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eQuipped

Safety IQ eNewsletter

eQuipped is the official e-newsletter for the College of Pharmacists of Manitoba's Safety IQ Program. Each issue will feature updates on Safety IQ, Safety IQ statistics from the pilot pharmacies, continuous quality improvement tips and tricks, and resources and information to keep you updated on all things Safety IQ! Please let us know if you have suggestions on information that you would like to see in eQuipped or have ideas or safety tips you would like to share.

In this Issue:

IQ Insights: A discussion with Safety IQ Pilot Champions

Since September 2017, 20 community pharmacies in Manitoba have participated in the Safety IQ pilot program. We had the opportunity to reflect on the past 20 months with a few of them and discuss the breakthroughs and challenges they experienced as a pharmacy when it comes to the Safety IQ program.

As the Safety IQ Advisory committee continues planning for the provincial implementation of Safety IQ to all community pharmacies in Manitoba, the next few eQuipped newsletters will review the key elements of this continuous quality improvement program.

The theme of this newsletter is reporting of medication incidents and significant near misses, and the College had an opportunity to speak to the following champions:

Jaimin Patel – Pharmacy Manager, Ashern Pharmacy
Melony Just – Pharmacy Technician, Ashern Pharmacy
Dustin Hunt – Pharmacy Manager, Mountain Park Pharmacy
Glen Rawluk – Pharmacy Manager, Meyers Drugs

What is the process when it comes to reporting?

Our champions all have a similar process to report medication incidents and near misses that occur in their pharmacies. Because pharmacies are so busy during the day, they often will make a note or fill out a printed report form while the incident is still fresh in their mind with as many details as possible. Once the pharmacy slows down towards the end of the day, our champions take the time to enter it into the vendor's platform.

"If it's not too busy, I make sure that CPhIR (ISMP's reporting platform) is open on the computer terminal so I can do it right away."

One pharmacy manager noted that he understands how it would be a challenge for larger pharmacies to make reports with hundreds of prescriptions coming through their pharmacy daily. Each pharmacy needs to find a process that works best for them and their staff.

This may include having staff enter the report themselves when they discover an error if the pharmacy workload allows them to do so safely. Having other staff enter incidents encourages learning and lessens the number of reports the pharmacy manager needs to enter.

How do you determine when to report near misses?

Reporting near-misses provides an important learning opportunity and is an integral part of Safety IQ. Pharmacies prevent many incidents by catching errors before the medication leaves the pharmacy. Learning from near misses can prevent similar errors from reaching the patient. The pharmacy staff use their professional judgment to determine if a near miss should be reported by asking questions, such as - Could it cause potential harm to the patient? Does it occur repeatedly?

Are there any examples of the reporting in your pharmacy making a difference?

One of our champions regularly reviews the incidents at their pharmacy to see if there are any patterns.

"If you can search by specific DINs, you can pinpoint if there is something with that specific drug. Then you can maybe look at what brand you're using and see if the packaging looks really similar. Is that a reason this is happening? Is there a way it can be arranged differently on your shelf? You can prevent these things from happening. I think that is helpful."

Any other thoughts?

Another Pharmacy Manager's advice to all community pharmacies in Manitoba gearing up for implementation stressed the importance of consistent reporting.

"Definitely report as much as you can. The way to get the most value out of this program is to report as much as you can. That way you get the most complete picture of what is happening at your pharmacy."

Safety Measures

Data matters! Here are the medication incident and near miss statistics reported by the Safety IQ Pilot pharmacies to the Community Pharmacy Incident Reporting (CPhIR) program since September 2017:

849 INCIDENTS REPORTED

- 601 NEAR MISS/MEDICATION DISCREPANCY (MEDICATION NOT DISPENSED)
- 244 NO HARM (MEDICATION DISPENSED - NO SYMPTOMS AND NO TREATMENT NEEDED)
- 18 MILD HARM (MEDICATION DISPENSED - NO TREATMENT OR MINOR TREATMENT NEEDED)
- 3 MODERATE HARM (MEDICATION DISPENSED - ADDITIONAL TREATMENT OR OPERATION NEEDED; CAUSED PERMANENT HARM OR LOSS OF FUNCTION)

MOST FREQUENT INCIDENTS BY TYPE

INCORRECT DRUG	212
INCORRECT DOSE / FREQUENCY	197
INCORRECT STRENGTH / DOSE	105
INCORRECT QUANITY	77
OMITTED MEDICATION / DOSE	75

Aviation Incident Reporting

With the recent aviation tragedies involving the Boeing Air Max 737, it is important to look at how consistent incident reporting can help prevent these incidents and what healthcare professionals, including pharmacists, can learn from this process.

The safety culture in high reliability organizations (HROs), such as nuclear and aviation industries, is strong. In aviation, each aircraft has a logbook containing information from each flight. Pilots note the hours they have flown and make reference to any information that the next pilot may want to know about their upcoming flight. This was the main incident reporting platform before a significant incident changed aviation safety forever.

On December 1, 1974, TWA Flight 514, en route to Dulles Airport in Washington DC, crashed and killed everyone on board. Six weeks earlier, a United Airlines flight narrowly escaped the same fate during the exact same approach towards the same runway. The safety information was only shared internally by United Airlines and not shared across the industry. This exposed a need for an industry-wide database and the National Aeronautics and Space Administration (NASA) was ready for the challenge.

The Aviation Safety Reporting System (ASRS), created in 1976 by NASA, is aviation's industry-wide database of safety incidents. Any employee in the aviation industry can report an incident or near-miss to the database. NASA de-identifies the data and makes it public in a searchable database. Those interested in looking at incidents reported about a certain type of plane are able to do so with their categorized data. Pilots can take it upon themselves to learn about potential issues that are common in their industry, but NASA also provides a monthly newsletter with creative ways to share the information. While all of this helped further aviation safety, it still isn't perfect.

According to a Bloomberg report, the Lion Air Boeing 737 Max 8 that crashed on October 29, 2018, had similar issues during a flight the day before. It was the heroic efforts by the presence of a third pilot that saved that flight from going down. So why did that same plane fly passengers the very next day? A source confirmed with Bloomberg that the crew did not know how to respond to the issues with the plane. They had minutes to react but were not successful in finding the correct fix. While journalists may speculate, it will take months for investigators to identify what actually happened on that flight. Regardless, there are gaps in the system that require more aviation staff to engage in safety culture and the importance of sharing safety incidents and learning from each other.

Unfortunately, it often takes a tragedy to create change when it comes to safety culture. The patient safety advocacy work of Melissa Sheldrick, which she started in honour of her son who died from a medication incident, has created a movement towards mandatory incident reporting to a national incident database in Canada. Many provinces have implemented, or are in the process of implementing, a standardized Continuous Quality Assurance (CQI) program.

With the work of the Safety IQ pilot pharmacies, the College is working to implement a provincial standardized CIQ program requiring community pharmacies to report medication incidents and significant near misses to an independent third party. This is only the beginning of our journey to improve patient safety. Pharmacists as well as pharmacy technicians, assistants, and interns who are committed to engaging in a culture of safety with open dialogue of incidents and solutions will improve medication safety for their patients and beyond.

SMART Pharmacist Podcast

The SMART (Specific, Measurable, Attainable, Relevant, and Time-based) Pharmacist Podcast is a great way for pharmacists and pharmacy staff to equip their practice with specific tools to prevent medication errors. By discussing real-life examples of safe medication practices and principles, the podcast shares key takeaways from medication safety successes and challenges.

The first season, which is now available for free on SoundCloud and iTunes, focuses on topics such as medication safety, the aftermath of medication incidents, medication successes and gaps associated with pharmacy students, compounding errors, and drug interactions among the elderly population. The episodes also include practical applications to prevent medication errors.

The SMART Pharmacist podcast is hosted bi-monthly by Jim Kong, Program Development Manager at ISMP Canada. With a background in community pharmacy and long-term care, he has been engaged with pharmacy safety culture initiatives across Canada. He graduated with a PharmD degree from the University of Waterloo. Podcast episodes frequently feature other ISMP guests and pharmacists with expertise in the subjects of focus.

The episodes are short, ranging from 10-20 minutes, and can fit into a morning commute or a quick break during the day. To listen to the podcast on iTunes, click here. To listen to the podcast on SoundCloud, click here.

SMART Medication Safety Agenda

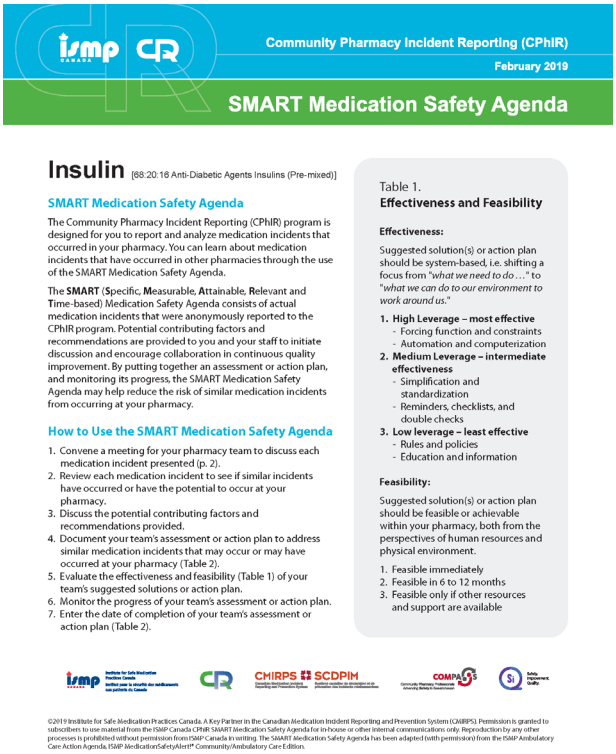
The Institute for Safe Medication Practices Canada (ISMP Canada) has introduced the SMART Medication Safety Agenda to share learnings on common medication incidents reported to them from across Canada through the Community Pharmacy Incident Reporting (CPhIR) program. This data forms the foundation for continuous quality improvement (CQI) resources like SMART Medication Safety Agenda to support pharmacy practice enhancements for patient safety.

The SMART Medication Safety Agenda encourages pharmacy teams to discuss and collaborate on CQI.

The following YouTube video (4:16 Minutes) is a step-by-step guide for pharmacy professionals to learn how to use the SMART Medication Safety Agenda:

https://youtu.be/zFTwL-mt0Xw

The latest SMART Medication Safety Agenda is on Insulin. Previous Agendas can be viewed on the Safety IQ homepage under Resources.



Community Pharmacy Incident Reporting (CPhIR)

February 2019

SMART Medication Safety Agenda

Insulin (68:20:16 Anti-Diabetic Agents Insulins (Pre-mixed))

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** (**S**pecific, **M**easurable, **A**ttainable, **R**elevant and **T**ime-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

ISMP Canada: Incidents Associated with Missed Medication Doses: A Multi-Incident Analysis

Credit: ISMP Canada CPhIR Newsletter

An aging population and increasing medication use imply that pharmacies and patients may be at risk of experiencing errors that involve missed medication doses. Missed medication doses can attenuate or eliminate a drug's therapeutic effects resulting in suboptimal disease management, more frequent physician visits, and higher hospitalization rates.[1] For some medications, such as warfarin, even a few missed doses can reduce its beneficial effects and result in serious adverse events, such as a stroke.[2] Missed doses can also cause withdrawal symptoms with some medications, such as antidepressants, resulting in side effects such as flu-like symptoms, anxiety, and electric shock-like sensations.[3, 4] Factors, such as, pharmacy environments, complex medication regimens, and training of pharmacy staff can contribute to incidents associated with missed medication doses. Identifying and addressing the root causes that may lead to these incidents in community pharmacy practice can have a significant positive impact on patient care and medication safety.

This multi-incident analysis aims to identify overarching themes encompassing underlying contributing factors that result in incidents associated with missed medication doses reported by community pharmacies. Additionally, this analysis targets vulnerable medication-use processes in community pharmacy settings in order to develop recommendations to mitigate the risk of future incidents associated with missed doses, and to optimize patient safety outcomes through safe medication practices.

Methods

Incidents included in this analysis were voluntarily reported by pharmacy professionals to the Institute for Safe Medication Practices Canada (ISMP Canada) Community Pharmacy Incident Reporting (CPhIR https://www.cphir.ca) program. We extracted incidents with "Omitted Medication/Dose" reported as the primary type of incident from the CPhIR database between July 1, 2016 and June 30, 2017. Using the specified inclusion criteria, an initial search yielded a total of 194 incidents. After removing duplicate entries and non-viable incidents (e.g. incidents with insufficient details, ambiguous description, etc.), a total of 156 incidents were included and subjected to a qualitative, multi-incident analysis, which was conducted by four independent medication safety analysts. Themes, sub-themes, contributing factors, and recommendations to address patient safety gaps corresponding to incidents associated with missed medication doses were then derived from this analysis.

Results

We identified three main themes and corresponding sub-themes. Along with contributing factors and potential recommendations, they are listed in Tables 1 to 4. We would also like to bring your attention to the following previous Multi-Incident Analyses that have been published in previous issues of TransPhIR from CPhIR Newsletter, as most incidents reviewed in this analysis that were associated with missed medication doses were identified during some of the high-risk processes in community pharmacy workflow.

- Medication Incidents Associated with Hospital Discharge (Volume 5, Issue 3 – Spring 2015 Issue)
- Medication Incidents Involving Drug Tapering in Community Pharmacy (Volume 5, Issue 1 – Fall 2014 Issue)
- Complexity and Vulnerability of Compliance Pack Preparation (Volume 4, Issue 2 – Winter 2014 Issue)
- Drug Shortage and Patient Safety (Volume 4, Issue 1 – Fall 2013 Issue)

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Table 1: Summary of Themes

Main Themes	Sub Themes
Compliance Packaging (Multi-Medication Compliance Aids)	• Over-the-Counter (OTC) Medications • Use of Samples • Drug Shortages of Backorders • Complex Medication Regimens
Transitions of Care	• Pharmacy (Prescription) Transfer • Hospital Discharge • Long-Term Care (LTC) Admission or Discharge
Medication Distribution	• Pick up • Delivery

Table 2: Main Theme 1 - Compliance Packaging (Multi-Medication Compliance Aids)

SUBTHEME 1 - Over-The-Counter (OTC) Medications

Incident Example: *Nurse phoned to say that the horse chestnut capsule was not included in the blister pack.*
Incident Example: *Physician called in renewals for patient's medications (including inhalers, blister-pack medications and OTC medications). However, during the transcribing of the verbal orders, the OTC medications were omitted and not updated on the patient profile. When the next blister pack was processed, the OTC medications (i.e. Vitamin D and ASA) were not included on the compliance pack labels and hence omitted from the blister packs.*

Contributing Factors:
OTC medications purchased separately by patient were not included in the blister pack
Incomplete medication review and/or medication list not up-to-date
Inadequate transcription and/or lack of verification of verbal orders

Recommendations:
Conduct regular medication reviews with patients; document and assess OTC medications in addition to prescription medications.
Place a poster or reminder at prescription pick-up area to remind patients to carry an updated medication list (including OTC medications) with them and to consult their pharmacist if starting any new OTC medications.
Develop or reinforce pharmacy policies and procedures when OTC medications are included in compliance packaging.[5, 6]

SUBTHEME 2 - Use of Samples

Incident Example: *Patient usually gets Tridural® samples mailed directly from the pharmaceutical company to the nursing home; and the nursing home will administer the samples to patient. The order form for the samples was not filled out properly by the prescriber this time, so the samples did not arrive on time.*

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Incident Example: *Patient has been on samples. When prescription was called into the pharmacy, the prescription labels of the compliance packs for the next cycle were already printed. Hence, the sample medications were missed in the compliance pack preparation. Pharmacy staff expected that patient had enough samples to last until the next cycle.*

Contributing Factors:
Medication samples supplied directly to the patient
Lack of communication between pharmacy and prescriber
Lack of documentation of sample supply on patient profile

Recommendations:
Develop or reinforce pharmacy policies and procedures to ensure appropriate documentation and communication when sample medications are included in compliance packaging.[6]
Ensure adequate training of pharmacy staff involved in compliance pack preparation.[7]

SUBTHEME 3 - Drug Shortages or Backorders

Incident Example: *Pharmacy ran out of Apixaban. We ran the medication roll via PACMED strip packaging (i.e. automated compliance packaging) without Apixaban. We then forgot to add Apixaban to the medication roll the next day and did not perform final check on PACMED pouch upon dispensing.*

Contributing Factors:
Drug shortages and backorders
Inadequate maintenance of pharmacy inventory
Lack of communication among pharmacy staff members
Lack of independent double checks

Recommendations:
Create end-of-day inventory maintenance checklist for pharmacy staff.
Develop or reinforce existing pharmacy policies and procedures to manage drug shortages and/or backorders.8

SUBTHEME 4 - Complex Medication Regimens

Incident Example: *A new blister-pack patient was supposed to receive Synthroid® 237 mcg daily alternating with 250 mcg daily (i.e. 100 mcg +137 mcg tablets daily alternating with 100 mcg +150 mcg tablets daily). Somewhere down the line, the 150 mcg tablets were mistakenly discontinued from the patient's profile, therefore the patient's set of blister packs ended up containing 237 mcg daily alternating with 100 mcg daily. The directions on these prescriptions did not accurately reflect the patient's dosing requirements, so it was not obvious that something went wrong.*

Incident Example: *Patient brought back his blister packs asking if we had forgot to put in his medications. He is on a specific cycle, taking 1 tablet once daily and 2 tablets on Mondays and Thursdays. We forgot to add the second Rapamune® tablet to the Monday and Thursday slots.*

Contributing Factors:
Inadequate documentation of prescription directions
Lack of independent double checks

Recommendations:
When possible, prescribers should simplify dosing regimens for patients with consideration of commercially available product formulations.[9, 10]
Perform independent double checks with patient when preparing and dispensing complex medication regimens. [11]
Flag compliance packaging orders with more than two strengths of the same medication.
Flag compliance packaging orders with medications dosed with specific frequencies (e.g. only on certain days of the week).[12]

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ISMP Canada Contribution Cont'd

Table 3: Main Theme 2 - Transitions of Care

SUBTHEME 1 - Pharmacy (Prescription) Transfer

Incident Example: *Patient's prescriptions were transferred from another pharmacy. Patient then brought in a prescription vial from another pharmacy and said that we should already receive the transfers. However, we did not see Ativan® SL on her medication profile. We then referred back to the prescription transfer images and realized that the transfer was supposed to be two pages, but we only logged the first page. We missed the last two prescriptions on the second page.*

Contributing Factors:
Incomplete medication review and/or medication list not up-to-date
Lack of independent double checks

Recommendations:
Perform independent double checks by conducting medication reviews with all new patients to the pharmacy.[11]
Develop technology to allow Pharmacy Practice Management Systems (PPMS) to communicate prescription transfers seamlessly in order to avoid the need for human intervention or transcription.[7]

SUBTHEME 2 - Hospital Discharge

Incident Example: *Nurse at long-term care home phoned to ask about Metoprolol and why it was not in the patient's blister packs. It was discovered that at hospital discharge, Metoprolol had been accidentally discontinued. There had been many medication changes and discontinuations upon patient discharge, but Metoprolol was not one of them.*

Incident Example: *Pantoprazole was not in the patient's compliance packs. Prescription for Pantoprazole was on hospital discharge, but it was missed by the pharmacist when the orders were being inputted and prepared.*

Contributing Factors:
Lack of medication reconciliation at hospital discharge
Lack of medication reconciliation at community pharmacy post-discharge
Lack of patient education on hospital discharge
Lack of independent double checks

Recommendations:
Conduct medication reconciliation at hospital discharge and generate discharge prescriptions to minimize unintentional medication changes upon patient discharge.
Provide copies of the medication list (ideally the up-to-date best possible medication history) to the patient, community pharmacy, and family doctor.[9, 10]
Assign a hospital helpline for patients and other primary health care providers (HCPs) to improve communication among HCPs at the transitions of care.[10]
Educate patients on the "5 Questions to Ask About Your Medications" (https://www.ismp-canada.org/medrec/5questions.htm).[13]

SUBTHEME 3 - Long Term Care (LTC) Admission or Discharge

Incident Example: *Pharmacy was notified earlier in the week that the resident would be transferring out of the long-term care facility (but no specific date was given). When cycle fill was run on Friday, this resident's medications were suspended as it was thought that he was leaving the long-term care facility. Technician had asked nursing staff to notify pharmacy if the resident did not leave. However, pharmacy was not informed, and the resident went without medications for three days before nursing staff noticed.*

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Incident Example: *Medication was missed when entering an admission prescription order for the nursing home. Nurse at nursing home informed pharmacy of the omission.*

Contributing Factors:
Lack of communication between pharmacy and LTC facility
Potential confirmation bias

Recommendations:
Implement an electronic reminder to prevent discontinuation of patient's medication profile unless resident discharge has been fully completed and documented.
Implement formal and standardized process for communicating LTC admissions and discharges between pharmacy and LTC facility (e.g. online communication).[14]
Recommend LTC homes to send daily or weekly patient census reports (electronically or manually prepared) to pharmacy. This can serve as a back-up or independent double check to verbal communication about admissions, transfers, and discharges.[14]

Table 4: Main Theme 3 - Medication Distribution

SUBTHEME 1 - Pick Up

Incident Example: *Three prescriptions were filled for one patient – two at one time, and one at another time. Patient's daughter came in to pick up prescriptions and only received two; the third prescription was in a separate bag.*

Contributing Factors:
Medications for the same patient were prepared in separate prescription bags
Lack of communication between pharmacy staff and patient
Insufficient patient counseling at pick-up
Lack of independent double check during pick-up and patient counselling

Recommendations:
Perform independent double checks at pick up with patient to confirm the number of prescriptions to be picked up and for which medications.[11] Ask the patient to review the prescription labels and contents of each prescription container to make sure that the medication is correct.[12]
Develop reminders in the Pharmacy Practice Management Systems (PPMS) to flag all prescriptions for the same patient if additional prescriptions are filled and a previous prescription has not been picked up yet.
Develop or reinforce existing pharmacy policies and procedures to ensure medications filled for the same patient are stored together.
When a friend or caregiver picks up prescriptions on behalf of a patient, remind the patient to check the contents of the prescription package at home before taking any medications and ask the pharmacist if there are any concerns or questions.[12]

SUBTHEME 2 - Delivery

Incident Example: *Prescription was delivered to the wrong nursing home. Patient had transferred to a different LTC home and the delivery address on patient's profile was not updated.*

Incident Example: *Patient called to have her prescriptions delivered. Prescriptions were not filled nor delivered until she called again two days later and informed the pharmacy about the outstanding delivery.*

Contributing Factors:
Potential confirmation bias
Lack of independent double checks
Ineffective communication among pharmacy staff members

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Recommendations:
Implement automated refill reminder system to prevent missed medication doses if delivery systems are delayed.
Remind pharmacy staff members of the importance of double-checking patient details (e.g. name, date of birth, delivery address) prior to sending prescriptions out for delivery.[11]

Conclusion

Despite pharmacy professionals' best efforts to provide safe and effective pharmaceutical care, errors cannot be 100% eliminated. Whether errors are related to a lack of communication among healthcare practitioners, or from an inadequate medication management system, it is essential to recognize the importance of being proactive in addressing the root causes. In this analysis, we described some of the contributing factors that may lead to missed medication doses and offer recommendations to prevent these incidents from occurring. Findings from this multi-incident analysis will help target areas of risk associated with missed medication doses and support making changes to improve medication safety in your pharmacy.

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Our mission is to protect the health and well-being of the public by ensuring and promoting safe, patient-centred, and progressive pharmacy practice in collaboration with other health-care providers.