Medication Safety Alerts

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DEVELOPMENT OF THE CANADIAN MEDICATION INCIDENT REPORTING AND PREVENTION SYSTEM (CMIRPS)

Background

Recent reports have raised concerns about the number of adverse events experienced by patients within the health care system.[1-3] Complications from drug therapy are recognized as the most common category of nonoperative adverse event.[3-5] It is generally accepted that medication incidents represent a preventable subset of potential and actual adverse drug events, and the prevalence, seriousness, costs, and preventability of these events have been documented previously.[6-8]

Efforts to improve medication safety can play a significant role in improving overall patient safety in the Canadian health care system, but better information is needed on the types, sources, causes, and outcomes of medication incidents. One outcome of a workshop on medication safety hosted by Health Canada in the year 2000 was the proposal to create the Canadian Medication Incident Reporting and Prevention System (CMIRPS). This national reporting system is being developed to help health care professionals, health care organizations, community-based pharmacies, governments, and others to design and implement preventive actions and processes. The report of the National Steering Committee on Patient Safety, *Building a Safer System—a National Integrated Strategy for Improving Patient Safety in Canadian Health Care*,[2] made recommendations for improving patient safety, including the adoption of nonpunitive reporting policies and the tracking of patient safety data, which provided additional incentive for the development of CMIRPS.

This article describes the goals of the CMIRPS and provides some information about how it will operate. The system is being implemented over the next few years and should be functional by 2008.

Purposes of the CMIRPS

- To coordinate the capture, analysis, and dissemination of information on medication incidents.
- To enhance the safety of the medication use system for Canadians.
- To support the effective use of health care resources through the reduction of potential and actual harm caused by preventable medication incidents.

Specific Goals of the CMIRPS

- To collect and analyze data on medication incidents.
- To facilitate the implementation of reporting systems for medication incidents.
- To develop and disseminate timely and targeted information to reduce the risk of medication incidents.
- To develop and disseminate information on best practices in medication use systems.

Key Principles and Attributes of the CMIRPS

- Be national in scope.
- Be compatible with an overall patient safety system and relevant patient safety initiatives such as those offered through the Canadian Patient Safety Institute.
- Encourage extensive voluntary participation.
- Support a nonpunitive approach with respect to those who report medication incidents.
- Safeguard data integrity, privacy, and confidentiality.

- Encourage organizations and individual practitioners to report all medication incidents.
- Allow for selected follow-up to facilitate root cause analysis and quality assurance of the data.
- Allow organizations to access their own data to assist with local patient safety efforts.
- Be dynamic, to allow for the continued relevancy and utility of the system.

Roles of Participating Organizations

The CMIRPS will be developed and implemented through the collaborative efforts of 3 national organizations: Health Canada, the Institute for Safe Medication Practices Canada (ISMP Canada), and the Canadian Institute for Health Information (CIHI).

Health Canada

- Provide funding for the development of CMIRPS.
- Provide secretariat support for the CMIRPS Operations Committee and the CMIRPS Advisory Committee.
- Define Health Canada's role in managing the post-market response for identified patient safety issues related to naming, packaging, and/or labelling of drug products.
- Investigate avenues by which it can work with the pharmaceutical industry, health care professionals, and related organizations in responding to identified postmarketing safety issues arising from medication incidents, with the goals of preventing such incidents and improving patient safety.

ISMP Canada

- Continue to take the lead in collecting and processing data from individual practitioners.
- Conduct root cause analysis for selected medication incidents.
- Develop and disseminate timely information bulletins (e.g., alerts).
- Conduct analytical studies (e.g., aggregate root cause analysis based on standardized data submitted to CMIRPS from health service organizations, as well as events reported by coroners' offices, professional regulatory agencies, and health care insurers).
- Provide support for the development and implementation of preventive measures.

CIHI

- Take the lead in developing and operating a system to collect and process standardized data from health service organizations.
- Develop a system capable of query and analysis.
- Conduct analytical studies and respond to ad hoc requests.

Reporting

CMIRPS will accept incident reports from both individual reporters and health service organizations. Reporting to CMIRPS by individual practitioners will be an expansion of ISMP Canada's existing voluntary practitioner reporting program, which offers confidential (or anonymous, when preferred) reporting of an incident and does not collect information about individual patients. Reports are accepted from anyone working within the health care system, including risk managers, regulatory colleges, coroners' offices, and insurance providers, as well as health care professionals such as physicians, nurses, pharmacists, technicians, and paramedics. A variety of reporting mechanisms are offered: telephone, regular mail, e-mail, Web portal, or electronic submission.

Reporting from health service organizations will initially be limited to hospitals, including general hospitals, specialty hospitals, cancer treatment centres, psychiatric hospitals and extended care hospitals. CMIRPS will try to accommodate and build on reporting programs that already exist within health service organizations. Privacy-compliant, anonymous, secure submission of standardized data will be accomplished by direct data entry (through a Web interface) or by batch data transfer. Participating health service organizations will have access to their own data and data from other submitting organizations to allow development of local patient safety strategies. Data will also be used to support trend analysis and aggregate reporting.

The data set will be designed to meet existing national and international standards for medical error reporting to ensure comparability with other data compilations. The CMIRPS will collect reports on potential and actual incidents related to any medication and occurring at any stage of the medication use system: prescribing, order communication, product labelling and packaging, compounding, dispensing, distribution, administration, monitoring, documentation, or use.

The CMIRPS will be available to individual and health service organization based reporters working in either of Canada's official languages.

Conclusions

The collaborative model for CMIRPS is unique in the world and will contribute substantially to the patient safety directions (i.e., reporting and collecting patient safety data that will be shared for the purposes of

evidence-based decision-making) put forth by the National Steering Committee on Patient Safety[2] and supported in the 2003 First Ministers' Accord on Health Care Renewal.[9] Hospital-based pharmacists, with their knowledge of systems theory and their understanding of the need for integrated medication system safeguards, have become leaders in the patient safety movement. Their support of initiatives such as the CMIRPS, through reporting of medication incidents and sharing of information about what has been learned from event analyses, will be critical to overall enhancement of patient safety in Canada.

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