

Medication Incidents Reported to OCP

A REVIEW BY ISMP CANADA

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In a collaborative effort to enhance medication safety in community pharmacy practice, the Institute for Safe Medication Practices Canada (ISMP Canada) reviewed medication incidents reported to the OCP Complaints Committee and offered recommendations in response to the data analysis.

As of July 2008, ISMP Canada has reviewed 229 reports of medication incidents reported to the OCP Complaints Committee from 2001 to 2007. The goal of this review was to seek trend information that may assist in identifying system issues and strategies that are useful to both OCP and ISMP Canada in supporting community pharmacists to reduce the risk of medication incidents.

This report highlights the most significant findings from a quantitative analysis of these 229 medication incidents with a focus on two main areas:

- o severity of outcome of medication incidents
- o medication-use areas associated with incidents

With the small number of incident reports in this review, results cannot be extrapolated to be a true reflection or representation of community pharmacy practice issues. It does however signal the nature of some of the medication incidents that occur and possible contributing factors associated with these incidents.

Severity of Outcome of Medication Incidents

Although most of the medication incidents during the period analyzed were not associated with patient harm or death, the proportion of events associated with harm or death (25.76%) does represent a substantial absolute number of patients. These events would have required considerable extra healthcare resources for treatment, in addition to the grief and suffering caused to the patient and the family.

Medication-Use Areas Associated with Incidents

Stages of Medication Use

This analysis indicated that the dispensing/delivery stage accounted for most of the medication incidents reported to the OCP Complaints Committee; another important medication-use area was the order entry/transcription stage. One possible explanation for this pattern may be that these two stages are the core work processes that happen in a typical community pharmacy setting. In addition, since a majority of these incidents were discovered and reported to the OCP by patients or patient care givers, it is unlikely that the other stages of medication use (for example, prescribing, administration, and monitoring) would be recognized.

Types of Medication Incidents

The most common types of error were incorrect drug, followed by incorrect dose and incorrect strength/concentration. A number of factors contribute to incorrect drug and incorrect dose errors, including use of dangerous abbreviations, look-alike and sound-alike drug names, look-alike packaging, and proximity of storage. ISMP Canada has undertaken work to address many of these issues. For instance, a list of dangerous abbreviations pertinent to Canadian healthcare was developed and has been published (see <http://www.ismp-canada.org/dangerousabbreviations.htm>).

Top 10 Medications

Comparing the 10 most frequently reported medications and the top 10 medications reported as causing harm or death, it is likely that prednisone, warfarin, furosemide, atenolol, and clarithromycin may be the “red-flag” medications in community pharmacy setting. Further research or analysis with a larger sample size of medication incidents is necessary in order to provide a better picture of high-risk medications in community pharmacy.

Drug Utilization Issues

Confusing drug name/label/packaging, pediatric and chemotherapy drugs accounted for a significant proportion of the medication incidents. This finding with respect to confusing drug name/label/packaging corresponds to the analysis as mentioned above in Types of Medication Incidents. In addition, pediatric and chemotherapy drugs are also potential “red-flag” medications in the community pharmacy setting.

Possible Causes

The most common causes associated with medication incidents in community pharmacy were lack of quality control or independent check systems, environmental, staffing, or workflow problems, drug name, label or packaging problems, staff education problems, and miscommunication of drug orders.

Limitations

There are several limitations to the results of the quantitative data analysis reported here.

- o No statistical analyses were done, and it is therefore impossible to completely rule out chance as an explanation for the results, particularly given the small sample size.
- o This report only reviews medication incidents that were brought forward to the OCP Complaints Committee, with a majority of them being discovered and reported by patients or patient care givers. Therefore, it cannot be used to obtain a true estimate of the rate or type of medication incidents in the community pharmacy setting.
- o The validity of inferring the degree of risk for a particular medication from the low number of medication incidents associated with it is uncertain, given that a higher number of reports may simply indicate widespread use of the drug. To balance the purely quantitative nature of the data analysis reported here, it might be more appropriate to study detailed descriptions or investigation reports of specific medication incidents and to analyze this data qualitatively.

As the sample size is small, continued compilation and analysis of medication incidents from community pharmacy would provide a more valuable data source, including encouraging community pharmacy practitioners to report directly to ISMP Canada through the online Medication Incident and Near Miss Reporting Program at the ISMP Canada

Web site (https://www.ismp-canada.org/err_report.htm). Collaborative analysis with ISMP Canada would assist in identifying emerging trends in medication errors as well as the type of factors that can contribute to causing errors in this particular setting. Through analysis of incidents and dissemination of information, practitioners can learn from reported incidents and implement safeguards. Creating a culture of patient safety (expressed through the behaviours, beliefs, and values of people in the workplace, and the systems and processes in place to manage safety) needs to be encouraged within all areas of pharmacy practice. Enhancing the understanding of why human error occurs, and the conditions which provoke it in all health care environments is a goal of ISMP Canada.

Recommendations

The following recommendations are offered by ISMP Canada in order to increase the awareness of safety issues in community pharmacy practice.

1. Report medication incidents and near misses or good catches to the online Medication Incident and Near Miss Reporting Program at the ISMP Canada Web site (https://www.ismp-canada.org/err_report.htm) for the purpose of shared learning.
2. Implement the Medication Safety Self Assessment Program (MSSA) for Community/Ambulatory Pharmacy (see <http://www.ismp-canada.org/amssa/index.htm>) to identify system improvement opportunities.
3. Participate in ISMP Canada education programs for community pharmacists, which include general medication safety principles (e.g. Medication Safety Self Assessment or MSSA), analysis of error situations (e.g. Root Cause Analysis or RCA <http://www.ismp-canada.org/rca.htm>), and assessment of work environment, equipment and procedures proactively to identify potential error sources (e.g. Failure Mode and Effects Analysis or FMEA <http://www.ismp-canada.org/fmea.htm>).
4. When relevant, engage ISMP Canada to assist with completing a root cause analysis for critical incidents.
5. When contracting relief pharmacist(s) through an agency, ensure that the relief pharmacist(s) are aware of the most common sources of errors and offer guidance to them in the event that an incident occurs during their shift(s). 