Disease State Management Clinics: A Pharmacist Perspective

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The Brooklyn Hospital Center

• Oldest hospital in Brooklyn-1845
• Located in Downtown Brooklyn
• Non-profit, tertiary care teaching hospital
• Innovative pharmacy department
  – Clinical pharmacy program
  – Pharmacy residency programs (PGY1 & PGY2)
  – Faculty from Touro College of Pharmacy & Long Island University
  – Implemented first outpatient pharmacy-managed clinic in 2004
Medication Errors

• Adverse drug reactions (ADRs) are the fourth leading cause of death in the United States
  – ADRs caused 106,000 deaths per year (1996)
• A recent comprehensive study of medication errors estimated that as many as 2.7 million medication errors occur each year in U.S. hospitals
• 28% of these errors were preventable
• Nearly half of the errors made were the result of errors in the prescribing process
ABSTRACT Identification and measurement of adverse medical events is central to patient safety, forming a foundation for accountability, prioritizing problems to work on, generating ideas for safer care, and testing which interventions work. We compared three methods to detect adverse events in hospitalized patients, using the same patient sample set.

AHRQ: Treatment for medication errors rising

By rshinkman
Created Apr 19 2011 - 1:32pm

A new study by the Agency of Healthcare Research and Quality indicates a sharp rise in the number of people requiring emergency room visits or hospitalizations due to medication side effects or errors, reports the New York Times Well blog. In 2008, 1.9 million people became ill due to medication side effects or errors, compared to 1.2 million in 2004—an approximately 60 percent increase.

The most common class of medication to cause a medical issue are corticosteroids, which are used to treat asthma, colitis and arthritis. Blood thinners, cancer drugs and heart and blood pressure medications also caused a large number of medical problems.

Although the large majority or ER treatments and hospital admissions were linked to patients over the age of 65, 20 percent of cases were linked to children and teenagers.

Medication errors cost the U.S. at least $3.5 billion a year in lost wages, productivity and additional healthcare expenses, according to a 2006 report issued by the Institute of Medicine, which noted that medication mistakes were the most common of medical errors.

For more:
Collaborative Disease State Management (CDTM)

Healthfirst 2011 Spring Symposium  Making Care Accountable:
Innovative Best Practices in Ambulatory Care , May 12, 2011
Collaborative Drug Therapy Management (CDTM)

• An agreement that allows Registered Pharmacists, “pursuant to a written collaborative agreement with a physician, to review, evaluate, modify and implement drug therapy”

• Team approach to optimize pharmacotherapy\(^1\)
  – Improve patient outcomes

• 46 states have CDTM legislation
  – Washington State was the first state (1979)
  – New York’s CDTM

\(^1\) Fuller T. Hosp Pharm. 1998; 368-371.
The New York Story-CDTM
5/2/11

• Full support of the NYS Assembly & Senate
• Demonstration project for 3 years
• Amend education law to expand the practice of pharmacy to include collaborative drug therapy management
• Authority is generally incorporated in the state pharmacy practice act
Benefits of CDTM

• Improved patient outcomes
• Decrease adverse drug reactions
  – Quicker detection of reaction
• Avoid drug interactions
• Decrease hospitalizations and readmissions
• Decrease health care expenditures
Brooklyn Hospital Pharmacist
Managed Ambulatory Clinics

• Collaborative disease state management clinics
  – Anticoagulation
  – Smoking Cessation
  – HIV Adherence
  – Diabetes
  – Asthma
  – Immunization
Pharmacotherapeutic Visit

• Tasks include:
  – Medication regimens reviewed
  – Changes to pharmacotherapy recommended
  – Monitoring for safety and efficacy of treatment
  – Referrals to patient assistance programs, low cost therapeutic alternatives
  – Non-pharmacologic alternatives discussed
    • Lifestyle modifications
  – Conjunction with Internists, Cardiologists & Pulmonologists
Anticoagulation Clinic Quality

• Time in therapeutic range (TTR)
  – INR specific person time incorporates the frequency of INR measurements and their actual values and assuming that changes between consecutive INR measurements are linear over time

• Benchmark for %time in therapeutic range is 65%\(^1\)

% Time in Therapeutic Range

Compliance Chart

- In Range
- Out Of Range
- In Range +/- 0.2
- Compliance (65%)

Visit Month

- May-10
- Jul-10
- Sep-10
- Nov-10
- Jan-11
- Mar-11

Lessons Learned

• Collaborations should be broad:
  – Signed protocols
  – Updated based on evidence-based medicine and guidelines yearly
• Provide written documentation of adjustments in therapy:
  – Patients
  – Providers
• Collect baseline data prior to implementation of services:
  – Benchmark
  – Needs Analysis
Summary

• Evidence has shown that pharmacists’ involvement in disease management improves outcomes

• Pharmacists are uniquely positioned to play a role in disease state management

• Publishing and presenting successes will support future endeavors
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