

Preventable Medication Errors

Look-alike/sound-alike drug names

"A prescription was written for Mebendazole 100mg, 2 doses with 2 weeks apart. The pharmacist interpreted the prescription as metronidazole 1000mg, 2 doses with 2 weeks apart. The prescriber's handwriting was hard to read, and Metronidazole was commonly prescribed by this prescriber."

By Qi (Kathy) Li, Atsushi Kawano and Certina Ho

Did you know that one of the most common causes of medication error is the existence of look-alike/sound-alike drug names? As more medications are being marketed in addition to the thousands already available, many of these medication names may look or sound alike as shown on the ISMP's List of Confused Drug Names (<https://www.ismp.org/tools/confuseddrugnames.pdf>). Look-alike/sound-alike drug names can lead to medication incidents that might cause serious patient harm. These errors can occur at any point in the medication-use system, including prescribing, order entry, dispensing, administration and/or monitoring. The scenario above illustrates an example where a medication incident involving look-alike/sound-alike drug names occurred during the order entry process.

Many factors could contribute to the confusion of medication names, such as illegible handwriting, knowledge deficit on drug names, and crowded storage spaces, etc. Additionally, when patients receive care from different health care providers and take multiple prescription medications, a comprehensive medication history may be more difficult to obtain. Therefore, the issue of look-alike/sound-alike drug names has become a significant challenge to pharmacists, patients, and prescribers.

The Institute for Safe Medication Practices Canada (ISMP Canada) performed a multi-incident analysis to help identify contributing factors leading to medication incidents involving look-alike/sound-alike drug names. Voluntary reports of medication incidents were extracted from the Community Pharmacy Incident Reporting (CPhIR) program, a database designed by ISMP Canada with support from the Ontario Ministry of Health and Long-Term Care.⁴ A total of 342 medication incidents were reviewed and categorized into four main themes, as shown below.

Individual factors take into account human capabilities, limitations, and characteristics, such as confirmation bias, illegible handwriting, and knowledge deficit, etc. In order to clearly indicate medication and instructions on prescriptions, physicians should consider using standardized pre-printed order forms.¹ Furthermore, independent double checks should be performed throughout the entire pharmacy workflow.

Environmental factors refer to issues in the work environment or within the workflow process, such as drug storage, environmental distractions, or drug shortage, etc. It is recommended that the pharmacy dispensing area should be organized to create a safe and efficient working environment. For example, there should be enough physical space to accommodate pharmacy staff members during the dispensing process.

Technological factors are related to the use of pharmacy computer systems, such as copying prescriptions and scanning barcodes. The copy functionality is available in most pharmacy software systems. In order to prevent confirmation bias, policies should be made within the pharmacy to restrict or limit the process of copying from previous prescriptions (where applicable).

Unique factors are special characteristics pertaining to look-alike/sound-alike drug pairs themselves, such as similar dose, similar indication, or same ingredients available in multiple formulations, etc. Warning flags should be incorporated into the pharmacy computer systems to alert for potential mix-up during drug selections.

Look-alike/sound-alike drug names continue to be an inevitable issue that often led to negative impacts on patient safety. Selected recommendations with varying degrees of effectiveness are presented in Table 1. A multifactorial approach is essential to overcome the threats to patient safety. Everyone in healthcare has a role in preventing medication errors. ISMP

Table 1: Selected recommendations in preventing medication incidents involving look-alike/sound-alike drug names

Recommendations	Effectiveness of Safety Strategies	High Leverage
<ul style="list-style-type: none"> Include both brand and generic names in the order entry system Use standardized pre-printed order forms (where applicable) Incorporate reminders or alerts in the pharmacy computer systems for look-alike/sound-alike drug names Place auxiliary labels or flags on medication storage bins, where look-alike/sound-alike drug pairs are potentially stored Perform independent double checks Verify all verbal prescription orders by repeating/reading it back, spelling out the drug names, and providing the indication of the drug 	Simplification / Standardization Reminders, Checklists, Double checks	High Leverage
<ul style="list-style-type: none"> Include indications for each medication on the prescription order Restrict or limit the process of copying from previous prescriptions (where applicable) Store look-alike/sound-alike drug pairs in separate physical locations 	Rules & Policies	Medium Leverage
<ul style="list-style-type: none"> Emphasize the importance of look-alike/sound-alike drug names in pharmacy internal communication and staff orientation/ training 	Education & Information	Low Leverage

Canada's ongoing initiative is to advocate for the reporting, sharing, and learning from medication incidents and ensure continuous quality improvement in the delivery of patient care. ■

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External Announcement

Valued Customers, Business Partners and Friends,

After 36 years as a critical employee of CHS and the last 15 years as President and CEO, David Enns has chosen to transition out of his day-to-day role at the Company. David, and the Enns family will remain significant shareholders in CHS and David will continue as an active member of the Company's Board of Directors for the indefinite future. Mr. Enns stated, "I have spent the better part of my career, and a significant part of my life at CHS and am very proud of the leadership position in the industry the Company has achieved. Given the strong foundation on which CHS is built and the quality of the team, the time is right for me to step away from the President/CEO role and let others drive the business forward."

Effective January 18, 2016, Mike Canzoneri will become President and CEO of CHS. Mike has a 28+year career as a successful executive in the healthcare industry, including significant experience in the Canadian Healthcare market. Most recently Mike was Platform Leader of BD Medication Workflow Systems with worldwide responsibility. Prior to this, Mike was an area Director for BD Europe, Director of BD Medical Surgical Systems in Canada and earlier, Vice President of Hospital Sales, Baxter Canada, with full responsibility for the business throughout the country. "I am thrilled to be part of the CHS leadership team. I am very familiar with the Canadian healthcare market and the position that CHS enjoys within it. It is a great Company with a long history of success and very attractive prospects for growth" stated Mr. Canzoneri.



Canadian Hospital Specialties Ltd.



Mike Canzoneri

CHS and its leadership team will continue to execute on its commitment to be recognized as a leader in the healthcare products industry. Throughout the transition period the focus will be on both near and long term success in our existing and expanding product offerings and relationships. We will continue to respect and build upon the legacy of CHS valuing our employees, business partners and customers.

About CHS: Canadian Hospital Specialties is a national specialty distributor of medical and surgical products focused on strategic partnerships to enhance the experience of our customers. Our clinical sales and marketing expertise coupled with our continued commitment to invest in new technologies brings value to supplier partners and customers alike. Our partnerships are based on shared values and mutual respect, essential elements to ensure long term success.

Electronic medical records

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CIHI has a vision for how EMRs can help inform health decisions in the future. This important tool can play a very important role in improving the care of Canadian patients.

The Source: The Commonwealth Fund

Based in the United States, the Commonwealth Fund is a private foundation that aims to promote a high-performing health care system that achieves better access, improved quality and greater efficiency, particularly for society's most vulnerable.

Their annual survey results are a must-read, helping illustrate health trends in a timely way, from different perspectives.

CIHI uses international comparisons like this survey to create a snapshot of how Canada compares on important health issues. You can find more broad information on international comparisons on CIHI's OECD e-tool. It includes over 50 indicators on many different parts of healthcare, and allows for direct comparisons between provinces and more than 30 other countries.

For more information on EMRs, or any other Canadian health issue, check out CIHI.ca. ■

Riley Denver is a Communications Specialist at The Canadian Institute for Health Information.