

## Hospital Medication Safety Self-Assessment™ Program: Update

The Hospital Medication Safety Self-Assessment™ (MSSA), originally developed by the Institute for Safe Medication Practices (ISMP) in the United States, was adapted for use in Canada in 2002 by ISMP Canada, with the support of the Ontario Ministry of Health and Long-Term Care. The MSSA is a comprehensive survey program for use by a multidisciplinary team within an individual hospital. The survey consists of questions about 195 institutional characteristics that serve to assess the safety of medication practices, to assist in identifying opportunities for improvement, and to provide direction for improvements. Most of these characteristics relate to potential system improvements recommended by both ISMP (US) and ISMP Canada on the basis of the analyses of medication incidents reported through their respective voluntary reporting programs.

The 195 characteristics of the MSSA are grouped according to 10 key elements of medication use systems (Table 1).

Key Element	Description
I	Patient information
II	Drug information
III	Communication of drug orders and other drug information
IV	Drug labelling, packaging, and nomenclature
V	Drug standardization, storage, and labelling
VI	Medication delivery device acquisition, use, and monitoring
VII	Environmental factors
VIII	Staff competency and education
IX	Patient education
X	Quality processes and risk management

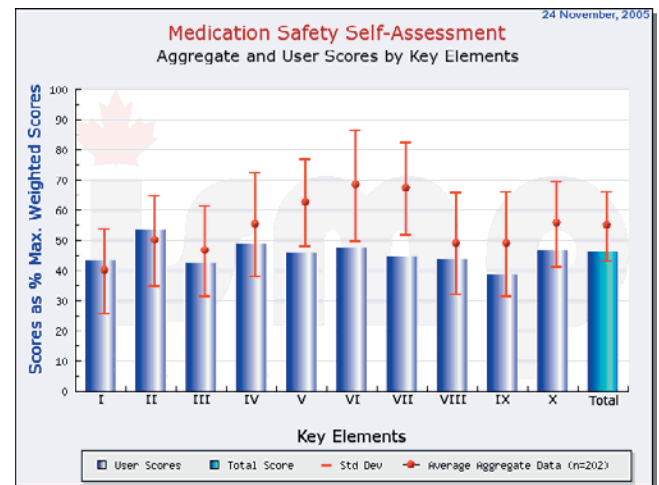
**Table 1: Key Elements of Medication Use Systems**

Hospitals are asked to rate their compliance with each characteristic using a 5-level scale. Each response is assigned a weighted score, which was developed by ISMP (US) through an assessment of the impact on patient safety and the ability of the characteristic to ensure sustained improvement.<sup>1</sup> Items with higher weighted scores are those that will have a greater impact on the safety of the medication use system as a whole. The weighted scores are not available to participants during completion of an assessment.

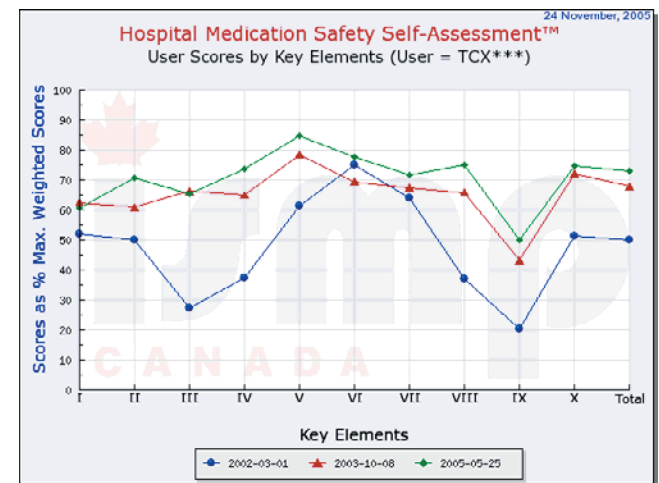
The completed survey is submitted on-line via the ISMP Canada web site. Individual users are then able to compare their results with the aggregate data, on a national and provincial or regional basis. Comparisons can also be made by demographic characteristics, e.g., hospital size, specialty service(s), or availability of residency programs.

Figure 1 shows a sample comparison of an individual hospital with the national aggregate. The individual hospital results are

displayed as a bar graph and the mean national aggregate scores are superimposed as red dots with standard deviations. Hospitals can track their quality improvement efforts over time if more than one self-assessment is conducted and the data entered. Figure 2 shows a sample comparison of three surveys completed by an individual hospital.



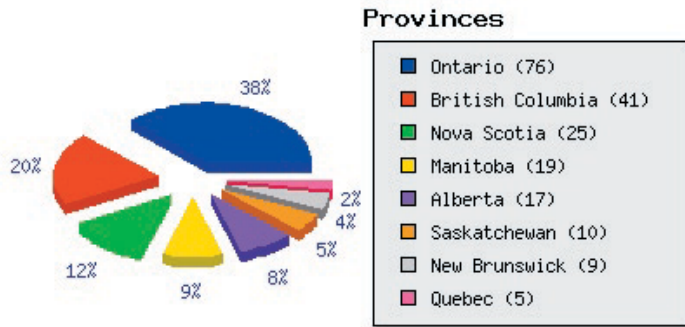
**Figure 1: Aggregate and user scores by key elements.**



**Figure 2: User scores by key elements: comparison of consecutive surveys.**

**Provincial MSSA Initiatives:** ISMP Canada is working collaboratively with Ontario, British Columbia, and Alberta to launch targeted safety support projects related to the MSSA program. Regional and provincial MSSA survey initiatives are currently under way or have already taken place in Manitoba, Nova Scotia, New Brunswick, Saskatchewan, and Newfoundland. At the time of writing, a total of 202 Canadian hospitals, representing approximately one-third of Canadian acute care hospitals, had completed the MSSA survey.

A breakdown of MSSA participation to date by province is shown in Figure 3.



**Figure 3: Medication Safety Self-Assessment participation by province. Numbers in parentheses represent number of institutions participating, and percentages represent percentage of total participants.**

**Ontario:** The MSSA program was first launched in Ontario in 2002. Thirty-one Ontario hospitals completed an initial survey in 2002 and a repeat survey in 2003, as part of a larger interventional study protocol. Gains were achieved in 18 of 20 core characteristics, as illustrated in Figure 4.

A comprehensive medication safety collaboration begun in 2002 with the Ontario Ministry of Health and Long-Term Care has raised awareness of medication safety issues in Ontario and has given priority to improvements in the medication use system. This may explain a finding of a higher provincial aggregate score in Ontario relative to other Canadian provinces.

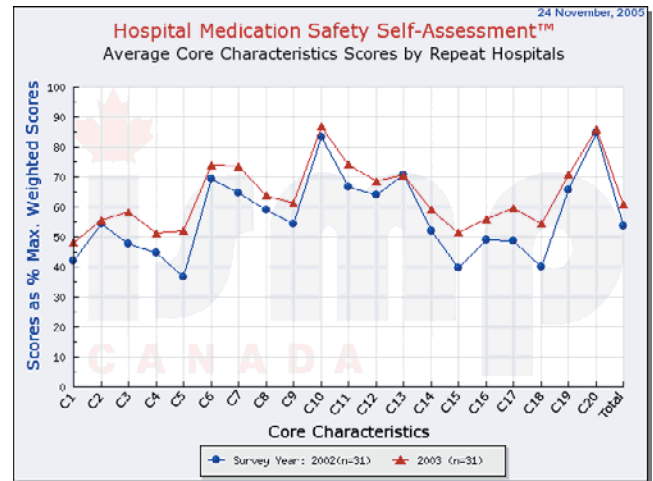
**British Columbia:** The Patient Safety Task Force of British Columbia invited 54 hospitals in the six provincial health regions to complete the MSSA in 2004. ISMP Canada provided in-depth data analysis, comparing results within and among the six provincial regions. Priority areas for action were identified in consultation with the task force, and a repeat survey is planned for 2006.

**Results and Interpretation:** A detailed review of the aggregate Canadian MSSA data was published recently in the 2005 Healthcare Quarterly Special Issue<sup>2</sup> and is also available on-line at <http://www.patientsafetypapers.com>.

**Discussion:** The MSSA provides insight into the status of medication use systems within Canadian hospitals through a

#### References:

1. Smetzer JL, Vaida AJ, Cohen MR, Trantum D, Pittman MA, Armstrong CW. Findings from the ISMP Medication Safety Self-Assessment for hospitals. *Jt Comm J Qual Saf.* 2003;29(11):586-597.
2. Greenall J, U D, Lam R. An effective tool to enhance a culture of patient safety and assess the risks of medication use systems. *Healthc Q Spec Issue.* 2005;8:53-58.
3. Looking forward: making "pro-change" your New Year's resolution. *ISMP Med Safe Alert* 2005;10(1):1-2.



**Figure 4: Average scores on core characteristic for Ontario hospitals repeating the MSSA.**

comprehensive, structured process that is proactive and unbiased and that encourages consensus building. The program provides a mechanism to shift the perspective of health care practitioners toward a system-based approach to prevention of adverse events. The data can be viewed and used by individual participating hospitals, and aggregate reports can be made available to regional authorities and provincial governments, to assist in setting priorities for improvement.

The MSSA program has been well accepted by Canadian hospitals and has been referenced within the guidelines for the 2005 Canadian Council on Health Services Accreditation Standards. The Canadian Patient Safety Institute has provided funding for enhancements to the MSSA program, which will include learning from recent medication incidents reported to the ISMP Canada voluntary individual practitioner reporting program.

In the United States, over 1400 hospitals participated in a national survey in 2000 and over 1600 in a repeat survey in 2004.<sup>1,3</sup> In Australia, the state of New South Wales has recently received approval and funding to adapt and implement an Australian version of the MSSA. International collaborative initiatives will facilitate the sharing of learning across borders.

**For more information about the MSSA program:** e-mail [mssa@ismp-canada.org](mailto:mssa@ismp-canada.org); or visit our web site <http://www.ismp-canada.org>; or call toll free 1 (866) 544-7672.

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ISMP Canada is a national voluntary medication incident and 'near miss' reporting program founded for the purpose of sharing the learning experiences from medication errors. Implementation of preventative strategies and system safeguards to decrease the risk for error-induced injury and thereby promote medication safety in healthcare is our collaborative goal.

To report a medication error to ISMP Canada: (i) visit our website [www.ismp-canada.org](http://www.ismp-canada.org), or (ii) e-mail us at [info@ismp-canada.org](mailto:info@ismp-canada.org), or (iii) phone us at 416-480-4099. ISMP Canada guarantees confidentiality and security of information received. ISMP Canada respects the wishes of the reporter as to the level of detail to be included in our publications.

***A Key Partner in the Canadian Medication Incident Reporting and Prevention System***