

2009 Canadian Health Accreditation Report: A Focus on Patient Safety

*Using Qmentum to Enhance Quality and
Strengthen Patient Safety*



**ACCREDITATION CANADA
AGRÉMENT CANADA**

*Driving Quality Health Services
Force motrice de la qualité des
services de santé*

2009 Canadian Health Accreditation Report: A Focus on Patient Safety

Using Qmentum to Enhance Quality and Strengthen Patient Safety

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Foreword

Accreditation Canada is a not-for-profit, independent organization accredited by the International Society for Quality in Health Care (ISQua). Through our rigorous and comprehensive accreditation process, we provide national and international health services organizations with the opportunity to assess their programs against standards of excellence and use the results to foster ongoing quality improvement in the services they provide to their patients and clients. We have been helping health services organizations promote quality health care since 1958.

Accreditation Canada is pleased to present the *2009 Canadian Health Accreditation Report: A Focus on Patient Safety*. For the past seven years, we have been providing health services organizations, policy and decision makers, and consumers with an annual summary of accreditation results and trends. In 2008 the launch of Qmentum, our new and innovative accreditation program, enabled Accreditation Canada to delve deeper into specific issues in health care. With its new reporting systems, interactive software, Required Organizational Practices and performance measures, Qmentum represents a quantum leap in Accreditation Canada's ability to collect in-depth data and provide detailed analysis.

For this year's report, we have chosen to focus on patient safety as quality and safety in health care are inextricably

linked. Accreditation Canada's programs are founded on this philosophy and this is reflected in our standards of excellence, Required Organizational Practices, and performance measures. This report profiles some of the work being done in Canada and internationally to embed patient safety into the quality agenda, highlights Accreditation Canada's and our partners' initiatives in the field, and analyzes patient safety accreditation results from 2008 to identify accomplishments, challenges, and opportunities.

Patient safety solutions have the potential to save lives, improve health status, and reduce financial burdens on individuals, organizations, and health systems. We work closely with all of our partners and stakeholders to ensure our collective efforts are aligned and information is shared. This report is but one of our many contributions to the ongoing improvement of national and international health care services.

Accreditation Canada offers this report as a benchmark for the future. As we continue our data collection and analysis, we expect to move the issues forward by collaborating with and complementing the information and efforts of others in the field. With this report, Accreditation Canada continues its leadership role of facilitating knowledge exchange and contributing to the focus on quality and patient safety at local, provincial or territorial, and national levels.

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Patient Safety: A Worldwide Health Care Priority

Between 9,000 and 24,000 Canadians die annually following an avoidable medical error (Baker et al., 2004). In the United States, 44,000 to 98,000 preventable deaths occur annually due to medical error, with 7,000 of them related to medication errors (Institute of Medicine, 2000). In the United Kingdom in 2000, it is estimated that patients were harmed in over 850,000 incidents (National Patient Safety Agency, 2003). The World Health Organization (WHO) estimates that as many as one in ten patients in developed countries are harmed while receiving hospital care, and that the probability of harm is much higher in developing countries (WHO, 2009b).

These statistics suggest that health care services in Canada and abroad do not consistently achieve desired levels of quality and safety. Since safety is an integral component of quality, these research results have led to a strong focus on patient safety in recent years. The WHO notes that adverse events may result from “problems in practice, products, procedures, or systems”, and that “patient safety improvements demand a complex system-wide effort, involving a wide range of actions in performance improvement, environmental safety, and risk management, including infection control, safe use of medicines, equipment safety, safe clinical practice and safe environment of care” (WHO, 2009a). Frequently, it is how the health system is organized that contributes to errors and adverse events (Reason, 2000). Human factors are a critical component of health systems performance and aligning the design of health care systems with the needs and considerations of staff, service providers, and clients makes the delivery of care safer.

In 2007, the International Steering Committee of the WHO’s World Alliance for Patient Safety approved nine inaugural patient safety solutions geared to addressing the following:

1. **Look-alike, sound-alike medication names** (one of the most common causes of medication errors)
 2. **Patient identification**
 3. **Communication during patient handovers** (to improve continuity of care)
 4. **Performance of correct procedure at correct body site** (by implementing a standardized pre-operative process)
 5. **Control of concentrated electrolyte solutions**
 6. **Assuring medication accuracy at transitions in care** (medication reconciliation)
 7. **Avoiding catheter and tubing misconnections** (to prevent delivery of medication or fluids through the wrong route)
 8. **Single use of injection devices** (to slow the spread of Human Immunodeficiency Virus [HIV], Hepatitis B Virus [HBV], and Hepatitis C Virus [HCV])
 9. **Improved hand hygiene to prevent health care-associated infection** (such as methicillin-resistant *staphylococcus aureus* [MRSA], *Clostridium difficile* [C. difficile], and *vancomycin-resistant enterococcus* [VRE])
- (The Joint Commission & Joint Commission International, 2008)

As part of the World Alliance, Patients for Patient Safety (PFPS) was created to emphasize the central role patients and consumers can play as partners in the effort to improve the quality and safety of health care. Patients and family members share adverse event stories as learning tools and actively participate to identify problems, design solutions, and implement change. PFPS champions collaborate with health professionals, administrators, and decision makers to raise awareness and initiate proactive patient safety strategies. Patients for Patient Safety Canada has been part of this international initiative since 2006 (Kovacs Burns, 2008).

Many developed countries are now increasingly involved in accreditation, standards development, and research as a means to improve health care quality and patient safety. Many of these countries have created national patient safety bodies to provide leadership and advance the patient safety agenda, including the Canadian Patient Safety Institute (CPSI), the National Patient Safety Agency in the United Kingdom, the Australian Commission for Safety and Quality in Health Care, and the Institute for Healthcare Improvement in the United States. CPSI coordinated the launch in 2005 of Safer Healthcare Now!, a joint effort of a diverse group of Canadian organizations featuring a series of targeted interventions to improve patient safety in Canada through learning, sharing, and implementing initiatives that are known to reduce avoidable adverse events (www.saferhealthcarenow.ca). The Joint Commission in the United States includes a set of National Patient Safety Goals in their accreditation program that focuses on risk reduction in health services (The Joint Commission, 2009).

Furthermore, many Canadian provinces have created safety and quality health councils to promote knowledge exchange and take steps to improve the quality and safety of health care services within their provinces, as follows:

- British Columbia Patient Safety and Quality Council (<http://www.bcpsqc.ca/>)
- Health Quality Council of Alberta (<http://www.hqca.ca/>)
- Saskatchewan Health Quality Council (<http://www.hqc.sk.ca/>)
- Manitoba Institute for Patient Safety (<http://www.mbips.ca/wp/>)
- Ontario Health Quality Council (<http://www.ohqc.ca/>)
- Groupe vigilance (<http://www.msss.gouv.qc.ca/ministere/vigilance/index.php?accueil>)
- New Brunswick Health Council (<http://www.nbhc.ca/>)
- Health Council of Canada (www.healthcouncilcanada.ca)





Patient Safety in Canada: Accreditation Canada's Role

Celebrating its 50th anniversary in 2008, Accreditation Canada has long played a pivotal role in enabling health organizations to integrate quality and patient safety awareness and practical action into their services. Through accreditation, health organizations are given the opportunity to identify and remedy unsafe practices, reduce risk and adverse events, foster a culture of safety, and make ongoing quality improvement a part of everyday operations. By identifying and validating the strengths and quality gaps of client organizations, Accreditation Canada's accreditation program contributes to improving care and reducing risk in health services organizations, whether they are community-based, regional health authorities (RHA), or other types and sectors of care.

The Qmentum accreditation program was released in early 2008. While some client organizations continue to use the previous AIM (Achieving Improved Measurement) accreditation program for 2008 and 2009, all national clients will be transitioned to Qmentum by 2010. Qmentum's key components are quality dimensions, national standards of excellence, Required Organizational Practices (ROPs), and performance measures. Safety is explicitly identified as one of the dimensions that Accreditation Canada uses to define quality health care services.

Accreditation Canada is committed to improving patient safety across the care continuum through accreditation. Historically, patient safety research has focused on acute hospital-based services, but more attention is now being given to emergency medical services, long term care, mental health services, home care, and community services. Accreditation Canada continues to address all sectors through standards enhancement and the development of sector-specific ROPs and performance measures.

Key Drivers of Patient Safety in Accreditation Canada's Qmentum Program

Required Organizational Practices (ROPs) and performance measures such as indicators and survey tools are important components of patient safety in Qmentum. This section of the report presents ROP and performance measure results from accreditation surveys conducted in 2008.

Required Organizational Practices: Are Client Organizations Meeting the Requirements?

ROPs are evidence-based practices that mitigate risk and contribute to improving the quality and safety of health services. Accreditation Canada convened a Patient Safety Advisory Committee in 2003 to guide the patient safety-related aspects of the accreditation program. This resulted in an ROP strategy that identified priority areas and integrated the first 21 ROPs into the accreditation program in 2006. Since then, 10 additional ROPs have been introduced, identified with input from health care experts including practitioners, researchers, policy makers, academics, and health services providers. 2009 is the third anniversary of the introduction of ROPs and the start of the second three-year accreditation cycle for organizations that began using the ROPs when they were first introduced.

The ROPs are organized according to patient safety goal areas. The patient safety goal areas for the ROPs in effect for on-site surveys conducted in 2008 are Culture, Communication, Medication Use, Worklife/Workforce, Infection Control, Falls Prevention, and Risk Assessment.

ROPs have a direct impact on an organization's accreditation decision. Organizations must meet all the ROP

requirements, and if they do not then they must submit evidence to Accreditation Canada within a specified time period outlining how unmet ROPs are being addressed. The implementation and monitoring of ROPs is one of the many ways that Accreditation Canada plays a central role in ongoing quality improvement and encourages the highest quality care.

The ROP compliance results in this report are drawn from on-site surveys conducted by Accreditation Canada in Canadian health service organizations during 2008. This information profiles the status of the achievement of safety practices in Canada, highlights areas of strength, and identifies opportunities for improvement.

Analysis

In 2008, Accreditation Canada conducted on-site surveys at 238 organizations across Canada. ROPs were evaluated as having been "met" or "not met" based on specific compliance criteria. (Details on ROPs and the compliance criteria are available at www.accreditation.ca/accreditation-programs/qmentum/required-organizational-practices.)

Analysis of ROP compliance focuses on areas where organizations demonstrated high achievement and areas where gaps in compliance still exist. Tables 1 and 2 show the breakdown of on-site surveys conducted in Canadian client organizations in 2008 by region and by sector. Table 3 shows ROPs with compliance rates of 75% or greater.

The two ROPs most frequently evaluated to be in place at organizations were *delivery of hand hygiene education and training* with 94% compliance and *having a policy and process to administer the pneumococcal vaccine in long term care* at 93% compliance.

Table 1
Number of client organizations surveyed that had ROPs assessed in 2008, by Canadian region*

WESTERN	ONTARIO	QUEBEC	EASTERN
British Columbia			New Brunswick
Alberta			Nova Scotia
Saskatchewan			Newfoundland and Labrador
Manitoba			
Northwest Territories			
42	127	50	19

*No on-site surveys were conducted in Prince Edward Island, Yukon, or Nunavut in 2008. The variability in the number of client organizations among regions differs according to how health care services delivery is structured.

Table 2
Number of client organizations surveyed that had ROPs assessed in 2008, by sector**

HEALTH SYSTEM	ACUTE SERVICES	LONG TERM CARE	HOME CARE
Regional Health Authorities (RHA)			
Centres de santé et de services sociaux (CSSS) [Quebec Health and Social Services Centres]			
58	47	103	20

**The sector of care represents service areas where Accreditation Canada conducted on-site surveys for at least 20 organizations. Due to small number of organizations surveyed in 2008, data are not included in this analysis for 10 organizations providing services in Acquired Brain Injury, Assisted Reproductive Technology, Mental Health, and Rehabilitation.

Table 3
ROPs with compliance rates of 75% or greater

ROP	Percentage Compliance
Delivers hand hygiene education and training	94%
Has a policy and process to administer the pneumococcal vaccine (long term care)	93%
Standardizes and limits number of medication concentrations	92%
Ensures policies and procedures meet infection control guidelines	91%
Stores concentrated electrolytes away from client service areas	89%
Monitors processes for reprocessing equipment	88%
Has a reporting and follow-up system for sentinel events, adverse events, and near misses	87%
Has a policy and process to administer the influenza vaccine	86%
Develops and implements a client safety plan	81%
Delivers client safety training and education at least annually	79%
Discloses adverse events to clients and families	79%
Has a preventive maintenance program for medical devices, equipment, and technology	78%
Produces quarterly reports on client safety, including recommendations from adverse incidents	78%

NOTE: Shaded ROPs are discussed in detail on page 6 and 7.

Strengths

While all of the ROPs address important aspects of patient safety, given the current importance on infection prevention and control (IPAC), this section provides additional detail on two that are of prime concern in Canada today: hand hygiene and administration of the influenza vaccine.

Delivering Hand Hygiene Education and Training ROP

Hand hygiene is widely recognized as the most effective means to prevent and control the spread of infection (Centers for Disease Control and Prevention, 2009; CPSI, 2006; WHO, 2009c). The high rate of compliance with the hand hygiene education and training ROP reflects the priority placed on this fundamental aspect of infection control by organizations across Canada. The rate of compliance with this hand hygiene ROP was consistently high for organizations across the care continuum and across all regions. An ROP in effect for 2009 regarding the requirement for a "hand hygiene audit" will further demonstrate whether or not there is adherence to actual hand hygiene practice in health services organizations. Nevertheless, delivering education and training is a critical first step in this regard.

Administering the Influenza Vaccine ROP

Influenza vaccination benefits the health of workers, as well as clients and their families. Influenza vaccination is considered to be a crucial practice in infection prevention and control (Anikeeva, Braunack-Mayer, & Rogers, 2009; Poland, Tosh, & Jacobson, 2005). The awareness of Canadian health care organizations of the importance of influenza vaccination can be seen in their high rate of compliance with this ROP (86%). The ROP requires that a policy be in place, thus facilitating access to vaccination and contributing to a healthier work place. While no regional differences were evident, there were variations in compliance across the care continuum: health systems, long term care, and acute services organizations had the highest rates of compliance at 90% or higher while home care organizations had lower rates of compliance at 65%.

Influenza vaccination policies and procedures are traditionally supported through IPAC programs. IPAC programs in acute services and long term care organizations have a well developed history, and this may contribute to higher rates of compliance with this ROP. Interestingly, Accreditation Canada surveyors found variations in the content of influenza vaccination policies, and significant variability in the rates of

vaccination at organizations, including differences in how vaccination rates were defined and calculated. This information will be taken into account as Accreditation Canada continues to review evidence and enhance the tests of compliance for this ROP. Accreditation Canada expects compliance with influenza vaccination policies and procedures to increase given the increasing profile and importance of immunization.

Opportunities for Improvement: ROPs Introduced in 2006

While organizations are commended for overall high rates of compliance with many ROPs, as shown in Table 3, it is noted that more than 20% of organizations still do not meet the requirements for the following four ROPs, despite the fact that they came into effect in 2006.

- *Discloses adverse events to clients and families (79% compliance)*
- *Delivers client safety training and education at least annually (79% compliance)*
- *Has a preventive maintenance program for medical devices, equipment, and technology (78% compliance)*
- *Produces quarterly reports on client safety, including recommendations from adverse incidents (78% compliance)*

Given the importance of these ROPs and the length of time since they were introduced, further analysis was conducted across the health care continuum and among regions to identify trends in compliance rates. This analysis did not reveal any sectors or regions that performed consistently higher or lower than others.

Disclosing Adverse Events to Clients and Families ROP

On average, the ROP requiring a policy and process for adverse event disclosure had the highest rate of compliance in health systems and acute services organizations with compliance rates of 85% or above. Long term care and home care had lower rates of compliance, 74% and 63% respectively. No differences across regions were noted. It is expected that an increasing number of organizations will develop policies and procedures for adverse event disclosure in the future as jurisdictions continue to create apology legislation, mandate the disclosing and reporting of sentinel or critical events, and make available more resources such as the Canadian Disclosure Guidelines released by CPSI in 2008.

Producing Quarterly Reports on Client Safety ROP

The ROP for providing the governing body with quarterly reports on client safety is important as evidence shows that engaging senior leadership, including the board, is critical to creating a culture of safety at an organization (Reinertsen, Pugh, & Bisognano, 2005). This ROP had the highest rates of compliance in acute services organizations (89%) and the lowest rates of compliance in health systems (59%). Lower compliance rates for health systems were further investigated by region, and the results indicated a substantially lower compliance rate in Quebec's Centres de santé et de services sociaux (CSSS) at 54%, compared to health systems in the Western provinces at 83% or the Eastern provinces at 77%. These differences may be due in part to the recent formation of the CSSSs in Quebec and the fact that the governing bodies of these organizations are just beginning to establish their functions and information requirements.

Opportunities for Improvement: ROPs with Less than 75% Compliance Rates

ROPs with compliance rates of less than 75% are shown in Table 4. ROPs with low rates of compliance included those related to conducting a client safety–related prospective analysis at 55% and educating clients and families about their roles in safety at 52%. The lowest compliance rates were 42% for implementing a falls prevention strategy, 38% for medication reconciliation at transfer, and 32% for medication reconciliation at admission.

Table 4
ROPs with compliance rates of less than 75%

ROP	Percentage Compliance
Adopts client safety as a written, strategic priority or goal	74%
Ensures effective information transfer at transition points	74%
Uses verification processes and other checking systems for high-risk activities	73%
Uses two client identifiers before administering medications	67%
Provides training on infusion pumps	64%
Tracks and shares information on infection rates	63%
Defines roles, responsibilities, and accountabilities for client care and safety	60%
Conducts one client safety–related prospective analysis per year	55%
Educates clients and families about their roles in promoting safety	52%
Implements a falls prevention strategy	42%
Conducts medication reconciliation at transfer	38%
Conducts medication reconciliation at admission	32%

NOTE: Shaded ROPs are discussed in detail on page 8 and 9.



Conducting a Client Safety–Related Prospective Analysis ROP

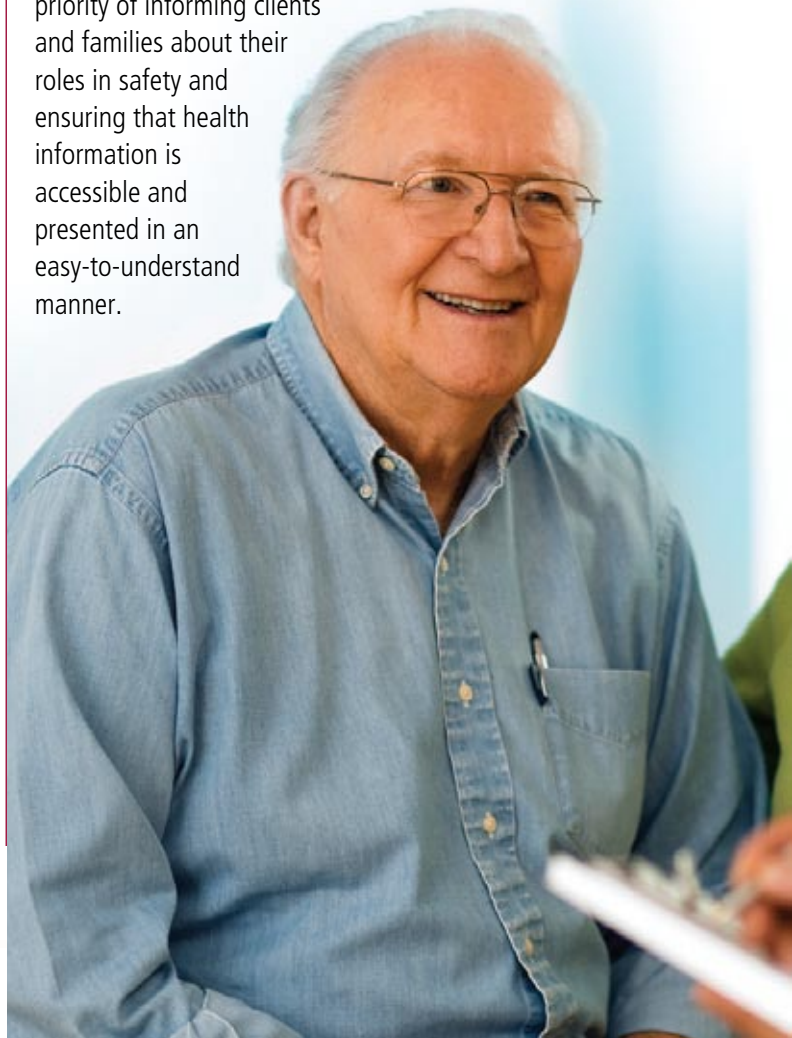
This ROP requires organizations to conduct a client safety–related prospective analysis. Different types of prospective analyses are available and may be used; organizations are able to select the type that best meets their needs. Conducting a prospective analysis is important as it assists organizations to move towards a culture of anticipating patient safety issues; a key initiative as organizations move from reacting to patient safety events towards a culture of openness and an expectation of anticipating and proactively addressing patient safety issues. Results from 2008 surveys showed that there continued to be a gap in compliance with this ROP. Results were further analyzed to determine if differences existed across the care continuum or between regions in Canada.

Acute services organizations showed the highest rate of compliance with this ROP (75%). Home care organizations and health systems had the lowest rates of compliance, at 42% and 41% respectively. The results for home care organizations are consistent with feedback from Accreditation Canada surveyors and organizations that identifies challenges in selecting and applying a type of prospective analysis that is appropriate to the services provided to clients. Compliance rates showed regional variation, partially explaining the low compliance rates for health systems. Accreditation Canada will continue assisting organizations to meet this ROP by providing guidelines to assist them in selecting and conducting appropriate prospective analyses, and to use the information to effectively improve safety and quality of services for clients and families.

Educating Clients and Families about Their Roles in Safety ROP

Informing clients and families about their roles in promoting safety is another important component of creating and sustaining safety and quality in health services. Feedback from Accreditation Canada surveyors has identified that organizations frequently have the necessary resources available to inform clients and families about their role in safety, but lack of compliance with the ROP is due to clients and families being inconsistently informed about their roles. Furthermore, the type of organization influences compliance with this ROP. Acute services organizations typically have the highest number of staff and volume of client admissions. In health systems, resources may not be uniformly used across the care continuum or across sites. Analysis of ROP compliance data across the care continuum supports this interpretation, as acute services organizations and health systems had the lowest rates of compliance at 34% and 9% respectively.

The importance of informing clients and families about their role in safety was reinforced at a recent Patient Safety Roundtable hosted by the CPSI and Accreditation Canada in the spring of 2009. Stakeholders from across Canada were asked to identify key topic areas requiring a stronger focus at a national rate. Participants identified the importance and priority of informing clients and families about their roles in safety and ensuring that health information is accessible and presented in an easy-to-understand manner.



Implementing a Falls Prevention Strategy ROP

Falls represent a considerable risk to many client populations and a prevention strategy is an important component of safe, high quality services (Currie, 2006). The falls prevention ROP was introduced in 2007 in several service standards. Data from 2008 on-site surveys indicated that organizations are in the process of preparing and implementing strategies to address falls prevention in different service settings. Further analysis across the care continuum revealed wide variations in compliance, with long term care organizations having the highest compliance (70%) compared to 36% compliance for acute services and 17% compliance for health systems.

Falls prevention strategies are more common in long term care organizations since falls are widely recognized to be more frequent and are a major concern for elderly clients (Shanley, 2003). The established body of literature on falls in long term care means falls prevention strategies are more commonly implemented (Rubenstein, Josephson, & Osterweil, 1996). Health systems had the lowest rates of compliance in part because they offer the full continuum of health services, making it more challenging for these organizations to implement a range of falls prevention strategies across all service sectors. No substantial regional differences were noted for this ROP.

Conducting Medication Reconciliation ROPs

Accreditation Canada recognizes the efforts of its client organizations as they continue to implement medication reconciliation across the care continuum. To this end, a transition period was introduced to reduce the immediate burden by considering organizations to have met these ROPs if they have implemented medication reconciliation at admission and transfer in at least one unit and have developed a plan to implement medication reconciliation across all services, sites, and teams.

Medication errors are one of the most common types of adverse events in health services (Baker et al., 2004), particularly during transitions in service. The low rates of compliance with the medication reconciliation ROPs represent a significant safety gap for client organizations and their patients. Medication reconciliation is an effective method for increasing client safety (CPSI, 2007) by creating a comprehensive medication list for clients and reconciling any discrepancies. Feedback from health care providers and decision makers has identified that formal medication reconciliation, at admission and at transfer, is challenging to implement and spread across services. Some of the difficulties include gathering comprehensive medication histories from clients due to the high volume of clients served, and staff not having the expertise or background to conduct formal medication reconciliation. These issues are reflected in the low rates of compliance for these ROPs.



Performance Measures: How Do They Contribute to Quality Improvement?

The Qmentum program introduced performance measures to help organizations in their quality improvement efforts. As valuable tools that support the consistent measurement of compliance with Accreditation Canada's standards and ROPs, performance measures strengthen the rigour and objectivity of the accreditation process. The introduction of performance measurement into the Canadian accreditation program, starting with patient safety measures, represents the implementation of a multi-phase project. This direction was endorsed nationally and internationally by Accreditation Canada client organizations, stakeholders, and provincial and federal associations.

Closely tied to the ROPs, performance measures reinforce the importance of ongoing data collection and the actions that need to be taken to improve quality and patient safety. For example, health care–associated infection indicators are reinforced by the ROP requiring organizations to collect infection surveillance data and share it within the organization.



Patient Safety Indicators

Five rate-based patient safety indicators were introduced when Qmentum was released: medication reconciliation; health care–associated infection rates (for MRSA and *C. difficile*); and surgical site infection (the rate of post-surgical infections and the rate of timely administration of prophylactic antibiotics). Given that Accreditation Canada's clients range from large and complex health systems to small, community-based organizations including home care and long term care, the performance measures introduced must be relevant and applicable across the care continuum and cover a wide array of critical health care quality issues.

When identifying indicators, Accreditation Canada uses an extensive list of measures compiled by an environmental scan and literature review, with guidance from domain-specific advisory committees of national experts, national consultations representing all regions of Canada and service providers across the full continuum of care, and pilot testing. It is important to note that only a small number of potential measures meet Accreditation Canada's criteria in terms of being useful quality improvement tools. For example, in the area of infection prevention and control, Accreditation Canada works with CHICA Canada (the Community and Hospital Infection Control Association of Canada), the CPSI, the Public Health Agency of Canada, and numerous other federal and provincial government bodies. Accreditation Canada continuously monitors, updates, and enhances its performance measures to meet the needs of organizations across the health care continuum.

Accreditation Canada also monitors health care performance measures used at the federal, provincial, and territorial levels and is committed to alignment and collaboration where feasible.

Once performance measures data are collected from a client organization, overall results are displayed and associated with "priority for action" flags on the organization's Quality Performance Roadmap on its customized web-based Client Organization Portal. As a simple project dashboard, the Roadmap allows organizations to easily see which of their reported indicator values fall outside of the expected range set with the input of health care experts. Each organization can then prioritize follow-up areas, implement action plans, and document and monitor progress on the indicators. The performance measures help guide Accreditation Canada in planning on-site surveys;



Table 5

Top areas where follow-up was required for Accreditation Canada patient safety indicators in acute services organizations surveyed in 2008

Patient Safety Indicator	Number of teams with required follow-up	Percentage of teams with required follow-up	Total teams reporting
Medication reconciliation at admission	125	68%	184
Surgical site infection: Rate of timely administration of prophylactic antibiotics	37	63%	59

based on a risk management framework, performance measures direct the surveyors to particular areas to assess in greater depth. The degree of sophistication of performance measure collection and monitoring is highly variable across the client continuum; while some organizations have sophisticated collection and reporting mechanisms through to their Boards, others have only basic mechanisms that still require development.

2008 was a transition year to Qmentum and for organizations to collect and report on patient safety indicators. Table 5 indicates the areas where the most follow-up was required among acute services organizations, based on the patient safety indicator data collected in 2008.

Patient Safety Culture Tool

Patient safety culture is widely recognized as a significant driver in changing behaviour and expectations to increase and emphasize safety within organizations (McCarthy & Blumenthal, 2006; Institute of Medicine, 2000). A patient safety culture is key to establishing a health care environment focused on safety (Fleming, 2005). A culture of safety attempts to create an atmosphere of openness and mutual trust where staff members and health providers feel comfortable discussing safety problems and how to solve them (Institute for Healthcare Improvement, 2009). In this way, staff and service providers demonstrate an awareness of safety issues and communicate freely with the goal of learning from errors and near misses, without fear of blame or punishment. A key step in this process is the ability to measure the presence and extent of development towards a culture of safety. This provides valuable insight into staff perceptions of patient safety, as well as an indication of

areas of success, areas for follow-up, and metrics to monitor changes in an organization (Nieva & Sorra, 2003).

To measure safety culture, client organizations are required to implement a patient safety culture survey instrument. Accreditation Canada uses the modified Stanford instrument (MSI) *Patient Safety Culture in Healthcare Organizations*. This 46-item tool has been extensively validated in Canada and measures the following:

- Staff perceptions of safety
- What happens after an event
- Individual actions

Ginsburg, Gilin, Tregunno, Norton, Flemons, and Fleming, the researchers who developed and validated this tool for the Canadian health care environment, suggest that there are underlying dimensions of a patient safety culture (2009). Based on the MSI-2005 and MSI-2006 (the latter being the same tool used by Accreditation Canada in 2008), these dimensions include organization leadership for safety, unit leadership for safety, perceived state of safety, shame and repercussions of reporting and talking about errors, and safety learning behaviours. Ginsburg et al. (2009) go on to suggest that leadership for safety at both the organization and unit level have been found to be the most statistically reliable, but that further research is needed to measure additional key dimensions of a patient safety culture.

Accreditation Canada's Patient Safety Culture Tool is a web-based survey instrument developed for Qmentum. Through the Client Organization Portal, information about patient safety culture can be collected from each organization over the internet, while maintaining data security and respondent confidentiality. Minimum response rates have been established based on the permanent staff complement in each organization to ensure sufficient response rates for representative sampling to draw conclusions. A staff census approach is encouraged whereby organizations disseminate the questionnaires to every permanent staff member. Accreditation Canada has also developed reports (including results by site and item results) to give organizations additional information to target their quality improvement action plans based on the collected survey results.

Table 6
Breakdown of respondents by gender, age, and organizational tenure, 2008 patient safety culture results (N=35,694)

Gender		Age		Organizational tenure (years)	
Male	15%	Under 30	16%	Under 1 year	9%
Female	85%	31 to 40	23%	1 to 2 years	11%
		41 to 50	33%	3 to 5 years	17%
		51 to 60	25%	6 to 10 years	18%
		Over 60	3%	11 to 19 years	18%
				Over 19 years	27%

In 2008, Accreditation Canada's Patient Safety Culture Tool was completed by 35,694 respondents in 95 organizations. Tables 6 and 7 show details about the respondents.

Patient safety culture data collected by Accreditation Canada in 2008 provided information about what is and is not working well, how different staff groups see their roles in patient safety, and variations in perception across the country and by sector. Results by sector and by Canadian region for areas of strength and areas identified for improvement are shown in Tables 8 through 11.

Table 7
Breakdown of respondents by staff group, 2008 patient safety culture results

Staff Group	Number of Respondents	Percentage of Respondents
Allied Health	2,874	8.1%
Clerical Support	3,432	9.6%
Clinical Care Manager/Educator	709	2.0 %
Nurse or Licensed Practical Nurse	12,300	34.5%
Physician	922	2.6%
Supervisor/Manager/Executive	2,182	6.1%
Support Services	6,230	17.4%
Technician	2,240	6.2%
Other	4,805	13.5%
Total	35,694	100%

Analysis

In terms of strengths, the reporting of errors by the individual staff member and learning from errors of colleagues were reported by respondents as occurring frequently. These results held true across sectors and across regions. In the unit leadership for safety area, respondents indicated that *their units took the time to identify and assess patient safety risks and their units were doing a good job of managing risks*. These findings held true across sectors and across regions. The results suggest that individual health care professionals as well as the leadership in their particular units are among the strongest components of patient safety culture.

Near-neutral scores, indicating opportunities for improvement, were noted for *supervisors or managers overlooking patient safety problems that happen over and over, and for rewarding staff who take quick action to identify a serious mistake*. Both are components of the unit leadership for safety. In these two areas, preferable scores were noted in home care and long term care. Slightly higher than neutral scores, also indicating areas for improvement, were noted regarding *witnessing a co-worker do something that appeared to be unsafe for the patient in order to save time and perceiving that health care errors often go unreported*. Home care, long term care, and mental health respondents were less likely to indicate these negative outcomes. Variation in scores for noted areas for improvement were limited based on Canadian region.



Table 8
Areas of strength, by sector, 2008 Accreditation Canada patient safety culture results

			Acute Services N = 17,627		Home Care N = 318		Long Term Care N = 4,072		Mental Health N = 212		RHA N = 6,578		CSSS N = 6,576		Overall N = 35,543	
Dimension	Question	Answer Scale	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Individual actions	I report the errors I make	1 = never to 5 = always	4.84	0.93	4.63	0.91	4.58	0.93	4.72	0.91	4.70	0.83	4.79	0.84	4.77	0.90
Individual actions	I learn from errors made by my colleagues	1 = never to 5 = always	4.68	0.98	4.45	1.12	4.39	1.01	4.37	1.04	4.49	0.91	4.40	1.05	4.55	1.00
Unit leadership for safety	My unit does a good job managing risks to ensure patient safety	1 = strongly disagree to 5 = strongly agree	4.29	1.01	4.31	0.68	4.38	0.84	4.47	1.01	4.25	0.97	4.21	0.99	4.28	0.98
Unit leadership for safety	My unit takes the time to identify and assess risks to patients	1 = strongly disagree to 5 = strongly agree	4.22	1.07	4.27	0.73	4.33	0.91	4.42	1.10	4.19	1.01	4.10	1.08	4.21	1.04

Std. Dev. = Standard Deviation

Note: The following sectors are not shown due to small sample sizes

- Acquired Brain Injury Services
- Assisted Reproductive Technology
- Rehabilitation

Table 9**Areas of strength, by Canadian region, 2008 Accreditation Canada patient safety culture results**

			Western Canada N = 3,549		Ontario N = 14,352		Quebec N = 13,713		Eastern Canada N = 4,080		Overall N = 35,543	
Dimension	Question	Answer Scale	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Individual actions	I report the errors I make	1 = never to 5 = always	4.69	0.86	4.62	0.91	4.97	0.88	4.70	0.84	4.77	0.90
Individual actions	I learn from errors made by my colleagues	1 = never to 5 = always	4.50	0.93	4.50	0.90	4.66	1.11	4.46	0.94	4.55	1.00
Unit leadership for safety	My unit does a good job managing risks to ensure patient safety	1 = strongly disagree to 5 = strongly agree	4.26	1.02	4.27	0.93	4.30	1.04	4.27	0.88	4.28	0.98
Unit leadership for safety	My unit takes the time to identify and assess risks to patients	1 = strongly disagree to 5 = strongly agree	4.20	1.07	4.21	0.98	4.20	1.13	4.21	0.92	4.21	1.04

Std. Dev. = Standard Deviation

Note: No on-site surveys were conducted in Prince Edward Island, Yukon, or Nunavut in 2008; therefore the patient safety culture tool was not administered.

Table 10
Areas identified for improvement, by sector, 2008 Accreditation Canada patient safety culture results

			Acute Services N = 17,627		Home Care N = 318		Long Term Care N = 4,072		Mental Health N = 212		RHA N = 6,578		CSSS N = 6,576		Overall N = 35,543	
Dimension	Question	Answer Scale	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Unit leadership for safety	My supervisor/ manager overlooks patient safety problems that happen over and over	1 = strongly disagree to 5 = strongly agree	2.46	1.58	1.97	1.31	2.08	1.34	2.21	1.47	2.41	1.55	2.46	1.58	2.40	1.55
Unit leadership for safety	I am rewarded for taking quick action to identify a serious mistake	1 = strongly disagree to 5 = strongly agree	3.04	1.40	3.52	1.17	3.32	1.31	3.00	1.32	3.25	1.19	2.89	1.54	3.09	1.39
Perceived state of safety	In the last year, I have witnessed a co-worker do something that appeared to me to be unsafe for the patient in order to save time	1 = strongly disagree to 5 = strongly agree	3.33	1.80	2.97	1.70	3.11	1.62	3.19	2.03	3.13	1.68	3.42	1.89	3.28	1.78
Perceived state of safety	I believe health care errors often go unreported	1 = strongly disagree to 5 = strongly agree	3.53	1.30	3.28	1.19	3.10	1.37	3.08	1.40	3.53	1.23	3.46	1.35	3.46	1.31

Std. Dev. = Standard Deviation

Note: The following sectors are not shown due to small sample sizes

- Acquired Brain Injury Services
- Assisted Reproductive Technology
- Rehabilitation

Table 11

Areas identified for improvement, by Canadian region, 2008 Accreditation Canada patient safety culture results

			Western Canada N = 3,549		Ontario N = 14,352		Quebec N = 13,713		Eastern Canada N = 4,080		Overall N = 35,543	
Dimension	Question	Answer Scale	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Unit leadership for safety	My supervisor/ manager overlooks patient safety problems that happen over and over	1 = strongly disagree to 5 = strongly agree	2.46	1.58	2.36	1.45	2.44	1.65	2.33	1.48	2.40	1.55
Unit leadership for safety	I am rewarded for taking quick action to identify a serious mistake	1 = strongly disagree to 5 = strongly agree	3.39	1.24	3.22	1.21	2.85	1.60	3.17	1.15	3.09	1.39
Perceived state of safety	In the last year, I have witnessed a co-worker do something that appeared to me to be unsafe for the patient in order to save time	1 = strongly disagree to 5 = strongly agree	3.32	1.67	3.20	1.64	3.43	1.96	2.99	1.65	3.28	1.78
Perceived state of safety	I believe health care errors often go unreported	1 = strongly disagree to 5 = strongly agree	3.58	1.27	3.45	1.25	3.46	1.41	3.38	1.22	3.46	1.31

Std. Dev. = Standard Deviation

Note: No on-site surveys were conducted in Prince Edward Island, Yukon, or Nunavut in 2008; therefore the patient safety culture tool was not administered.

Results from the First Year of Qmentum, Patient Safety Learnings, and Next Steps

Results from organizations surveyed in 2008 show several opportunities for improvement in ROP compliance. ROPs related to communication, particularly medication reconciliation, represent an area for ongoing improvement in organizations across the continuum of care and additional attention needs to be directed towards this important area of services. Accreditation Canada will continue to work with partners such as CPSI and Institute for Safe Medication Practices Canada (ISMP Canada) to provide organizations with ongoing education, resources, and information to implement medication reconciliation. Collaboration with CPSI and ISMP Canada will also include updating ROPs to further reflect the unique requirements of medication reconciliation across the care continuum. Based on indicator data, medication reconciliation is a key area of required follow-up for acute services organizations, along with the timely administration of prophylactic antibiotics prior to surgery. Promoting the importance of medication reconciliation and helping organizations implement tools to improve processes and make clients safer are, and will continue to be, primary goals for Accreditation Canada.

Other opportunities for improvement for organizations include conducting an annual client safety-related prospective analysis, implementing falls prevention strategies, providing quarterly reports on safety to the governing body, and providing education for clients and families about safety. These ROPs contribute to developing the capacity of organizations to create a culture of safety that encompasses senior leadership and clients, and to anticipate and prevent adverse events. These areas need to be addressed in organizational strategies, plans for quality improvement need to be created and followed, and a superior patient safety culture needs to be established. The evidence that Accreditation Canada has collected shows that a mindset of safety and a focus on prevention are hallmarks of high-performing organizations and represent the greatest opportunity for organizations to maximize the safety of health services for clients and their families.

Accreditation Canada's performance measures continue to prove useful to organizations in developing their capacity to collect and use indicator data for decision making, monitoring, and improving the quality of their services. We continue to work with client organizations as they collect performance measure data, helping them track and improve their progress beyond the 2008 Qmentum transition year. Toward this end, quarterly indicator data must be submitted annually and survey instrument results are submitted once per three-year accreditation cycle. Accreditation Canada will provide ongoing support as client organizations, especially those outside the acute services sector, continue to use and develop their expertise regarding performance measures.

In terms of what is working well across sectors and across Canada based on the results of the Patient Safety Culture Tool, learning from the errors of colleagues is occurring on a regular basis. Units took the time to identify and assess patient safety risks and units were also reported to be doing a good job of managing these risks. However, supervisors or managers should pay particular attention to patient safety problems that happen over and over, and should reward staff members who take quick action to identify serious mistakes. Attention should also be paid to reports that health care professionals have witnessed co-workers doing something that appeared to be unsafe for the patient in order to save time. Interestingly, while the regular reporting of errors by individual staff members is occurring, there is still a shared perception that health care errors often go unreported, indicating that there remains work to be done in this area.

Other tools and performance measures incorporated into Qmentum include two additional web-based survey instruments, the Worklife Pulse Tool and the Governance Functioning Tool, and hospice and palliative care indicators for organizations that provide such services. Analyses of the results from some of these additional tools and performance measures will be highlighted in future reports.

Accreditation Canada continues to work with its client organizations across Canada and advisory committees of domain-specific health care experts to identify critical performance measures in a number of areas: organ and tissue donation and transplant, chronic disease management, child and youth populations, and stroke services. As well, Accreditation Canada will start formally measuring client experience to strengthen the assessment of how the standards are met and thereby improve the quality of client-centred services in health care in Canada. This information will be used to assess compliance with the accreditation standards and help organizations monitor and improve client experience on an ongoing basis.

As performance measure data continues to be collected across Canada, Accreditation Canada expects to be able to provide additional valuable information – for example, examining how staff perceptions of work climate affect patient safety, analyzing the impact of governance on the creation of a patient safety culture, or evaluating how client experience is impacted by staff perceptions of patient safety culture or organizational ROP compliance. Accreditation Canada is proud to contribute to patient safety research, assisting organizations, policy makers, and stakeholders to achieve the shared vision of enhancing the safety and quality of health services for patients and their families. In partnership with health care organizations, quality councils, and many other partners and stakeholders, we look forward to continuing to drive quality improvement and patient safety through accreditation.



References

- Anikeeva, O., Braunack-Mayer, A., & Rogers, W. (2009). Requiring influenza vaccination for health care workers. *American Journal of Public Health, 99*(1), 24–29.
- Baker, G. R., Norton, P. G., Flintoft, V., Blais, R., Brown, A., Cox, J., et al. (2004). The Canadian adverse events study: The incidence of adverse events among hospital patients in Canada. *Canadian Medical Association Journal, 170*, 1678–1686.
- Canadian Patient Safety Institute. (2006). *STOP! Clean your hands: Canada's hand hygiene campaign*. Retrieved June 18, 2009, from <http://www.handhygiene.ca/Default.aspx>
- Canadian Patient Safety Institute. (2007). *Safer Healthcare Now! Getting started kit: Medication reconciliation – Prevention of adverse drug events how-to guide*. Retrieved from [http://www.saferhealthcarenow.ca/EN/Interventions/medrec_acute/Documents/Med%20Rec%20\(Acute%20Care\)%20Getting%20Started%20Kit.pdf](http://www.saferhealthcarenow.ca/EN/Interventions/medrec_acute/Documents/Med%20Rec%20(Acute%20Care)%20Getting%20Started%20Kit.pdf)
- Centers for Disease Control and Prevention. (2009). *CDC features: Wash your hands*. Retrieved June 18, 2009, from <http://www.cdc.gov/Features/HandWashing/>
- Currie, L. M. (2006). Fall and injury prevention. *Annual Review of Nursing Research, 24*, 39–74.
- Fleming, M. (2005). Patient safety culture measurement and improvement: A "how to" guide. *Healthcare Quarterly, 8*(Spec), 14–19.
- Ginsburg, L., Gilin, D., Tregunno, D., Norton, P. G., Flemons, W., & Fleming, M. (2009). Advancing measurement of patient safety culture. *Health Services Research, 44* (1), 205–224
- Institute for Healthcare Improvement. (2009). *Patient Safety: General*. Retrieved June 19, 2009, from www.ihl.org/IHI/Topics/PatientSafety/SafetyGeneral
- Institute of Medicine. (2000). *To err is human: Building a safer health system*. Kohn, L. T., Corrigan, J. M., & Donaldson, M. S. (Eds.). Washington, D.C.: National Academy Press.
- Kovacs Burns, K. (2008). Canadian patient safety champions: Collaborating on improving patient safety. *Healthcare Quarterly, 11*(Spec), 95–100.
- McCarthy, D., & Blumenthal, D. (2006). Stories from the sharp end: Case studies in safety improvement. *Milbank Quarterly, 84*(1), 165–200.
- National Patient Safety Agency [U.K.]. (2003). *Seven steps to patient safety: A guide for NHS staff*. Retrieved from <http://www.wales.nhs.uk/documents/Sevenstepsoverview.pdf>
- Nieva, V., & Sorra, J. (2003). Safety culture assessment: A tool for improving patient safety in healthcare organizations. *Quality and Safety in Health Care, 12*, ii17–ii23.
- Poland, G. A., Tosh, P., & Jacobson, R. M. (2005). Requiring influenza vaccination for health care workers: Seven truths we must accept. *Vaccine, 23*, 2251–2255.
- Reason, J. (2000). Human error: Models and management. *British Medical Journal, 320*, 768–770.
- Reinertsen, J. L., Pugh, M. D., & Bisognano, M. (2005). *Seven leadership leverage points for organization-level improvement in health care*. Cambridge, MA: Institute for Healthcare Improvement. Retrieved from the Improving Chronic Illness Care website: http://www.improvingchroniccare.org/downloads/1.1_seven_leadership_leverage_points.pdf
- Rubenstein, L. Z., Josephson, K. R., & Osterweil, D. (1996). Falls and fall prevention in the nursing home. *Clinics in Geriatric Medicine, 12*(4), 881–902.
- Shanley, C. (2003). Falls and injury reduction in residential aged care: Translating research into practice. *Contemporary Nurse, 15*, 81–93.
- The Joint Commission. (2009). *National patient safety goals*. Retrieved June 18, 2009, from <http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals>
- The Joint Commission, & Joint Commission International. (2008). *Patient safety solutions*. Retrieved June 18, 2009, from the WHO Collaborating Centre for Patient Safety Solutions website: www.ccforspatientsafety.org/patient-safety-solutions
- World Health Organization. (2009a). *Patient safety*. Retrieved June 18, 2009, from http://www.who.int/topics/patient_safety/en/
- World Health Organization. (2009b). *10 facts on patient safety*. Retrieved June 18, 2009, from http://www.who.int/features/factfiles/patient_safety/en/index.html
- World Health Organization. (2009c). *WHO guidelines on hand hygiene in health care*. Retrieved from http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf

