Medication History – process improvement guide

Section 1: Background

What is a medication history?

A medication history is defined as an account of all medications that a patient is taking prior to hospitalization and any new treatments provided in the institution. This account should be detailed, accurate and thorough, including both prescription and non-prescription medications. All medications listed should include a name, dosage, route, frequency, duration, time of last dose and any additional directions for use and purpose.

Why is an accurate admission medication list important?

Transitions to and from any care setting can be overwhelming for a patient as well as for his or her family and caregivers. Adverse patient outcomes have been documented within each type of care transition. Problems with transitions often begin at the point of entry into a health care facility and if uncorrected can lead to patient harm.

Medication reconciliation is defined as the process of comparing the medications a patient is taking (and should be taking) with newly ordered medications in order to identify and resolve discrepancies or potential medication related problems. An accurate medication history detailing all pre-hospital medications is critical for ensuring medication reconciliation can accurately be performed and to prevent avoidable adverse drug events if inaccurate or incomplete medication information exists.

Obtaining an accurate medication history is an important aspect in the provision of the most effective patient care. The information that is obtained during the medication history is extremely valuable to the providers caring for the patient. Most importantly, it tells providers what medications a patient should be taking while they are in the hospital. It can also be used to identify otherwise unknown past medical history, give insight to the provider on potential medication related issues, tool to assess the patient's medication compliance, guide the provider's prescribing and treatment requirements for a patient and so much more.

What is the risk to patient safety?

Multiple studies have evaluated and documented the patient safety risk of not having accurate medication histories:

- Admission prescriber errors
  - 54% of hospital errors made by prescribers were attributable to errors made when ordering medications upon admission[1]
- Variances between home medications and admission orders
  - Multiple studies have shown that this variance can range from 30-70%[2,3]
- Source of admission medication errors
  - 36% of medication errors on admission orders occurred during the medication history gathering phase[4]

Medication history process improvement – luxury or critical?

Obtaining an accurate and complete medication history can be challenging even for the most experienced healthcare provider. Often this task can be relegated to yet another additional task asked of nursing when admitting a patient. While the admitting nurse is certainly capable the question must be asked – do they have the time and resources to *own* this process? It is important for medication history interviews to be conducted by personnel who are specifically trained in this area and have the foundational knowledge necessary to acquire the most accurate list possible. A medication history program should implement continuous quality control strategies and reinforce policies in place to

ensure medication history interviews are being conducted appropriately and that documentation adheres to the standards.

The Joint Commission has identified several National Patient Safety Goals to improve patient safety and patient outcomes. Specifically, National Patient Safety Goal 03.06.01 relates to obtaining and documenting correct information regarding a patient's medications. The JCAHO requires that "a good faith effort to collect this information is recognized as meeting the intent of this requirement" but is that adequate for patient safety? An *effective* medication history process needs to be in place in order to optimize patient safety and prevent avoidable adverse drug events.

Additional information and literature reviews regarding interventions for improved patient outcomes can be found in the MARQUIS Medication Reconciliation Implementation Manual and MATCH toolkit for medication reconciliation.

Section 2: Planning and building a case for needed change

Creating the burning platform – quantifying the error rate at *YOUR* facility

Obtaining approval from the institution is one of the most important steps in starting a medication history program. Support of the clinical staff is vital in order for the program to be successful. Everyone has to be on board for how this program can affect the dynamics of work flow and affect the provision of patient care. Understanding the implications and clinical benefit of a structured medication history program will assist in gaining the institution's and clinical staff's support.

When proposing the need for process improvement measures be prepared to justify how implementation of such a program can improve patient clinical outcomes, safety and improve overall work flow for providers and other healthcare professionals involved in the patient's care. First, demonstrate the scope of the problem at your institution by auditing your current process. Use pharmacy students, residents or pharmacists to review medication history lists from recently admitted patients and re-interview these same patients to determine the baseline error rate at your institution.

Leverage an existing ROI tool to help build the financial case

If additional resources will be needed to optimize this process there are ROI tools available to assist with building a financial case for adding dedicated medication history resources. Both of the tool kits below provide ROI tools that can be used and/or modified to meet your facility's needs.

- MARQUIS Medication Reconciliation Implementation Manual
- MATCH toolkit for medication reconciliation

It is important to include an assessment of the financial burden of adverse drug events that could be avoided if a proper program were in place. Make a connection between the significance of such program with National Patient Safety Goals and other quality control initiatives that the institution may already have in place. There is a plethora of published research available to affirm the benefits of having a medication history program in place so let the evidence speak for itself.

Other "must haves" to help build your case for process improvement

- **Where is the biggest need** – ED admissions, direct admission, surgical admission, etc. – focus on the numbers: where are the biggest risk areas for your institution
- **Number of admissions per day** – based on your target population (ED admissions, surgery admissions ,etc.) quantify how many medication histories per day will need to be obtained and when these typically occur

- **Physician champion** – providers are all too familiar with the pain of using inaccurate or incomplete medication histories when admitting patients
- **ED staff, nursing staff** – removing medication history obtainment from the admitting nurse allows for more time for nursing to provide direct patient care
- **Examples of errors or near misses** – use *real* stories from your institution to help build the case for needed improvement at your facility

Section 3: Beyond showcasing the *need* for improvement – implementing a medication history service

Building a Team

After approval and funding from the institution is obtained, the next step is building a team of qualified personnel to be a part of the medication history team. The personnel responsible for the task of obtaining medication histories may vary and include pharmacy technicians, pharmacy students, pharmacists, or nurses. Utilizing trained pharmacy technicians is a model employed at many institutions and is also a more cost effective option than models utilizing other health care professions (pharmacists, nurses, etc.) and will be used as an example in the remainder of this toolkit. Regardless of who is designated with this task it is important to identify and establish goals, standards and policies so that team members understand the overall objective of the program.

It is best for team members to have a solid foundation of basic medication related principles including:

- Brand and generic drug names
- Drug classes
- Various dosage forms of medications
- Routes of administration
- Sig abbreviations for directions of use

Team members should also exhibit effective communication skills among patients and other healthcare professionals. It is important to be able to speak to patients in a manner that is clear and easily understood. The team member should also be comfortable with calling pharmacies, physician offices and nursing facilities to gather necessary information. Effective written communication skills are also necessary for documentation purposes and ensuring that information is appropriately communicated to other team members when necessary. It is important for each team member to be aware of their role and responsibilities and to be accountable in order to achieve the overall goal of improving patient outcomes.

Role of Medication History Technician

The role of a medication history technician is to gather the information that is necessary to compile the most accurate, complete and up-to-date medication list possible for a patient. Steps for gathering information, conducting the interview and documenting the medication list are summarized above. If questions or concerns arise, the technician should seek help or guidance from the medication history supervisor or pharmacist responsible for oversight of this process.

Role of Medication History Supervisor

The role of a medication history supervisor is to be a “point person” for the medication history technicians. The supervisor should be available to the technicians for assistance or guidance with any questions or concerns they may encounter. The supervisor should also ensure accuracy and efficacy of the program and team members. Continued quality control should be enforced to maintain standards of care and reach the goals outlined by the program.

Establishing Workflow among Clinical Staff

Implementing new programs and policies can often be challenging among staff. It is important for all clinical staff to be aware of the goals that are outlined for the new medication history program. Being familiar with the goals and how they will benefit patient outcomes could provide an incentive to cooperate with small changes. Assigning specific roles to the staff and being clear about expectations and desired outcomes will help establish workflow and prevent ambiguity about roles and responsibilities.

Section 4: Obtaining an accurate medication history

STEP 1: Gathering background patient information

Before conducting a medication history interview it is important to gather significant background information on the patient to help with the accuracy and timeliness of the interview. Examples of pertinent background information could be a previous medication history list documented in the electronic medical record, a medication administration record if the patient came to the hospital from a facility, or a discharge medication list from a previous hospital admission. This information can be useful to help guide your interview questions for the patient especially if the patient is a poor historian or unable to provide information at the time. Additional information to gather ahead of time may include documented allergies and names of pharmacies that the patient uses.

STEP 2: Conducting the medication history interview

After gathering the necessary background information available, you are ready to conduct the patient interview. Use open ended questions to acquire the most complete and accurate medication list possible. Include the medication name, dosage, route, frequency, duration, time of last dose and any additional directions for use and purpose. Patients will often have a list of their medications or may have the bottles with them in the hospital. Additional resources may be required to gather all information that is required. This could include a phone call to the pharmacy, physician's office, nursing facility, caregiver or a family member. Also include a list of drug and food allergies with reactions. Document all sources that were used to conduct the interview and gather information. The institution should consider how the information should be documented – how prescribed vs. how patient is actually taking the medication. This should be discussed with your providers so everyone is consistent in their approach and expectations are clear in regard to how medication history data is collected and reported.

STEP 3: Documenting and charting

After the medication history interview is complete, the information will need to be entered into the EMR or placed on the patient's chart. When entering medications into the EMR, be sure to include all pertinent information described above. Transcription errors are easy to make so it is important to triple check your entries to ensure accuracy and completeness.

Section 5: Quality control – ensuring accuracy and sustainability

It is highly recommended to design and implement an ongoing quality control process to ensure that the personnel assigned to collecting the medication histories are following all policies/procedures and you are sustaining the gains in patient safety as were expected. Additionally, a double-check system for high alert medications such as anticoagulants, long-acting opioids, insulin, and seizure medications can be used to provide an additional layer of safety for patients taking these medications as part of their normal home regimens. In addition, controlled substance monitoring databases (CSMD) can also be useful for verifying opioid regimens that may be unclear or require further clarification.

How can THA and the Pharmacist Coalition help you in these efforts?

Mentor institutions

THA and the medication reconciliation workgroup of the Pharmacist Coalition are committed to assisting other Tennessee hospitals in their quest to improve medication histories while recognizing that this can be a daunting task. There are numerous facilities across the state of Tennessee that have implemented successful programs and are willing to serve as "mentors" to assist you in your pursuit to improve this process at your own local facility. If you are interested in speaking with a pharmacist at a mentor facility in Tennessee to help answer questions and provide practical examples of how to best evaluate, plan, and implement improvements to your medication history collection processes please reach out to Jackie Moreland (jmoreland@tha.com).