

SMART Medication Safety Agenda

QT-Prolonging Medications

Table 1.

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).

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

QT-Prolonging Medications

Table 2.

Drug-Drug Interaction

INCIDENT EXAMPLE:

A patient was prescribed both ciprofloxacin and clarithromycin for an infection. The combination of these drugs increases the risk of QT prolongation. The physician was notified and discontinued one.

POTENTIAL CONTRIBUTING FACTORS:

- Unfamiliarity with QT-prolonging drugs
- Limited ability for computerized prescribing systems and/or pharmacy dispensing systems to recognize drug-drug interactions that increase the risk of QT prolongation

RECOMMENDATIONS:

- Ensure that the pharmacy’s drug-drug interaction checker is regularly updated to provide clinical decision support for QT prolongation risk.¹
- Develop a system to efficiently communicate emergent drug interaction information with prescribers.

Clinical Assessment

INCIDENT EXAMPLE:

A patient taking quetiapine 150 mg was prescribed azithromycin. The pharmacy team contacted the prescriber about the potential increased risk of QT prolongation and the need for an alternative antibiotic. However, the prescriber deemed the patient healthy enough to not need a change in antibiotic.

POTENTIAL CONTRIBUTING FACTORS:

- Overreliance on drug-drug interaction checkers
- Unfamiliarity with clinical significance of QT-prolonging drug interactions
- Inaccessible resources to assess drug interactions for clinical significance

RECOMMENDATIONS:

- Provide easy access to an up-to-date and validated QT prolongation risk assessment tool.
- Assess patient-specific risk factors for QT prolongation and communicate findings to relevant care providers in the patient’s circle of care.¹

Polydoctoring

INCIDENT EXAMPLE:

A drug interaction between sotalol and clarithromycin was detected on a patient’s profile. The patient had been seeing multiple doctors, each of whom were not aware of all of the patient’s medications.

POTENTIAL CONTRIBUTING FACTORS:

- Fragmented medication management due to multiple prescribers
- Lack of communication between multiple prescribers

RECOMMENDATIONS:

- Educate patients about the risks of polypharmacy and polydoctoring.
- Provide patients with an up-to-date medication list each time there’s a change in therapy, to be shared at each health care appointment.

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:

Reference

1. ISMP Canada. How to prevent QT-Prolongation medication incidents in the community. Hospital Newsletter. 2016.