Evaluation of outpatient medication reconciliation involving student pharmacists at a comprehensive cancer center

Emily Ashjian, Louise B. Salamin, Katie Eschenburg, Shawna Kraft, and Emily Mackler

Abstract

Objective: To determine the number of discrepancies and medication-related problems found as a result of pharmacy-led medication reconciliation involving introductory pharmacy practice experience (IPPE) students at a comprehensive cancer center.

Setting: Outpatient infusion center of a National Cancer Institute (NCI)–designated and National Comprehensive Cancer Network (NCCN) cancer center.

Practice description and innovation: Third-year IPPE students contacted and completed medication reconciliation for 510 hematology/oncology patients scheduled for infusion center appointments without a coupled provider visit. IPPE students discussed the findings of the medication reconciliations with their pharmacist preceptors, who updated the medication histories in the electronic medical record (EMR) and communicated with prescribers directly about identified medication-related problems. All medication reconciliation was documented using a standardized note template in the EMR.

Main outcome measures: Number of medication discrepancies found, including medication additions, medication deletions, dose changes, and herbal product additions; medication-related problems—including drug–drug interactions, untreated indications (e.g., nausea, vomiting, pain, need for prophylactic medications), failure of patients to receive prescribed medications, and adverse drug reactions—were also documented.

Results: Medication reconciliation was completed for 510 patients through the student pharmacist/pharmacist preceptor–led intervention during a 1-year period between January 1, 2013, and December 31, 2013. A total of 88% of patients had at least one discrepancy identified in their medication history and corrected in the EMR. In addition, 11.4% of patients had a medication-related problem identified.

Conclusions: Pharmacy-led medication reconciliation identified a large number of discrepancies among our hematology/oncology patients. This intervention allowed for correction of discrepancies in the EMR leading to improved accuracy of patient medication lists. In addition, it provided a valuable learning experience for student pharmacists.

J Am Pharm Assoc. 2015;55:540–545
doi: 10.1331/JAPhA.2015.14214

Emily Ashjian, PharmD, BCPS, Clinical Assistant Professor, Department of Pharmacy Practice, Oregon State University/Oregon Health & Science University College of Pharmacy, Portland, OR; at the time of writing, Postgraduate Year 1 Pharmacy Resident, Department of Pharmacy Services, University of Michigan Health System and College of Pharmacy, Ann Arbor, MI

Louise B. Salamin, BSN, MSA, Clinical Nurse Manager (Retired), University of Michigan Comprehensive Cancer Center, Ann Arbor, MI; at the time of writing, Clinical Nurse Manager, University of Michigan Com-prehensive Cancer Center, Ann Arbor, MI

Katie Eschenburg, PharmD, Pharmacist Generalist, Cancer Center Infusion, Department of Pharmacy Services, University of Michigan Health System, Ann Arbor, MI

Shawna Kraft, PharmD, BCOP, Clinical Assistant Professor, University of Michigan Comprehensive Cancer Center, Ann Arbor, MI

Emily Mackler, PharmD, BCOP, Oncology Clinical Pharmacist, Michigan Oncology Quality Consortium, University of Michigan Comprehensive Cancer Center, Ann Arbor, MI; and Adjunct Clinical Associate Professor, University of Michigan College of Pharmacy, Ann Arbor, MI

Correspondence: Emily Mackler, PharmD, BCOP, 1227 S. Forest Ave., Ann Arbor, MI 48104; emackler@gmail.com

Disclosure: The authors declare no relevant conflicts of interest or financial relationships.

Previous presentations: Previously presented in abstract form at the Midyear Clinical Meeting of the American Society of Health-System Pharmacists, Orlando, FL, December 8–12, 2013, and the University HealthSystem Consortium Pharmacy Council Meeting, Orlando, FL, December 6–7, 2013. Final results were presented at the Great Lakes Pharmacy Resident Conference, West Lafayette, IN, April 22–24, 2014.

Received September 24, 2014. Accepted for publication April 20, 2015.

Objective

The goal of this study was to determine the number of discrepancies and medication-related problems found as a result of medication reconciliation involving introductory pharmacy practice experience (IPPE) student pharmacists. Medication reconciliation was completed for hematology/oncology patients receiving parenteral chemotherapy without a coupled physician, physician assistant, or nurse practitioner visit.

Setting

This study took place at the outpatient infusion center of the University of Michigan Comprehensive Cancer Center, a National Cancer Institute (NCI)–designated and National Comprehensive Cancer Network (NCCN) cancer center.

Practice description

At the University of Michigan Comprehensive Cancer Center, a process is in place for medication reconciliation for hematology/oncology patients during office visits or for patients receiving prescriptions for oral oncology medications. Patients often present to the infusion center for parenteral chemotherapy visits that are not coupled with a physician, physician assistant, or nurse practitioner appointment. Based on internal review, the Cancer Center leadership team identified medication reconciliation for noncoupled infusion visits as an area that needed improvement. In addition, patient feedback indicated dissatisfaction with incomplete medication records. Thus, Cancer Center staff identified medication reconciliation for infusion center patients as a target area for intervention.

Previous studies conducted at the University of Michigan and other institutions have described the success of student pharmacist involvement in inpatient medication reconciliation processes as part of IPPE and advanced pharmacy practice experience (APPE) rotations.[1–4] Additional publications have described student pharmacist involvement in the medication reconciliation process at an outpatient family medicine center and an academic medical center through a volunteer program, as well as student participation in the identification of drug-related problems through medication reconciliation in a patient-centered medical home.[5–7] A recent American College of Clinical Pharmacy white paper on improving transitions of care suggested the importance of involving student pharmacists in medication reconciliation in both inpatient and outpatient settings.[8]

Student pharmacists at the University of Michigan College of Pharmacy complete both IPPE and APPE rotations within the University of Michigan Health System (UMHS). The direct patient care IPPE, required for all third-year student pharmacists, exposes students to medication reconciliation within the health system. We implemented a process for medication reconciliation within the University of Michigan Comprehensive Cancer Center by pharmacists and student pharmacists completing their direct patient care IPPE, and we conducted a single-center, observational, nonrandomized study of ambulatory hematology/oncology patients receiving parenteral chemotherapy without a coupled physician, physician assistant, or nurse practitioner visit.

This study was carried out in accordance with the ethical standards of the University of Michigan Institutional Review Board, whose approval was obtained prior to study commencement. Ambulatory hematology/oncology patients were identified for study participation through the schedule for parenteral treatment at the University of Michigan Comprehensive Cancer Center. Patients with multiple noncoupled infusion center appointments who had already completed medication reconciliation as part of the program were excluded in order to prevent duplications.

Key Points

Background:

- Previous studies have demonstrated the successful incorporation of student pharmacists in medication reconciliation in both inpatient and outpatient settings.
- There is limited published literature describing student pharmacist involvement in the medication reconciliation process among hematology/oncology patients.

Findings:

- Student pharmacists were able to perform medication reconciliation effectively among ambulatory oncology patients.
- Many medication discrepancies were identified in our ambulatory hematology/oncology population.
- Incorporation of student pharmacists in the medication reconciliation process provided a meaningful learning experience and was well received by patients and health care providers.

Practice innovation

Third-year student pharmacists from the University of Michigan College of Pharmacy participated in the medication reconciliation process as part of their direct patient care IPPE. All students complete this learning experience as part of the University of Michigan College of Pharmacy doctor of pharmacy curriculum.

Student pharmacists were paired with pharmacist

Download English Version:

https://daneshyari.com/en/article/2543032

Download Persian Version:

https://daneshyari.com/article/2543032

Daneshyari.com