

Development of minimum dataset injury surveillance in Canada

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In Canada information on injured people treated in hospital emergency rooms (ERs) is available from the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP)¹, which is operated by Health Canada in collaboration with 16 hospitals, 10 of which are children's hospitals. Since they are not representative of Canadian hospitals, CHIRPP data cannot be used to provide national estimates of the numbers of ER-treated injuries or to calculate rates. However, the data do provide good information on the circumstances in which injuries happen. Twenty-eight data elements are used to describe the circumstances and each record also includes a free text description of how the injury happened.

The usefulness of the CHIRPP data is widely recognized and Health Canada is quite often approached by communities that want to join the program so they can obtain local injury data. Unfortunately, we have to turn them down because we do not have the resources for expansion. The reasons the communities want local data are: to build local relevance for injury prevention, to set local injury prevention priorities, to develop appropriate prevention initiatives and to evaluate those initiatives. Others who advocate increased ER-based injury surveillance point out that as out-patient treatment accounts for an ever-increasing proportion of health care, it is becoming more important to be able to capture information from ambulatory care settings.

Health Canada recognized the interest in local injury surveillance and in November 1998 held a meeting in Ottawa to discuss strategies for implementing minimum dataset injury surveillance (MDIS) in Canada. The meeting was attended by about 20 people with interests in and/or experience with local or minimum dataset injury surveillance. We were fortunate to be joined by Johan Lund from Norway and Joan Ozanne-Smith from Australia, both of whom provided valuable information and insights based on their experiences. After a day and a half of interesting presentations and discussion, the group developed the recommendations that are presented in table 1.

Table 1: Recommendations from the 1998 Ottawa meeting on minimum dataset injury surveillance (MDIS)

1. That a single MDIS system be developed and recommended for use in Canada.
2. That the MDIS system be usable in a variety of health care and other settings.
3. That the MDIS system comprise:
 - a. A core set of variables that should include, but not necessarily be limited to, the mandatory and optional variables in the Minimum Dataset for Injury Monitoring presented by Johan Lund;
 - b. Modules to collect other information as needed in the specific setting in which surveillance is carried out.
4. That standard modules be developed for commonly needed data to facilitate collection of comparable data from different settings.
5. That ICD-10 compatibility be maintained where feasible.
6. That MDIS be initiated in Emergency Rooms with expansion to other settings to follow.

7. That all data collection systems that include injury data (such as CHIRPP and the Canadian Institute for Health Information's National Ambulatory Care Reporting System) be compatible with the core data set.
8. That there be a commitment to the collection of more detailed data for the testing of hypotheses.
9. That the MDIS initiative be evaluated.

Comments on table 1

- The use of a single MDIS system would permit roll-up of local data to regional and provincial levels, and possibly to the national level if MDIS were to become widespread. A single system would also facilitate comparisons of patterns of injury occurrence between jurisdictions.
- Although MDIS would most likely be initiated in emergency rooms, there should be nothing to stop, for example, a school board that wants information on injuries suffered by its students, or a sports club that wants injury data, from setting up a surveillance system.
- Meeting participants were reluctant to agree to collection of limited amounts of information; they wanted to be sure they would be able to get information that would be useful in local planning. Participants also wanted modules to collect specific information. A sports module would probably be one of the first that would be needed and others could certainly be developed.
- The more detailed information mentioned in the ninth recommendation could be either the type of information that is available from CHIRPP or information from specially designed studies.

In addition to the recommendations in table 1, the group strongly encouraged the establishment of a body that would develop a national strategy for injury prevention and control, of which coordinated national surveillance would be a key component.

The eighth recommendation from the MDIS meeting referred to the National Ambulatory Care Reporting System (NACRS) of the Canadian Institute for Health Information (CIHI). The Institute collects, processes and maintains data for a number of national health databases including the Discharge Abstract and Hospital Morbidity Databases. NACRS is a new program that collects administrative and clinical data about patients seen in ambulatory care settings. As it was being developed, representatives of Health Canada and CIHI met to discuss the system's potential usefulness for collecting injury data. These discussions led to addition of the data element Activity and provision for inclusion of a line of free text to describe how the injury happened. CIHI decided that the fifth digit of the ICD-9 E-code would provide adequate information about where the injury happened. Table 2 presents listings of selected NACRS data elements.

Table 2: Selected data elements from the National Ambulatory Care Reporting System that would, or might be, useful in a minimum dataset injury surveillance system

Definitely useful	Possibly useful, or nice to have
Demographic data elements	
Chart number	Health care number
Postal code	Province issuing health care number
Gender	
Birth date	
Administrative data elements	
Date of visit	
Clinical data elements	
Visit disposition <i>(Visit completed, admitted etc.)</i>	Main intervention
Main problem (N-code)	Other intervention(s)
Other problem(s) (N-code)	
E-code	
ER data elements	
	Triage level <i>(Level of illness/acuity)</i>
Optional data elements	
Type of visit <i>(First, follow-up or last visit for a problem)</i>	Referred from
	Referred to
	Highest level of education
Narrative description of injury event	
Activity when injure	

NACRS is not only new, it is a voluntary program, and it is not yet used by many hospitals. This may soon change. In the province of Ontario, which is home to about 30% of the Canadian population, the Ministry of Health has indicated it intends to have NACRS implemented in all hospitals. We are looking forward to working with Ministry officials to evaluate the usefulness of NACRS as a tool for minimum dataset injury surveillance.

There is strong interest in local injury surveillance in Canada. It will be a significant challenge to develop a single set of data elements that will meet the needs of a wide variety of organizations.

Reference

1. Mackenzie SG, Pless IB. CHIRPP: Canada's principal injury surveillance program. *Injury Prevention* 1999; (in press)