Advanced Pharmacy Technician Practice Model Case Study

South Pointe Hospital
Warrensville Heights, Ohio
A Cleveland Clinic Hospital

Technician-Initiated Medication Histories in the Emergency Department

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ASHP Pharmacy Technician Initiative and Pharmacy Practice Model Initiative: This case study is a resource that supports the goals of PPMI and the PTI and the critical roles pharmacy technicians have in patient care. Important characteristics of current and evolving advanced technician practice models include training through an ASHP accredited training program, PTCB certification, and licensure with a Board of Pharmacy.

Primary Intended Outcome(s):
1. Creation of an advanced certified pharmacy technician role to expand the scope of pharmacy services.

2. Enhancement of the accuracy of documented patient medication histories through the provision of a dedicated caregiver to this process.

Associated with the following PPMI Recommendation or ASHP Strategic Plan Goals:
- Initiation of medication reconciliation including obtaining and documenting patients’ medication information for pharmacists’ review.

- Reviewing patient charts to identify medication allergies that require pharmacist follow up.
Site Description:
The Department of Pharmacy offers both inpatient and outpatient services, including decentralized coverage in the intensive care units (ICU), Medical / Surgical units, Emergency Department (ED), and a bedside prescription delivery program. Twenty-four hour inpatient services are provided by a staff of 25 caregivers, including: 9 pharmacists, 2 clinical pharmacists, 1 PGY1 pharmacy resident, 9 certified pharmacy technicians, as well as a compliment of management, automation, and material management support staff.

The hospital and department utilize an integrated electronic medical record (EMR) and computerized physician order entry (CPOE). Medication distribution is largely processed via automated dispensing cabinets (ADS) and supported by a pneumatic tube system and manual delivery process.

Technician staffing model for day shift on weekdays includes:

- 2 technicians in unit dose (filling orders, pulling for and filling ADS, delivering orders)
- 1 technician in USP 797 sterile preparation suite
- 1 technician covering bedside delivery program (filling and delivering prescriptions)
- 1 technician in the ED (facilitating medication history and allergy information collection and bedside prescription delivery services)

Advanced Role Description:
Prior to implementation of this program, the role of the pharmacy department in the care of ED patients was limited largely to verifying medication orders by a centralized pharmacist and supporting medication distribution. Decentralized pharmacist services were already being provided on multiple Medical/Surgical and ICUs. A decentralized technician was also providing prescription bedside delivery services to all inpatient and same-day surgery patients. Previous published literature supports the efficacy of pharmacy technicians in enhancing the medication history process. An opportunity was identified to extend pharmacy services to ED patients via an advanced pharmacy technician role.

The Emergency Department Pharmacy Technician (EDPT) has the following dual roles:
(1) For patients who will be admitted to the hospital, the technician interviews the patient to collect an allergy list and a medication history.
(2) For patients who are being discharged from the ED, the technician offers to fill prescriptions via the pharmacy department’s existing bedside delivery service.

This case study will focus on role of the technician in the collection of medication histories and allergies.

Preparing for Program Implementation
(1) FTE allocation and staffing: Prior to this program, technician hours were allocated to supporting various administrative functions on a weekly basis. A re-organization in the technician duties and staffing allowed for a technician to be dedicated to the ED, Monday through Friday for 8 hours per day, with minimum impact on staffing levels.
(2) Personnel:
- An experienced, engaged technician staff with a desire to learn new skills is an important factor in implementing this program. One technician, with over 10 years’ experience in this department, was identified to initiate the program. An additional two technicians have since been trained to ensure coverage and continuity of care. Training of technicians is covered in a later section. Pharmacist commitment is also necessary, as they provide support and serve as a drug-information resource for the technicians.
- Support from the ED nursing leadership and staff is critical. The nursing team was enthusiastic to receive assistance with the medication history process, which had previously been solely a nursing responsibility. Education for the nursing staff focused on (1) the role of the pharmacy technician in assisting with the collection
of allergies and history and (2) that the nurse is still responsible, per state requirements, to review and sign off on the collected information. Nursing education was provided using written communication, as well as staff meetings and daily nursing huddles.

(3) Tools and equipment: The technician utilizes existing ED computers and portable clinical workstations. A hospital-issued wireless phone device with a dedicated extension is designated for use by the EDPT. The technician's EMR privileges have been modified to allow access to the ED patient tracking system.

Workflow
The workflow was developed based on feedback from the nursing staff. The hours of service are Monday through Friday, 8:30am to 5:00pm. The technician prints the existing prior to admission (PTA) medication list from the EMR. The technician then interviews the patient to obtain the most recent and accurate medication list. In addition, the technician may use a written list provided by the patient or actual prescription bottles. For unreliable historians, secondary sources of information are used, such as outpatient pharmacies, physician offices, and skilled nursing facilities. The technician reviews discrepancies and any other identified issues with the patient's nurse. The technician may make notes on the medication history list, in situations such as the patient stating non-compliance with a medication they are supposed to be taking. The technician uses a pharmacy EMR process to communicate to the pharmacists potential issues for future follow-up (i.e. non-compliance, patient access issues). The technician also documents an intervention via the EMR.

Regulatory and/or Legal Requirements:
Due to Ohio State regulations, medication histories completed by a certified pharmacy technician, are reviewed by a registered nurse. Alternatively, the list may be reviewed by a pharmacist.

Revenue & Expense Parameters (abbreviated financials):
Staffing levels were minimally affected due to re-distribution of staff responsibilities and hours.

Training and/or Education Requirements:
Technicians working in the EDPT role are certified through the Pharmacy Technician Certification Board (PTCB). Additional training for the EDPT role is provided using direct observation at other health-system hospitals using a similar model, a training manual, and by direct pharmacist observation and training checklist.

A detailed training manual was developed which included terminology definitions, workflow description, and a step by step process for collecting a patient's allergy list and medication history. The manual and coaching focused on asking open-ended questions, the type of information which should be collected, appropriate sources of information, and identification of discrepancies. The manual also provided scripted examples.

Outcome Measures:
Short-term results:
Anecdotal benefits:
• Enhanced nursing satisfaction
• Enhanced information for pharmacists (the pharmacist processing admission orders and following the patients during the hospital stay reported using the information documented by the technicians)

Data is currently being collected for:
• Number of admission histories completed
• Number of discrepancies identified

Long-term goals:
• Currently evaluating options to review medication histories shortly after admission to capture a broader group of patients, including direct admit patients.

Lessons Learned:
High visibility of pharmacy technicians in the ED is critical to the integration of the program into the nursing workflow.
• In addition to collection of medication histories, training must cover policies and procedures related to patient safety (correct patient identifiers, hand hygiene, isolation precautions, etc.)

Intangible benefits:
The pharmacy technician serves as an added resource for the nursing staff for ADS issues and questions, providing information on discount medication programs when a patient has financial/access issues, and other medication-related issues.

Future opportunities:
Exploring a more effective communication process to the admitting physician regarding identified issues, such as medication non-compliance.

References:
• Michaels RD and Meisel SB. Program using pharmacy technicians to obtain medication histories. Am J Health Syst Pharm. 2003; 60(19):1982-86.