Informatics Pearls
Learning Objectives for Pharmacists and Pharmacy Technicians
1. Describe an automated system that can be used to track drug recalls.
2. Explain the roles available to pharmacy technicians in the informatics space.
3. Identify a method for reporting near-miss errors.
4. Illustrate an automated workflow for restocking a used pharmacy kit.
5. Describe strategies that can be employed to overcome alert fatigue.

Informatics Pearls - Battling Alert Fatigue
Michelle Geurink, RPh
OSF Healthcare System
No Conflict of Interest

Know Your Alerts
- Drug-Drug
  - Severity
  - Documentation
  - Management Code
- Allergy
  - Inert Ingredients
  - Cross Allergens
- Precautions
  - Pregnancy
  - Lactation

Know Your Alerts
- Duplicate Medication
  - Route
  - Status (PRN)
- Duplicate Therapy
  - Categories
  - Status
- Dose
  - Minimum/Maximum
  - Dose/Day

Low Hanging Fruit
- Duplicate Therapy Allowances
- Suppression in Order Sets
  - Pregnancy Alerts in OB order sets
    - 0.4 warnings/100 orders= 2851 alerts
    - 0.2 warnings/100 orders= 1398 alerts
  - Duplicates (Heparin load, bolus, infusion)
    - 823 alerts/month (August 2014)
    - 0 alerts/month (April 2015)

Know Your Options
- Example: Drug-Drug Interaction
Know Your Options

• Example: Duplicate Therapy

Enlist the Experts

• Workgroup
  – Review Optimization Report
  – Drug-Drug Interactions
    • Management Code
    • Duplicate Therapy
      • What meds are included

Next Steps

• Workgroup
  – Evaluate Changes
  – Review Optimization Report
  – Drug-Drug

• User Filtered Alerts
  – Drug-Drug

  – Pregnancy/Lactation (order sets)
  – Others Already Filtered (e.g. Drug-Food)
Automated Pharmacy Kit Replenishment Solutions

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Sinai Health System
Clinical Informatics Specialist
No actual or potential conflicts of interest

Polling Question

- Does your institution use an automated pharmacy kit replenishment solution?
  
  A. Yes
  B. No

Available Solutions

- Kit Check
- MedEx Tray Safe

Keeping your numbers straight

- Utilizes RFID technology and/or 3D barcoding to ensure accuracy of tray contents
- Monitor usage, expiration, and lot number information for recalls
- Enables advanced reporting
- Potential for reduction of stock

Operational Considerations

- Tray Turnover
- Number of items in rotation
- Space Considerations
- Technical requirements
Self-Assessment Question

An automated pharmacy kit replenishment solution has the potential to reduce the time spent checking kits by how much?

A. > 25%
B. >40%
C. >50%
D. >75%
Informatics Pearls – The Role of the Technician in Informatics
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Speaker has no conflict to disclose.

Objective
• Explain the roles available to pharmacy technicians in the informatics space

Questions
• What is a Pharmacy Technician Informaticist (PTI)?
• In what setting(s) are PTIs employed?

Pharmacy Technician Informaticists
• Manage pharmacy IT processes
  – Automation and technology systems management
  – Project management
  – Training and education
  – Policy and governance
  – Customer service
  – Reporting

Inpatient Pharmacy Informatics
• Barcode Medication Administration
• Automated Dispensing Systems
• Inventory
• Computerized Physician Order Entry
• Electronic Health Record

Community Pharmacy Informatics
• Software evaluation and implementation
• Documentation strategies
• Billing and reimbursement
• End user training
• Maintenance and support
Other Settings

• Long Term Care
• Specialty Pharmacy
• Mail Order
• Software Vendors
• Third Party Payers
• Education

Review Questions

• What is a Pharmacy Technician Informaticist (PTI)?
• In what setting(s) are PTIs employed?

References

Informatics Pearls – Near-Miss Error Reporting

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Disclosure

• The speaker has no actual or potential conflict of interest to disclose in relation to this presentation.

Outline

• Background

• Good-Catch Medication Error Reporting Program Overview

• Results of the Program

• Conclusion

Poll the Audience

How many near-miss medication errors occur monthly at your institution?

a. <10
b. 10-50
c. 50-100
d. >100

BACKGROUND

The Good-Catch Program

• Under-reporting identified during a mock Joint Commission Survey at Hospital Sisters Health System (HSHS) St. Elizabeth’s Hospital

• Goals of the Program:
  – Increase error reporting
  – Identify clusters of events
  – Identify processes to target for improvement

Hospital Sisters Health System

- Multi-institutional health care system comprised of 14 hospitals across Illinois and Wisconsin

HSHS St. Elizabeth’s Hospital

- 303 bed community teaching hospital
- Located in Belleville, IL

Defining Medication Errors

Near-miss errors: an event occurs that does not reach the patient


GOOD-CATCH MEDICATION ERROR PROGRAM OVERVIEW

Prior to Implementation

- All medication error events were reported through a third party tool, Peminic®
- Average number of errors reported: 11 per month
- Computerized Provider Order Entry (CPOE): 80.9%/month

Limitations to Reporting Through Peminic®

- Time consuming
- Number of clicks/screens to navigate
- Limited information collected by system
- Web based application – Interrupts pharmacist’s workflow
Implementation of the Good-Catch Routine Entry

- Image removed due to possible proprietary restriction

RESULTS

6 Months Post – Implementation

- September 2014-February 2015:
  - Total number of events = 654
  - Average number per month: 109
  - 891% increase in reporting
  - Total number of events with high-alert medications = 280
    - 42% of total errors
- Flat file utilized to directly send data to be uploaded into Peminic®

Scorecard

Number of Events by Medication

Number of Events by Event Type
Conclusion

• Strengths
  – Program increased reporting
  – Captured a large enough sample to analyze data

• Limitations
  – Likely not catching all near-miss errors
  – Entry is subjective, based on pharmacist’s perception

Self-Assessment Question

Which factors must be taken into consideration when developing a process or tool to report medication errors?
A. Sustainability of the process
B. Ease of use of the reporting tool
C. Ability to track events reported through the tool
D. All of the above

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References


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**Drug Recall Tracking**

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The speaker has no conflicts of interest to disclose in relation to this presentation

**Recall Management**

1. Recalls continue to be grow  
   • Exponential growth since 2008
2. Several challenges to Recall Management  
   – Source of truth  
   – Response rate  
   – Volume of recalls  
   – Storage of information  
   – Liability

**NorthShore University HealthSystem**

• Integrated healthcare delivery system  
• 4 Acute Care Hospitals  
• 70+ Medical Group offices

How do we manage recalls for medications, devices, food, and equipment?

**Electronic Management**

• Information feeds from FDA and Manufacturers  
• Coordinator delegates to buyers  
• Buyers are responsible follow up  
• Comprehensive location to store follow up information  
• Covers scope of all FDA recalls
What it doesn’t solve

• People doing their job
• Getting 100% of all information
• Confusing updates
• Friday afternoon scramble
• “Track and Trace”

Self-Assessment Question

Which of the following is a benefit to having an automated or electronic medication recall system

A. Automatically removes recalled products from the storage areas
B. Provides a comprehensive electronic location to store follow up information that is easily retrievable
C. Sends recall information to patients
D. Fulfills all requirements of “Track and Trace” legislation

References

3. RASMUS, Noblis. Available at: http://info.rasmus.noblis.org/