICHIGAN MEDICINE UNIVERSITY OF MICHIGAN**
Michigan Medicine Statistics

- Michigan Medicine experiences approximately 3 million patient visits per year
- Licensed as ~ 1,000 bed hospital
- Averaging 75,000 transactions / month from ADC (Automated Dispensing Cabinets)
- About 1,000 dispensing transactions per day from our 4 retail pharmacies
- Averaging 150 surgery cases per day
- Over 280 emergency department visits per day

Approximately 26,000 employees including:
- 5,500 Nurses
- 1,300 House officers (physicians)
- 1,400 Resident physicians
- 200 Pharmacists
- 200 Pharmacy technicians
- 180 CRNA’s
- 270 Anesthesiologists
- 200+ Researchers

Data to Review

Direct access employees =~ 6,300
Indirect (physicians, Rad Techs, MA’s, EVS…) =~ 5,000

Monthly Totals (approximates)
- 75,000 ADC transactions
- 100,000 eMAR Transactions
- 6,000 prescriptions
  (~ 30% of all scripts are CS)

The risk!!!
CDC indicates that ~ 12-16% of healthcare workers may have a substances abuse issue sometime in their career.
The Data

Looking at all medication used over time in a unit or institution
Comparison of unit and care giver transaction
There are multiple ways of looking at data
Each unique chart tells a story
Combined together they tell a better story
Combined with other information will help to verify the facts of the investigation

Each white outlined box represents a patient.
Smaller boxes represent care givers

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Following up with Data findings

On the occasion that data findings indicate an unexplainable outlier or activity

Actions that follow include:

• A deeper dive into supporting data
• Meeting with impacted management
• Meeting and evaluation with cross function team
• Meeting and interview with the responsible employee, HR, representation

Outcomes range from
Acceptable Explanation Obtained – Assistance with a recovery program

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Following up with Data findings

Identifying improvement opportunities

- I wasted 50 of fentanyl in the Omnicell along with a co-worker RN. My co-worker forgot to push the "waste med now" button, he said afterward he didn’t know that was his responsibility to do so. After I got the notice of this issue, my co-worker clearly stated that he did in fact witness me waste the medication.

- I helped the assigned RN to repositioning the pt. Afterward, we found a pill in pt's bed. RN looked up pill online, determined it was an Oxycodone. We notified charge RN, who then notified security and the Unit manager. Security picked up the pill.

- The housekeeper was sweeping under the patients bed and found two pills. RN was at bedside and the housekeeper gave the meds to the RN. The meds were brought to pharmacy and identified as 50 mg tramadol and 0.5 mg Ativan. The patient has an order for both of these medications PRN. Security was notified and came to 8C to take the meds.

- I took out one ampule of fentanyl and one vial of versed, from the Omnicell, for first case of the day. There was a delay in getting the Pt to the procedure room. I put the drugs in the top drawer of our nurse cart - out of sight, during the procedure. We did not use these meds. I failed to return the drugs to the Omnicell. They were found later, that day.

How We Used Prescribing Data

University of Michigan OPEN (Opioid Prescribing Engagement Network)
https://youtu.be/_mszv9CFBaM

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Suspicious Activity Monitoring

There are 2 types of activity monitoring taking place

1. **Data Analytics** includes transactions from the ADC (automated dispensing machines), the patient medical records and anesthesia tracking system.
   - This monitoring is ‘desk top’ and looks at transactional data from the dispensing units along with administration data from medical records.
   - It helps to detect outlier transactions, high frequency transactions, wasting transactions and other transaction types.

2. **Behavioral monitoring** includes observations made by coworkers, supervisors, managers, patients and visitors.
   - These are observations made pertaining to the activities of people inside of the facility (patients, employees and visitors).
   - Also noted during Risk Rounds and Audits
   - Data analytics are used to support each investigation
Michigan Medicine has produced this video to promote open communications and understanding of healthcare providers that encountered this issue.

**Speak-up - Save a Life**

https://vimeo.com/135620252

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**Conclusions**

**Collaborative Investigations**

- Multiple types of investigations and observations are needed to detect controlled substance diversion and abuse in healthcare. Data analytics and behavioral observations lead the list and are codependent and co-supportive.
- A team of cross functional departments including Pharmacy, Nursing, Security, Safety and Compliance all contribute to the data analysis and outcome recommendations of the investigations.
- Discoveries from these investigations may lead to opportunities that improve our systems and upgrade our skill sets while also helping to detecting diversion.
Questions

Len Lewis
Compliance Manager – Controlled Substances
Michigan Medicine Corporate Compliance Office
University of Michigan
lenlewis@med.umich.edu