Utilization of pharmacy technicians for accurate and timely medication histories

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Disclosure

• The content of this presentation does not relate to any product of a commercial interest. Therefore there are no relevant financial relationships to disclose.

• Dr. Asplund is the site lead at Mission Hospital for the MARQUIS2 trial: (Implementation of a Medication Reconciliation Toolkit to Improve Patient Safety)
Mission Hospital

Mission Hospital is a 730 bed tertiary care, community hospital. It is the primary regional referral center and flagship of a 5 hospital system in a 17 county region of Western North Carolina.

Mission has 5 ASHP accredited pharmacy residency programs and affiliations with University of North Carolina (UNC) School of Pharmacy and School of Medicine.
Mission Hospital Stats

• In fiscal year 2017, the Emergency Department (ED) saw 102,130 patients
  – 11,627 were pediatric patients
  – Behavioral health patients have increased
  – 25.79% of all ED patients are admitted
  – 3rd busiest ED in NC
  – Current technician staff complete histories for:
    • 78% all patients admitted through the ED
      – 87% of high risk patients, 57% general risk patients
    • 24% of patients discharged from the ED
      – 39% complex risk, 9% general risk
Learning Objectives

• Describe barriers for nurse gathered histories
• Discuss comparative accuracy of pharmacy gathered and nurse gathered medication histories
• Explain completion of a “good faith effort”
• Develop a business plan for program development
Self-Assessment

True or false:

• RNs are the most accurate staff when gathering and documenting a medication history.

• pharmacy technicians are not as competent as pharmacists or nurses in gathering an accurate medication history.

• A “good faith effort” can be achieved by a patient interview.
The Journey of Reconciliation

• Literature going back as early as 1981 evaluates clinical significance of an accurate medication history.¹

• Evidence suggested that more than 40% of medication errors can be attributed to inadequate medication reconciliation.²

• 2005: The Joint Commission (TJC) added medication reconciliation as a National Patient Safety Goal

• 2006: TJC published a sentinel event alert titled “Using Medication Reconciliation to Prevent Errors”³
The Journey of Reconciliation

• Documenting a list of medications seems easy, however......
  – Variation in process causes confusion
  – Who’s role is it? And who has time?
  – Lack of standard documentation location and type of information create unresolved discrepancies
  – Patient acuity may skew prioritization
Documenting a list of medications seems easy, however......\(^4\)

- Patient lack of knowledge or confusion regarding medications/ poor historians
- Limited access to external pharmacy records

Up to 25% of prescription medications were not recorded in the hospital admission record, according to Lau and colleagues.\(^5\)
Medication History: Nurse

• Chevalier et al. studied nurse perceptions about medication history documentation.⁶
  – Identified barriers: time and staffing resources

• Histories taken in ED resulted in discrepancies for 37-87% of patients⁷,⁸

• With standardization, training, and resource devotion, nurses are accurate with histories⁹,¹⁰,¹¹
True or False:
RNs are the most accurate staff when gathering and documenting a medication history.
Medication History: Pharmacist

• More accurate then physicians in the ED\textsuperscript{12}

• More accurate on an internal medicine service\textsuperscript{13,14}

• More expensive than nurses or pharmacy technicians.
Medication History: Technician

• When compared to physicians in the preoperative setting, a significant reduction in medication discrepancies resulted from technician involvement.\textsuperscript{15}

• Technicians improved history accuracy from 45.8\% to 95\% over nurse-collected, according to Smith and Mango.\textsuperscript{16}

• This accuracy of technician histories has been demonstrated in multiple other studies as well, at greater than 90\% accuracy. \textsuperscript{17,18,19}
Technicians in the ED

• Technicians have been shown to have comparable accuracy to pharmacists in the ED setting. 20

• ED Pharmacy technicians have fewer errors than nurses. 21,22,23

Overall, a meta analysis determined that interventions reliant on pharmacy staff is supported for medication reconciliation with a focus on high risk patients. 24
True or False:
Pharmacy technicians are superior to nurses when documenting medication histories, but inferior to pharmacists.
Building a Business Case

• Assess the problem
  – Observations
  – Retrospective chart review
• Gather literature support
• Talk to the other process owners!
  – Physicians
  – Nurses
  – Accreditation department
Building a Business Case

• Try a small pilot
  – Important to select the right people 26
  – Important to train staff well 15,25
  – Standardize process and documentation
  – Collect data points
    • Time of completion
    • Comparison of defects to pre-intervention chart audit
    • High risk defects
  – Don’t forget about staff satisfaction!
Building a Business Case

• Utilize savings information
  – Saved RN time
  – Projected medication error savings

• Most importantly, physicians demanded the service to facilitate safer admission from the ED. Obtaining the physician champion sealed the deal.
Building a Business Case

• Don’t expect a full staff model at first
  – Plan to prioritize high risk patients\textsuperscript{27,28,29}
    • Some cited risk factors include:
      – Age
      – Polypharmacy
      – High risk medications
      – Multiple, frequent hospital admissions
  – MARQUIS (Multi-Centered Medication Reconciliation Quality Improvement Study) developed a quality tool post-study, available online free of charge (including a cost ROI excel document).\textsuperscript{30}
Building a Business Case

• Mission Hospital example:
  – Pharmacy students (trained by faculty) re-interviewed patients with a completed medication history.
    • **Technicians**: average 2 clarifications needed/history
    • **Nurses**: 5
  – Well trained technician can average 3 histories per hour
Assessment

What are the first steps to building a business case? True or false:

1. Gather data on current problem
   ✓

2. Go straight to pharmacy VP for money
   ✓

3. Start a pilot with your PRN IV room technician
   ✓
Good Faith Effort

- Struggle to balance time constraints with accuracy
- Nursing staff have multiple tasks at admission that must take priority.
- TJC allows us to define this term
Good Faith Effort

• List all the places medication information can be located
• Work with nursing to determine what is reasonable for a bedside nurse
• Develop policy and pharmacy consult guidelines for complicated patients
• Leverage the EMR to help with follow-up when necessary
Mission Hospital example:

• If a patient arrives to the unit without a pharmacy-documented history, the RN completes a “good faith effort” defined as:
  – Interview patient or family/caregiver
  – Utilize available written records from patient, outside facility, nursing home, or assisted living facility
  – Review historic list in EMR and utilize online centralized prescription database

• After those steps, a pharmacy consult can be utilized for assistance.
True or False: The Joint Commission defines a “Good Faith Effort” in the National Patient Safety Goals.
Assessment

True or False:
A “good faith effort” can be accomplished by a patient interview.
Key Takeaways

• Nurses, pharmacists, and pharmacy technicians are all capable of taking an accurate medication history with appropriate training and task time.

• Pharmacy technicians are equal to or better than pharmacists and nurses respectively at documentation of an accurate medication history.

• A good faith effort can be defined by an institution and may mean different things to different staff team members.

• Building a business case requires careful planning, engagement and support of physician and nursing staffs, and proof of effectiveness.
References

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