Spot the difference: Citalopram vs. esCitalopram

By Kevin Li and Certina Ho

Citalopram and escitalopram are cornerstone, first-line therapies for depression and are widely used options for anxiety. They are two commonly prescribed selective serotonin reuptake inhibitors (SSRIs) and are amongst the top 30 prescribed medications in 2015. Along with their popular use, citalopram and escitalopram are associated with a myriad of medication incidents that involve both technical and therapeutic issues, such as a cardiac condition known as QT prolongation. Although there are potential solutions to these preventable incidents, the strong resemblance between this drug pair makes it challenging for them to be detected by any single safeguard. Therefore, a team-based approach among healthcare providers will facilitate multiple layers of preventative measures, promote vigilant screening, and encourage an overall safety culture.

ISMP Canada conducted a multi-incident analysis of medication incidents involving citalopram and escitalopram to identify potential contributing factors that may highlight medication-use processes where effective teamwork can improve patient safety. Medication incidents were retrieved from the ISMP Canada's Community Pharmacy Incident Reporting (CPhIR) Program from the year of 2015. Two major themes were identified and they were further divided into subthemes as shown in Table 1 and Table 2.

Although citalopram's and escitalopram's risk for harm is typically mild in nature, medication incidents still have potential repercussions should an error occur in the vulnerable patient groups (e.g. patients with high risk for QT prolongation). As a result, caution should be exercised in all stages of the medication-use process and considerations to implement effective team-based preventions and practices as outlined in Table 1 and Table 2 should be made.

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Table 1: Theme #1 Pharmacists & Pharmacy Staff – A Collaborative Effort in Enhancing Medication Safety

Subtheme: Strength/Dosage Selection Errors

Potential Contributing Factors	Team-Based Preventions
Historical influences – prescription order entry errors due to copying past prescriptions or being influenced by previous prescription order entries	To prevent confirmation bias, policies may be considered to restrict or limit the process of copying from previous prescriptions (where applicable).
Inattentional blindness – the event in which an individual fails to recognize an error although it has been seen.	Incorporate independent double checks in the pharmacy workflow.
Environmental factors (e.g. workload, distractions in the pharmacy)	Incorporate independent double checks in the pharmacy workflow.

Subtheme: Tablet-Splitting Issues

Potential Contributing Factors	Team-Based Preventions
Misreading or misinterpretation of prescription order due to illegible hand-writing	Verify medication and directions of prescription with the patient and/or the prescriber (whenever applicable).
Complex tapering regimen – anti-depressants often require gradual adjustments of dosage when initiating or discontinuing therapy	Write out dosage calculations or use visual tools (e.g. a calendar) to clarify tapering prescription orders. Incorporate independent double checks in the pharmacy workflow.

Subtheme: Look-alike, Sound-alike Drug Names

Potential Contributing Factors	Team-Based Preventions
Lack of differentiation – Citalopram and escitalopram have nearly identical strengths, dosage regimens, indications, names, and similar pharmacological properties	Train and remind front-line pharmacy staff to routinely verify prescribed medications, indications, and directions of use with the patient and/or the prescriber (whenever applicable). Notify or communicate with patients and investigate all changes in therapy. Educate patients of possible look-alike, sound-alike drug pairs (if applicable) and to be watchful of their medications.
Confirmation Bias	Incorporate independent double checks in the pharmacy workflow. Discuss and address medication safety issues (e.g. look-alike, sound-alikes drug names and other common technical errors) during staff meetings.

Table 2: Theme #2 Pharmacists & Prescribers – A Team-Based Approach in Embracing Patient Safety

Subtheme: Look-alike, Sound-alike Drug Names

Potential Contributing Factors	Team-Based Preventions
An implied culture or habit of communicating drug names with either brand names or generic names only among healthcare providers	Include both brand name and generic name on all prescriptions and all forms of communication.
Illegible hand-written prescriptions or fax prescription orders	Consider arrangements for e-prescribing to eliminate hand-written prescriptions or hand-written forms of communication, such as computerized physician order entry (CPOE) systems. (Note: CPOE systems may introduce other safety challenges in the medication-use process. Therefore, always assess the risks versus benefits when implementing a new system in your practice setting.)

Subtheme: Therapeutic Errors

Potential Contributing Factors	Team-Based Preventions
Absent or limited ability to detect potential drug-drug interactions within CPOE systems at the point of prescribing	Incorporate CPOE systems with built-in or integrated drug-drug and drug-disease interaction-checking functionality.
Limited familiarity with QT-liable medications among healthcare practitioners, which may lead to an omission to communicate or document potential risks for QT prolongation when providing patient care	Consult a reliable resource, such as Credible Meds (www.crediblemeds.org) whenever initiating medications with QT liability. Notify or communicate with patients regarding potential risks for QT prolongation (if applicable).
Patients may seek episodic care (e.g. walk-in clinics and urgent care centres) or utilize multiple pharmacies for filling their prescriptions, which may lead to incomplete medical/medication information in a patient's health records at an individual practitioner's office or at a particular pharmacy	It is important to ensure that a patient's complete medical/medication record is obtained at the point of care. Incorporate the use of ISMP Canada's "5 Questions to Ask about your Medications" when engaging your patients in a dialogue (www.ismp-canada.org/medrec/5questions.htm) – this will help capture and communicate changes in patients' medication therapy.