A Series of Unfortunate Events: Using Continuous Quality Improvement Programs to Reduce Medication Errors

Presented by:

Michael Jackson, R.Ph., Executive Vice President, Florida Pharmacy Association

11:05 a.m. - 1:05 p.m., Saturday, October 15, 2005
Ft. Lauderdale, Florida

Evaluation # 05- 138

This program is approved by NCPA for 0.2 CEUs (2.0 contact hours) of continuing education credit. NCPA is approved by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.
A Series of Unfortunate Events: Using Continuous Quality Improvement Programs to Reduce Medication Errors

**Learning Objectives:**

1. Define elements of a Continuous Quality Improvement Program.
2. Restructure a pharmacy practice to address quality related events.
3. Analyze some common causes of quality related events.
4. Implement an action plan to address quality of care in pharmacies with a goal towards error reduction and prevention.
A Series of Unfortunate Events: Reducing Medication Errors Through Implementing a Continuous Quality Improvement Program

Michael A. Jackson, R.Ph.
Executive Vice President
Florida Pharmacy Association
www.pharmview.com

Learning Goals

• Define elements of a Continuous Quality Improvement Program
• Restructure a pharmacy practice to address quality related events
• Analyze some common causes of quality related events
• Implement an action plan to address quality of care in pharmacies with a goal towards error reduction and prevention
• Recite quality improvement regulations for Florida pharmacies
• Implement programs to improve patient safety in pharmacy health care systems

How big is this problem?

• Medication errors in our nations 7,000 hospitals could cost as much as $15 billion/year
• More prescribing errors occur between 12 noon and 3:00pm than any other time
• One patient per hospital each day will experience a medication error according to ASHP
• Missing doses by far are the most common medication error
• 1-4% of all visits to the emergency rooms are due to inappropriate use of medications that is no fault of the patient's

Source: www.Medrrors.com
How big is the problem?

- The National Patient Safety Foundation found that 1 in 3 Americans have been affected by serious medical mistakes.
- A 1990 article estimated that a pharmacist who is 99% accurate over 40 years of practice in which 480,000 prescriptions are dispensed will likely cause the death of 6 patients. (Assuming 5 day – 50 week years that is less than 50 prescriptions/day)
- One research study suggested that errors occurred more frequently at the beginning of each month.

How big is the problem?

- A study by the non-profit group US Pharmacopeia determined that morphine-based medications are among the most common errors that lead to death or injury.

Quality Improvement in health care services is not a one person operation!

- Commitment of the organization providing the services
- Health system staff are stakeholders
- Caregivers are stakeholders
- Management or owners are stakeholders
- Is your health care system working as designed?
- Where do we go from here?
Managing negative quality related events (video presentation)

• Listen to the patient or patient’s caregiver
• Assume that an error has occurred
• Investigate the facts surrounding the event
• Show genuine concern for the patient
• Apologize for the inconvenience but use judgment on accepting full responsibility
• Document the event immediately
• Notify management/owner
• If its broken, fix it & document the repair

Questions to answer in documenting a QRE

• Describe the QRE
• Note the date & time when the QRE occurred and the date and time the incident was reported
• How was the QRE discovered?
• Was treating physician or other care giver notified?
• Disposition of the patient
• Disposition of the physician
• In a dispensing error was the container retrieved (how much of the drug did the patient use or take)?
• What is the status of the patient?
• Who were the staff/caregiver(s) involved?

Contributing causes of negative quality related events (Video)

• Telephone interruptions
• General interruptions
• Prescriber’s handwriting
• Look alike/sound alike drug names
  – Akarpine – Atropine
  – Neurontin - Noroxin
• Pharmacy design
Other contributing causes of negative quality related events

- Prescription volume
- Fatigue
- Verbal orders
- Product labeling and packaging
- Brand name extensions and suffixes
  - Allegra, Allegra-D
  - Tylenol, Tylenol Sinus
- Knowledge and skills of the staff/caregiver
- Knowledge of the patient or patient’s caregiver

What are other types of negative quality related events?

- Incorrect dosage prescribed or administered
- Inappropriate drug prescribed or administered
- Missed documented drug allergy
- Expired drug dispensed or administered
- Improperly compounded drug (USP 797)
- Miss branded prescription drug

Factors that contribute to positive quality related events

- Influence and support by management
- Use of information provided by computers
- Motivation of the staff/caregiver
- Involvement of the patient or patient’s caregiver
- Continuous staff training and system upgrades
Negative QRE Prevention

• Pay attention to the warning signs
  – Patient does not get better or gets worse
  – Computer messages
  – Recognizable changes in medication appearance
  – Questions from patient or patient’s caregiver
  – Questions from physicians office
  – Insurance claim denial

Negative QRE Prevention

• Examine the patient’s health information
  – Refill schedule out of sync
  – Age (especially in children)
  – Weight
  – Sex
  – Medical history
  – Allergies

Negative QRE Prevention

• Examine dispensing procedures
  – Question illegible prescriptions
  – Question strange therapy
  – Question high doses
  – Modify final check process
  – Verify patient identification
Negative QRE Prevention

- Adopt system wide QRE prevention policies
  - Physician electronic order entry
  - Have two health care licensees verify and document the dispensing of problem related drugs (Heparin, Sodium Warfarin, digoxin, IV potassium, etc.)
  - Remove concentrated drug solutions from patient care areas
  - Sterilize final check area
  - Implement bar code/RFID technology
  - Verify identity of patient or patient’s caregiver

Standards of Practice – Continuous Quality Improvement Programs

64B16-27.300

- (1) "Continuous Quality Improvement Program" means a system of standards and procedures to identify and evaluate quality-related events, and improve patient care.

Standards of Practice – Continuous Quality Improvement Programs

64B16-27.300

- (2) "Quality-Related Event" means the inappropriate dispensing of a prescribed medication including:
  - (a) a variation from the prescriber's prescription order, including but not limited to:
    - 1. Incorrect drug;
    - 2. Incorrect drug strength;
    - 3. Incorrect dosage form;
    - 4. Incorrect patient; or
    - 5. Inadequate or incorrect packaging, labeling, or directions.
Standards of Practice – Continuous Quality Improvement Programs
64B16-27.300
– (b) a failure to identify and manage:
  • 1. over-utilization or under utilization;
  • 2. therapeutic duplication;
  • 3. drug-disease contraindications;
  • 4. drug-drug interactions;
  • 5. incorrect drug dosage or duration of drug treatment;
  • 6. drug-allergy interactions; or
  • 7. clinical abuse/misuse.

Standards of Practice – Continuous Quality Improvement Programs
64B16-27.300
• (3)(a) Each pharmacy shall establish a Continuous Quality Improvement Program which program shall be described in the pharmacy’s policy and procedure manual and, at a minimum shall contain:

Standards of Practice – Continuous Quality Improvement Programs
64B16-27.300
– 1. provision for a Continuous Quality Improvement Committee that may be comprised of staff members of the pharmacy, including pharmacists, pharmacy interns, pharmacy technicians, clerical staff, and other personnel deemed necessary by the prescription department manager of the consultant of record.
– 2. provision for the prescription department manager or the consultant pharmacist of record to ensure that the committee conducts a review of Quality Related Events at least every three months;
– 3. a planned process to record, measure, access and improve the quality of patient care;
– 4. the procedure for reviewing Quality Related Events.
Standards of Practice – Continuous Quality Improvement Programs

64B16-27.300

• (b) As a component of its Continuous Quality Improvement Program, each pharmacy shall assure that following a Quality-Related Event, all reasonably necessary steps have been taken to remedy any problem for the patient.
• (c) At a minimum, the review shall consider the effects on quality of the pharmacy system due to staffing levels, workflow, and technological support.

Standards of Practice – Continuous Quality Improvement Programs

64B16-27.300

• (4) Each Quality-Related Event that occurs, or is alleged to have occurred, as the result of activities in a pharmacy, shall be documented in a written record or computer database created solely for that purpose. The Quality-Related Event shall be initially documented by the pharmacist to whom it is described, and shall be recorded on the same day of its having been described to the pharmacist. Documentation of a Quality-Related Event shall include a description of the event that is sufficient to permit categorization and analysis of the event. Pharmacist shall maintain such records at least until the event has been considered by the committee and incorporated in the summary required in subsection (5) below.

Standards of Practice – Continuous Quality Improvement Programs

64B16-27.300

• (5) Records maintained as a component of a pharmacy Continuous Quality improvement Program are confidential under the provisions of section 766.101, F.S. In order to determine compliance the Department may review the policy and procedures and a Summarization of Quality related events. The summarization document shall analyze remedial measures undertaken following a Quality Related Event. At a minimum, the review shall consider the effects on quality of pharmacy systems due to staffing levels, workflow, and technological support. No patient name or employee name shall be included in this summarization. The summarization shall be maintained for two years. Records are considered peer-review documents and are not subject to discovery in civil litigation or administrative actions.
Things to note in a QRE form
(Report should be considered confidential)

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Reporting staff member</th>
<th>Brief description of the event</th>
<th>Type of QRE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Incorrect drug, drug strength, dosage form, wrong patient, over or under utilization, interaction, therapeutic duplication, allergy etc</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level of prescription volume</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Turnaround time</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Frequency of interruptions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Level of telephone call volume</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lighting, noise distractions etc</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Interpretation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Transcription error, look alike-sound alike drugs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other factors involved</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Computer system (including software), fax machine, voice mail, counting machines, IV hood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Action taken</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Staff on duty</td>
</tr>
</tbody>
</table>

Things to note in a summary form
(Must be made available for DOH inspectors)

- Quality related event **category**
  - Drug dispensed to wrong patient, incorrect drug selected, prescribing error noted etc
  - What were the staffing levels, remedial action taken, prescription volume, etc?
  - There must be no reference to patient or staff information in this document.