Medication Incident Reporting and Analysis in Professional Practice Lab

Continuous Quality Assurance Starts in Pharmacy School

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Objectives

Continuous quality assurance (CQA) is necessary for advancing safe medication practices in community pharmacies.

Students should embrace and start practicing CQA when they are in pharmacy school.

We introduced an activity in Professional Practice Lab (PPL) where pharmacy students reported their near misses and medication incidents to an online reporting program with the intention to determine underlying system-based contributing factors and prevent similar incidents from occurring in PPL.

Methods

Two classes (Rx 2013 and Rx 2015) of pharmacy students participated in this CQA PPL exercise in 2010 and 2012.

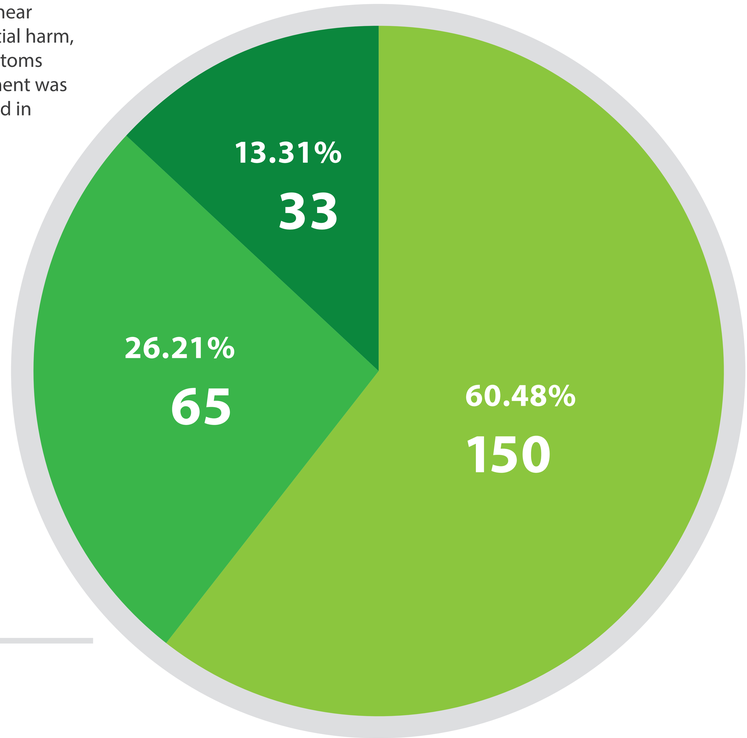
248 near misses or incidents were voluntarily reported by pharmacy students to the Institute for Safe Medication Practices Canada (ISMP Canada) (www.ismp-canada.org) Community Pharmacy Incident Reporting (CPhIR) Program Training Site (www.cphir.ca/training).

The incidents were analyzed, with a focus on the potential severity of "patient" outcome of the near misses and incidents, and medication-use areas associated with these reports.

Results

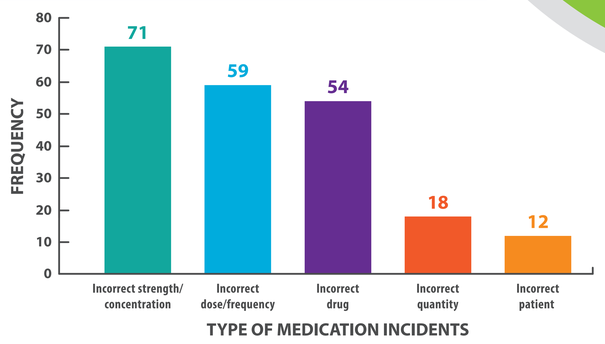
- Of the 248 incidents, 61% (150 of 248) were near misses, 26% (65 of 248) resulted in no potential harm, i.e. medication was "dispensed", but no symptoms were expected to be detected and no treatment was required in "patients". 13% (33 of 248) resulted in anticipated harm in "patients". (**Figure 1**)
- The majority of incidents occurred during the Prescription Order Entry and the Prescription Dispensing stages.
- The most common types of incidents reported were incorrect strength/ concentration (29%), incorrect dose/frequency (24%), and incorrect drug (22%). (**Figure 2**)
- Possible contributing factors to these near misses and medication incidents include look/sound-alike drug names, look-alike packaging, and miscommunication of drug order. (**Figure 3**)

FIGURE 1.
MEDICATION INCIDENTS CLASSIFIED BY OUTCOME ($n = 248$)



Near Misses	60.48%	150
No Potential Harm	26.21%	65
Anticipated Harm	13.31%	33

FIGURE 2.
TYPE OF MEDICATION INCIDENTS



Discussion

A CQA medication incident reporting and analysis PPL exercise served as an initial attempt to study factors that may contribute to near misses and medication incidents in simulated community pharmacy practice settings.

Through the analysis of medication incidents and sharing of findings in class, pharmacy students can learn from reported incidents and implement safeguards in PPL.

Pharmacy students will be prepared for CQA initiatives and activities in community pharmacies when they are ready to practice.

FIGURE 3.
POSSIBLE CONTRIBUTING FACTORS TO NEAR MISSES AND MEDICATION INCIDENTS IN PPL

Key Elements in Medication Safety	Possible Causes of Near Misses and Medication Incidents in PPL
Miscommunication of drug order	Illegible
	Ambiguous
	Incomplete
	Misheard orders
	Misunderstood orders (e.g. Intentional change of medication or dosage not indicated on Rx)
	Intimidation / faulty interaction
Drug name, label, packaging problem	Look / sound-alike names
	Look-alike packaging
	Unclear / absent labeling
	Faulty drug identification

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