

SMART Medication Safety Agenda

Warfarin [20:12.04 Anticoagulants]

SMART Medication Safety Agenda

The Community Pharmacy Incident Reporting (CPhIR) program is designed for you to report and analyze medication incidents that occurred in your pharmacy. You can learn about medication incidents that have occurred in other pharmacies through the use of the SMART Medication Safety Agenda.

The **SMART** (Specific, Measurable, Attainable, Relevant and Time-based) Medication Safety Agenda consists of actual medication incidents that were anonymously reported to the CPhIR program. Potential contributing factors and recommendations are provided to you and your staff to initiate discussion and encourage collaboration in continuous quality improvement. By putting together an assessment or action plan, and monitoring its progress, the SMART Medication Safety Agenda may help reduce the risk of similar medication incidents from occurring at your pharmacy.

How to Use the SMART Medication Safety Agenda

1. Convene a meeting for your pharmacy team to discuss each medication incident presented (p. 2).
2. Review each medication incident to see if similar incidents have occurred or have the potential to occur at your pharmacy.
3. Discuss the potential contributing factors and recommendations provided.
4. Document your team's assessment or action plan to address similar medication incidents that may occur or may have occurred at your pharmacy (Table 2).
5. Evaluate the effectiveness and feasibility (Table 1) of your team's suggested solutions or action plan.
6. Monitor the progress of your team's assessment or action plan.
7. Enter the date of completion of your team's assessment or action plan (Table 2).

Table 1. Effectiveness and Feasibility

Effectiveness:

Suggested solution(s) or action plan should be system-based, i.e. shifting a focus from "what we need to do ..." to "what we can do to our environment to work around us."

1. **High Leverage – most effective**
 - Forcing function and constraints
 - Automation and computerization
2. **Medium Leverage – intermediate effectiveness**
 - Simplification and standardization
 - Reminders, checklists, and double checks
3. **Low leverage – least effective**
 - Rules and policies
 - Education and information

Feasibility:

Suggested solution(s) or action plan should be feasible or achievable within your pharmacy, both from the perspectives of human resources and physical environment.

1. Feasible immediately
2. Feasible in 6 to 12 months
3. Feasible only if other resources and support are available

SMART Medication Safety Agenda

Warfarin [20:12.04 Anticoagulants]

Unique Properties of Warfarin

Incident Example: Significant interaction between sulfatrim and warfarin was not caught until [patient] was being counselled and asked if it interacted with his warfarin. [Prescription] went through without flashing as [drug interaction] and note at bottom of [prescription] was not seen during checking.

Potential Contributing Factors: Computerized systems for identifying drug-drug interactions (DDIs) can act as a safeguard; however, these systems have limitations such as the assimilation of new information into the software, and the inability to consistently identify clinically significant drug interactions.

Recommendations: High-alert medications, such as warfarin, require heightened vigilance to avoid the risk of adverse drug events.¹

Set reminders to ensure that the pharmacy software is always up-to-date to identify DDIs, and perform independent double checks to ensure instructions are interpreted correctly for high-alert medications.⁽²⁾

Order Entry Error

Incident Example: [Patient] wanted to get refill on warfarin 4 mg but got 5 mg because the 5 mg [prescription] was newer and the older 4 mg was copied to the 5 mg. When the [patient] used the 4 mg [prescription] number, the 5 mg automatically got filled.

Potential Contributing Factors: Due to warfarin's complex dosing regimen, there are multiple dosage strengths of warfarin available. Copying instructions from previous prescriptions or inputting prescriptions with intricate dosing regimens can increase the risk of error. Without any communication with the patient and/or prescriber, it may be hard to determine the appropriate dosing regimen for each individual.

Recommendations: For high-alert medications, limit the use of "copy from previous prescription" function to prevent duplication or confusion of the correct dosing regimen.³

Educate pharmacy staffs on the importance of understanding the adjustment to warfarin therapy and that two or more different dosage strengths of warfarin are commonly used to reach optimal dose.⁴

¹ ISMP Canada. Lowering the risk of medication errors: Independent double checks. *ISMP Canada Safety Bulletin*. 2005; 5(1): 1-2.

² ISMP Canada. Aggregate analysis of dose omission incidents reported as causing harm. *ISMP Canada Safety Bulletin*. 2013; 13(2): 1-7.

³ ISMP. List of high-alert medications in community/ambulatory healthcare. 2011. Available from: <https://www.ismp.org/communityrx/tools/ambulatoryhighalert.asp>

⁴ Horton JD, Bushwick BM. Warfarin therapy: evolving strategies in anticoagulation. *Am Fam Physician*. 1999; 59(3): 635-646.

Table 2.

Assessment / Action Plan

Effectiveness:

- Forcing function and constraints
- Automation and computerization
- Simplification and standardization
- Reminders, checklists and Double checks
- Rules and policies
- Education and information

Feasibility:

- Feasible immediately
- Feasible in 6 to 12 months
- Feasible only if other resources and support are available

Progress Notes

Date of Completion:
