Promoting Safe Medication Prescribing in an Internal Medicine Residency Clinic

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Discussion of How the Problem was Identified and Explored

Safe medication prescribing is a crucial skill to learn during residency training. The widespread use of electronic health records presents new challenges to safe prescribing, and an internal medicine residency clinic with novice physicians presents additional challenges and opportunities in this area. Further, the ACGME's Clinical Learning Environment Review (CLER) visit has highlighted patient safety and encouraged reporting of near-misses and patient safety events by residents. Our program sought to improve our culture of safety, increase reporting of errors by residents in non-punitive environment, and improve education of residents on safe medication prescribing

Implementation of Innovation

Preparation/baseline evaluation:
Administered baseline culture survey
Identified that clinic was not aware of error reporting processes
Faculty/residents had not reported any clinic events

Phase I: Jan 2010-June 2010
Educational interventions to increase awareness
Standardized clinic error reporting process

Phase II: July 2010-June 2013
Continued reminders to report events
Ongoing event review during clinic meetings

Phase III: July 2013 to present
Initiated PGY1 ½ day didactic session

Phase IV: July 2014 to present
Started reward system for all error reports
Monthly report volume tripled
Started Medication Safety "Fishmail"

Phase V: July 2015 to present
Initiated PGY2 ½ day didactic session

Description of the Innovation

- Championed by a clinical pharmacist
- Developed with physician clinic director
- Implemented in resident continuity clinic
- Initiated in 2010

Part 1: Single ½ day didactic training for both PGY1 and PGY2 Residents

PGY-1 Med Safety Curriculum	PGY-2 Med Safety Curriculum
Review components of the outpatient medication use process that may contribute to medication safety events or near-misses by evaluating 8 to 10 relevant cases from the Primary Care Center (PCC).	Review, discuss, analyze and follow-up, and enter a reported event into the electronic ERS.
Discuss specific types of errors or risk situations (high-alert, look-alike/sound-alike, EHR-related: faulty defaults, deleted medications)	Conduct a safety review of pre-selected patient charts (1-3 as determined by the resident prior to the meeting with pharmacy)
Discuss the impact of patient health literacy on medication safety and complete a health literacy self-assessment. (Newest Vital Sign)	Review resident-specific medication orders utilizing EHR queries. Reviews may include: • Renal dosing of medications • Appropriate use of high-alert medications • Identification of high risk drug interactions • Identification of errors related to EHR function • Assessment of the use of Beer's list medications in the elderly
Review, discuss, analyze and follow-up, and enter a reported event into the electronic ERS (error reporting system).	

Example case from PGY1 Curriculum

Case #6

Patient presents the following prescription to the pharmacy:

Metformin ER 500 mg

#150

Take 2 tablets in the morning and 2 and a half (2.5) tablets in the afternoon

Discussion questions:

1. What are the safety concerns with this prescription? (unusual dosing of metformin—AM and afternoon, high dose—concerns for kidney function and patient tolerability, ½ tablet of ER formulation).

2. Are there ER formulations that are okay to modify or cut? (Discuss different ER dosage form technologies and how each can be modified, if applicable. Highlight metoprolol succinate and isosorbide as important examples of ER formulations that can be cut).

3. Discuss the importance of curiosity—this rx was written by one of the clinical pharmacists. Don't assume that a well-educated individual won't make mistakes. Respectfully question anything unusual—in the interest of patient safety. Also discuss the importance of culture—we should always be supportive of questioning, whether it is up or down in the hierarchy.

Part 2: Interactive Email Quizzes

Part 3: Reward system for all error reporting

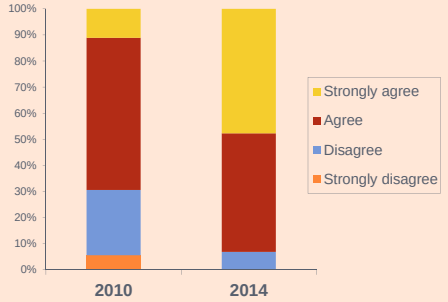
- Utilized candy or other inexpensive snacks
- Engendered positive response to reporting

Impact of the Innovation

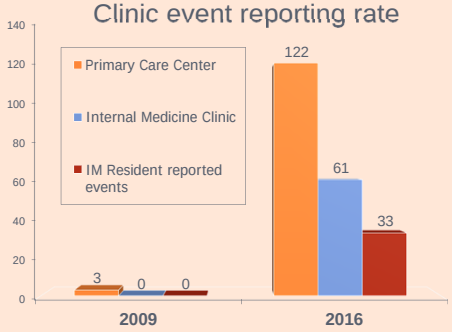
Measurement of clinic safety culture

Ambulatory Medication Safety Culture Survey

Q15: Medication safety is constantly reinforced as a priority in this clinic



Clinic event reporting rate



Implications and generalizability of the Innovation

Implementation of a medication safety curriculum has allowed us to develop a culture that promotes and encourages reporting of medication safety events and near-misses by residents. We have employed a multifaceted approach focusing on education and support. While our innovation was championed by a clinical pharmacist, programs without this resource could develop a similar program and culture with a faculty member as its champion.