A Healthcare Facility responds to Opioids and Substance Use Disorder

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

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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

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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.

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The options of not using controlled substances are "limited"
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 Countis | johncounts@mlive.com The Ann Arbor News

October 26, 2014

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Suspicious Activity Monitoring

Data Analytics

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

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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 substance abuse issue sometime in their career.

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The Data
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

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. Afterwards, 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 30 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/_mszv9CFBlw

Preventing Chronic Opioid Use and Abuse Before it Starts

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Opioid Related Projects and Research

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
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

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