Improving the Quality of Admission Medication Histories
A Pharmacy-based Approach

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Disclosures

I, Angie Powell, have no relevant financial relationships to disclose.

Learning Objectives

- Describe the importance of collecting an accurate medication history for patients upon admission
- List challenges hospitals encounter when trying to collect accurate admission medication histories
Learning Objectives

- Describe how a Pharmacy-based admission medication history team could improve the quality of admission medication histories
- List skills that would make a pharmacy technician well-suited to serving on an admission medication history team
- Describe what steps are involved in collecting an accurate admission medication history

Baxter Regional Medical Center

- 268 bed acute care facility
- Serves patients throughout north central Arkansas and south central Missouri

Why do we need a good list?

- Patient may need to continue medications taken prior to admission while in the hospital
- Medications taken prior to admission may be contributing to current problem
- New medications being added while in the hospital may interact with meds being taken prior to admission
- Need to know if patient has already failed on a previous medication (i.e., antibiotic)
Ultimate Goal

Decrease adverse drug events, improve medication related outcomes

What can happen if the list is poor?

In the hospital
- Wrong medication
- Wrong dose
- Wrong frequency
- Dose omission
- Failure to recognize increased risk (e.g., patient on warfarin)

At discharge
- Duplicate therapy
- Patient confusion
- Readmission

Case Study: Mrs. Smith

Nurse: Mrs. Smith, can you tell me what medications you are currently taking?
Mrs. Smith: Well, I take a yellow one at bedtime, and in the morning I take one that starts with an “C” – I think it is for my cholesterol. I also take a water pill, and something for my blood pressure. I just can’t remember them all!
Mrs. Smith

Nurse: Did you happen to bring a list with you?
Mrs. Smith: No, I didn’t. But don’t worry – my doctor knows what I take!

Why is getting a good list hard?
- Patients are often poor historians
- Physician offices are busy, and the primary care physician may not know what specialists have prescribed
- Community pharmacies are busy, and the patient may use multiple pharmacies
- Hospital staff may not have the time or skill to do a great job investigating med lists thoroughly

Patient obstacles
- Poor health literacy
- Don’t always consider OTCs, herbals, eye drops, insulin to be “medications”.
Nurse obstacles

- Not trained to be expert medication transcribers
- Not trained to recognize every crazy med under the sun
- No time to investigate

The BRMC Med History Experience

- April 2007 - Electronic Nursing Documentation, including “Meds by Hx”
- December 2010 – CPOE Pilot – Significant physician frustration around electronic med rec
- October 2011 – Pharmacy Med History Team launches – focus on patients likely to be admitted from ED and direct admits
- October 2012 – Added Presurgical Testing
- Spring 2014 – Added Behavioral Health

Recognizing the need

- Quality of Med Hx performed by nursing was known to be an issue before CPOE go-live
- Multiple attempts were made to improve nursing skills around this activity – minimal impact
- During CPOE go-live, physicians became extremely frustrated with the number of hard stops encountered when completing admission orders
Quantifying the Problem

- Random audit of 136 documented home medications
- 50% had missing details (dose, route, and/or frequency)
- 2 patients had ZERO medications documented correctly
- Every patient had at least one error noted
- Four patients had completed ED prescriptions from previous visits left as active on their list

Quantifying the Problem

- "The key complaint from physicians continues to be the challenges and difficulty with med rec due to incomplete or inaccurate meds by history."
- "The med rec process is terrible. One nurse told me that every patient she takes care of has an incomplete med history or there hasn’t been one done at all;"
- "A doctor gave an example of a patient admitted from a nursing home through ER. 20 home meds documented. 9 out of 20 were documented incorrectly."
- "I am quitting CPOE until the admission med history issue is fixed."

Our Solution

- Pharmacy Medication History Team
  - Mon – Thu: 1 pharmacist + 1 tech
  - Fri: 2 techs, supervised by point of care pharmacist
  - Sat – Sun: 1 tech, supervised by point of care pharmacist

- Staffed 07:00 – 17:30
- Seven days per week

- Team comprised of pharmacists and technicians
Pharmacy Tech Role
- Interview patients
- Follow-up detective work
- Transcribing into EMR
- Typically complete 18 – 20 med history interviews per day

Pharmacist Role
- Interview patients
- Follow-up detective work
- Transcribing into EMR
- Verifying technician’s work
- Contacting prescribers when new information suggests changes need to be made to inpatient orders

Why pharmacy technicians?
- Pharmacy technicians have training and experience to qualify them for this role
- Skills and qualities to look for include:
  - Experience with prescription order-entry
  - Customer interaction skills
  - Detail-oriented
  - Adaptability
Team Statistics - 2013

- >12,000 med history interviews performed
- >7,000 allergies clarified
  - 11 percent of preventable medication errors result from drug allergies or harmful drug interactions.
- >3,500 home med history errors fixed
  - Based on Thomson Healthcare Action O-I estimates, each prevented med error avoids $220 - $2,200, depending on severity. Using that estimate, our Rx Med History team avoided somewhere between $770,000 and $7.7 million in 2013.

Team Statistics - 2013

- Many of these home med documentation errors occur during the hours when the Med History team is not available.
- There were 22 documented instances of physicians restarting a patient’s home meds before the Med History team had a chance to correct an error, resulting in patients receiving wrong medications.

Physician Satisfaction

- Physician satisfaction with electronic med reconciliation has significantly improved.
- The average percentage of home meds that easily convert to inpatient orders for CPOE physicians was 85% for the first 3 quarters of 2013. This is well above the conversion rate at most other hospitals using our EMR system.
Nursing Satisfaction

- Able to repurpose an estimated 2,500 hours per year
- “The electronic medication reconciliation process has been challenging for our physicians, and Pharmacy stepped in and filled in the gap. The addition of the medication history team owned by Pharmacy has been a huge win for BRMC. The med history is more accurate, therefore the med rec is more correct, easier to complete, and is much safer for the patient.”

Practical Tools: Adjudicated Rx Data

- Several vendors offer this type of service
- Allows you to query a patient’s community prescription history
- Gives you a starting point for the interview
Practical Tools: A Structured Interview

- Do you have any allergies? Describe the reaction you had to that medicine.
- What is the name of the pharmacy that you normally go to?

- Tell me what medications you are taking.
  - Make sure to collect information about dose, route, and frequency.
  - Your organization will need to decide how to document when a patient is taking the medication differently than prescribed.
  - Are there any prescription medications you or your physician have stopped or changed?

- Do you take anything that you would buy without a doctor’s prescription, like aspirin?
- Do you take any vitamins or minerals?
- Do you use any supplements, like glucosamine or St. John’s Wort?
- Do you use any eye drops, ear drops, or nose drops/sprays?
Practical Tools: A Structured Interview

- Do you use any inhalers? Medicated patches? Medicated creams or ointments? Any injectable medications, like insulin?
- Did you doctor give you any samples to use in the last few months?
- Have you used any antibiotics in the past 3 months?

Practical Tools: After the Interview

- Clarifications are likely to be needed
- Have your local pharmacies and physician offices on speed dial

Practical Tools: Leveraging Your EMR
Practical Tools: Leveraging Your EMR
Collateral Benefits
- Improved collaboration with nursing
- Improved collaboration with physicians
- Improved pharmacy presence in the ED and perioperative areas, with impact beyond admission meds

Additional Resources

Questions?