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Evaluation of the Institute for Safe Medication Practices (ISMP) Canada Canadian Medication Incident Reporting and Prevention System (CMIRPS) activities

Final Report Executive Summary

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Prepared for: ISMP Canada

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Executive Summary

The Institute for Safe Medication Practices Canada (ISMP Canada) is a partner in the Canadian Medication Incident Reporting and Prevention System (CMIRPS), a national, collaborative program with Health Canada, the Canadian Institute for Health Information (CIHI), Patients for Patient Safety Canada, and Healthcare Excellence Canada (an amalgamation of the Canadian Patient Safety Institute [CPSI] and Canadian Foundation for Healthcare Improvement [CFHI]). This evaluation centred on the CMIRPS products and services provided by ISMP Canada.

ISMP Canada is a national, independent, and not-for-profit organization that aims to advance medication safety in Canada. ISMP Canada works collaboratively with a number of different health-related stakeholders to promote safe medication practices, including regulatory agencies; policy

makers; provincial, national, and international patient safety organizations; the pharmaceutical industry; and the general public (e.g., patients, consumers, caregivers).

CMIRPS is a program aimed at reducing and preventing harmful medication incidents in Canada, and has been in operation since 2003. Each partner plays a role in delivering CMIRPS. Generally, ISMP Canada offers a medication incident reporting mechanism for individual healthcare practitioners, community pharmacies, and a consumer reporting and learning website: SafeMedicationUse.ca. ISMP Canada is also responsible for conducting analysis and follow-up of incident reports, providing support for the development and implementation of preventive measures, and developing and disseminating information bulletins and alerts.

Methodology

The evaluation focussed on the relevance, usefulness, and effectiveness of the products/services offered by ISMP Canada and their associated risk reduction and financial impact (i.e., value-for-money), as well as ISMP Canada's ability to leverage impact through collaboration and engagement. The evaluation included four lines of evidence: a document,

literature, and data review; key informant interviews with organization representatives (n = 14) and previous ISMP students (n = 3); an online survey of stakeholders (n = 734); and case scenarios highlighting ISMP Canada's influence on improvements in health care practice (n = 6).

Findings

Awareness and use of ISMP Canada CMIRPS activities

ISMP Canada undertakes a number of CMIRPS activities, including distributing safety bulletins, sharing learning from medication incident reports, and providing education sessions. ISMP Canada continues to meet and exceed its CMIRPS activity targets.

Evidence from the evaluation indicates high awareness and use of ISMP Canada's CMIRPS activities. ISMP Canada's CMIRPS activities are disseminated to and seen by stakeholders and consumers. These stakeholders and consumers in turn report high use of ISMP Canada's CMIRPS products and services. While ISMP Canada engages the correct healthcare system stakeholders, ISMP Canada should make greater efforts to reach front line staff and consumers.

More specifically regarding awareness, more than two-thirds of all survey respondents are aware of ISMP Canada's CMIRPS activities, and highlighted the importance of the wide-ranging resources developed by ISMP Canada to varying types of stakeholders. The evaluation also provided evidence that ISMP Canada is engaging the correct health care system stakeholders through their outreach in a timely manner. However, key informants indicated that awareness of these activities may be higher for health care system stakeholders at higher levels (e.g., national and provincial health organizations) than at the front line staff and consumer levels (e.g., clinicians, nurses, pharmacists, paramedics, consumers, First Nations/Inuit/Métis groups, the general public). Increasing awareness of ISMP Canada CMIRPS activities at those levels is considered a priority.

It was suggested that ISMP Canada should be making efforts to reach those groups directly or working with its partners to ensure information is disseminated to those levels. It was further noted that ISMP Canada needs to review the way products are presented to these levels to increase their appeal.

Through ISMP Canada's stakeholder email list and by making products available on their website and the SafeMedicationUse.ca website, ISMP Canada's CMIRPS activities, such as safety bulletins, newsletters, and alerts are disseminated to and seen by a large number of stakeholders and consumers. Furthermore, the medication safety videos on the SafeMedicationUse.ca website were viewed a cumulative 101,854 times in 2019-20. Survey results from stakeholders and consumers (from ISMP Canada's stakeholder email list) confirm use of ISMP Canada's CMIRPS products and services. For example:

- More than half of the survey respondents and their organizations are participating in receiving bulletins, alerts, or newsletters from ISMP Canada about medication incidents and prevention strategies; implementing specific medication safety practice improvements based on ISMP Canada recommendations or tools; and using medication safety resources.
- Almost all survey participants that receive ISMP Canada bulletins or alerts read them, while the majority also use them to identify potential medication safety issues within their organization, to facilitate or implement changes in their own/their organization's policies, practices, processes, or standards, and disseminate them within their organization.

Impacts of ISMP Canada CMIRPS activities

There is vast evidence of ISMP Canada CMIRPS activities positively impacting the Canadian health system. ISMP Canada CMIRPS resources, activities, and products have been integrated into and referenced in several national and provincial standard and required practice, guideline and best practice, product improvement, and policy and procedure documents and committees over the past 10 years. Additionally, the opioid stewardship case scenario completed as part of this evaluation showed direct impact of an ISMP Canada safety bulletin on patients. Finally, ISMP Canada is also impacting the Canadian health system by

transferring knowledge to medical researchers through journal publications they have co-authored or been referenced in.

ISMP Canada CMIRPS activities and recommendations are also positively influencing policies, practices, processes, guidelines, and standards within health care organizations. This is evidenced through the survey findings as well as key informant interviews with previous ISMP Canada students who employ a number of CMIRPS activities undertaken by ISMP Canada in their current positions.

The positive influence of ISMP Canada CMIRPS activities on the Canadian health system and Past studies have shown the value of organizations like ISMP Canada to increase patient safety and to reduce national health care costs through proactive measures. However, a recent study completed for ISMP Canada showed that available data on preventable medication incidents and their financial impact is limited to broad perspectives and general high-level insight. Therefore, this evaluation could not measure exact numerical and financial impacts of particular ISMP Canada CMIRPS activities. Evidence from the evaluation, however, does show the overall value of ISMP Canada to the Canadian health system and its stakeholders by using the available published information and combining it with the additional data collected as part of this evaluation.

Stakeholders and consumers see great value in ISMP Canada's CMIRPS activities. Highlighted is ISMP Canada's ability to bring stakeholders and individual subject-matter experts for organizations and government organizations together, raise the awareness and appreciation for medication practices and patient safety in general, boost staff morale, provide training, provide data and clinical expertise, help change the culture and the way health care views patient safety, provide quality and timely products and services, and provide information and recommendations as an objective and independent third party.

health care organizations is resulting, theoretically, in greater medication safety, reduced harmful medication incidents, and improved outcomes for patients. While a few specific examples of these outcomes were provided, generally, it was noted that there is very little evidence and/or data to show these actual impacts. It is suggested that ISMP Canada collect more data and provide evidence of the implementation of guidance and/or recommendations to show positive results and increase the encouragement of using its guidance and recommendations, and to increase education directed at consumers.

Value of ISMP Canada CMIRPS activities

The cost to the Canadian health care system from harmful events in hospitals and home care settings is high. Past studies have shown that harmful events in hospitals and home care settings, while costly to the Canadian health care system, are preventable through the types of activities undertaken by ISMP Canada. Given ISMP Canada's operating budget of just under \$3 million in 2021-22, ISMP Canada's activities would only need to help reduce slightly less than 450 patient safety incidents per year. Using a number of assumptions, this evaluation calculated potential cost-savings from specific ISMP Canada CMIRPS activities. While the calculated dollar figures need to be reviewed with caution, these calculations show that these activities result in significant savings to the Canadian health care system.

Additionally, stakeholders highlighted a number of other cost-savings that ISMP Canada provides to their organizations and the Canadian health care system, and added that their organization would not have the capability to undertake the same quality work completed by ISMP Canada or complete it in the same timely manner.

Barriers to incorporating health care practice changes

The two main barriers mentioned by stakeholders to incorporating health care practice changes based on ISMP Canada's guidance and recommendations are a lack of time and resources within organizations to implement the guidance and recommendations, and culture change. For example, key informants noted that they have seen very little impact in improved patient safety due to not seeing a change in healthcare stakeholder mentality regarding error reporting and the lessons that can be learned from error reporting. However, stakeholders do see the current and future work of ISMP Canada as helping the culture change in the Canadian health care system to one that focusses on patient safety, identifying root causes for errors, and creating systems improvements instead of a "blame and shame" culture.

To address this culture change, the continued message from stakeholders is for ISMP Canada to reach front line staff and consumers in different ways (e.g., advertisements, pamphlets in pharmacies, media alerts, make newsletters and alerts more concise and easy to read) with their CMIRPS activities.

Diversity and inclusivity

ISMP Canada's activities regarding diversity and inclusivity are generally unknown among stakeholders, and it is unclear if ISMP Canada sufficiently takes into consideration any potential differences in the use or impact of its

activities on diverse groups of women, men, and non-binary individuals, considering a range of identity factors such as race, age, disability, or education. For the most part, it is believed that ISMP Canada's CMIRPS activities are addressed to everyone, so no population is excluded. To improve ISMP Canada's CMIRPS activities regarding diversity and inclusion, it was suggested that ISMP Canada partner with organizations that represent different populations and ensure to collect and report on this type of information.

Future directions and alternatives

There is a clear interest and value in ISMP Canada continuing its CMIRPS activities going forward. While some suggestions for ISMP Canada to expand its CMIRPS activities were provided, there was a general sense that given ISMP Canada's current budget, it may not be possible to expand its activities especially if it will affect its already ongoing CMIRPS work. However, suggestions to expand ISMP Canada CMIRPS activities included increasing the reach of its products and services to more front line staff and consumers (as noted previously in this report), as well as provide more information to consumers on drug reactions, side effects, and interactions; and reducing the use of or overuse of medications and antibiotics.

Recommendations

Recommendation 1: ISMP Canada should review the way in which its CMIRPS activities reach health care workers and front line staff. ISMP Canada should consider working with partners (e.g., associations, hospitals) to provide an additional method for their CMIRPS activities to be distributed to health care workers and front line staff.

Recommendation 2: ISMP Canada should review the way in which its CMIRPS activities reach consumers and the general public. ISMP Canada should consider working with partners (e.g., associations, First Nations/Inuit/Métis groups) to provide an additional method for their CMIRPS activities to be distributed to consumers and the general public.

Recommendation 3: ISMP Canada should review the way it presents information to consumers and the general public to find a more engaging way to get their attention. Reviewing how other organizations (e.g., Choosing Wisely Canada) present their information to the public and potentially working more with those organizations is recommended.

Recommendation 4: ISMP Canada should attempt/find ways to collect data to provide evidence of the positive influence the implementation of guidance and/or recommendations have on greater medication safety, reduced harmful medication incidents, and improved outcomes for patients. The results should be disseminated to health care stakeholders and consumers to increase the implementation of guidance and recommendations and consumer knowledge.

Recommendation 5: ISMP Canada should look at potential opportunities to measure value-for-money for the implementation of their CMIRPS activities and take the necessary action to begin collecting data to be able to measure actual cost-savings in the future. Presenting the findings of the value-for-money analyses should be shared with health care workers and consumers (similar to recommendation 4 above) to encourage and increase the implementation of guidance and recommendations.

Recommendation 6: ISMP Canada needs to increase the consideration of diversity and inclusivity in its CMIRPS activities, as well as clearly indicate how diversity and inclusivity are being addressed by their activities. For example, if a safety bulletin may potentially affect one population more than another, this should be noted in the safety bulletin and ISMP Canada should ensure that the safety bulletin reaches this population. Partnering with organizations for dissemination, as noted in recommendation 2, is recommended.