Patient safety

10E

Main points

All health facilities are responsible to keep patients safe during the process of providing care. Keeping patients safe is complex. National studies show some patients are harmed while receiving care in the health system.

Regina Qu'Appelle Regional Health Authority (RHA) had adequate processes for patient safety in its health care facilities except for analyzing patient safety reports to learn from its experience.

We made three recommendations to help improve the RHA's processes for analyzing events causing harm to patients, communicating the highest patient safety risks, and reporting patient safety results.

Other regional health authorities should use the criteria described in this chapter to assess the adequacy of their own processes for patient safety in their health care facilities.

Introduction

All health facilities are responsible to keep patients safe during the process of providing care. The mandate of the Regina Qu'Appelle Regional Health Authority (the RHA) is to provide safe, quality health care services, including specialty care, for people living in southern Saskatchewan.[1] The RHA provides hospital, rehabilitation, community and public health, long-term care, and home care services.

Processes to improve patient safety could prevent harm and loss of life. Patient safety processes can also reduce overall spending on health services. Better patient safety reduces complications, shortens the length of hospital stay, and supports clinical efficiencies including better use of skilled health care workers. Reducing risks to patient safety also builds the capacity of the health system to provide better care.

There are various ways of measuring patient safety. No single measure tells the whole story. *The Canadian Adverse Events Study* reviewed the charts of patients hospitalized in 2000 in 20 hospitals of various sizes. It reported that the health care system harmed 7.5% of patients admitted to these hospitals.[2] Many harmful events are preventable. The Study estimated that the health system could have prevented about 36% of the events causing harm in hospitals (including some deaths). Reviewing many patient charts is expensive and is not often done.

An alternate measure is the hospital standardized mortality ratio (HSMR) used by the Canadian Institute of Health Information (CIHI).[3] The measure compares the actual number of in-hospital deaths to the expected number based on the types of patients treated.

Exhibit 1 shows this HSMR mortality ratio for the Regina Qu'Appelle and Saskatoon regional health authorities for the past four years.

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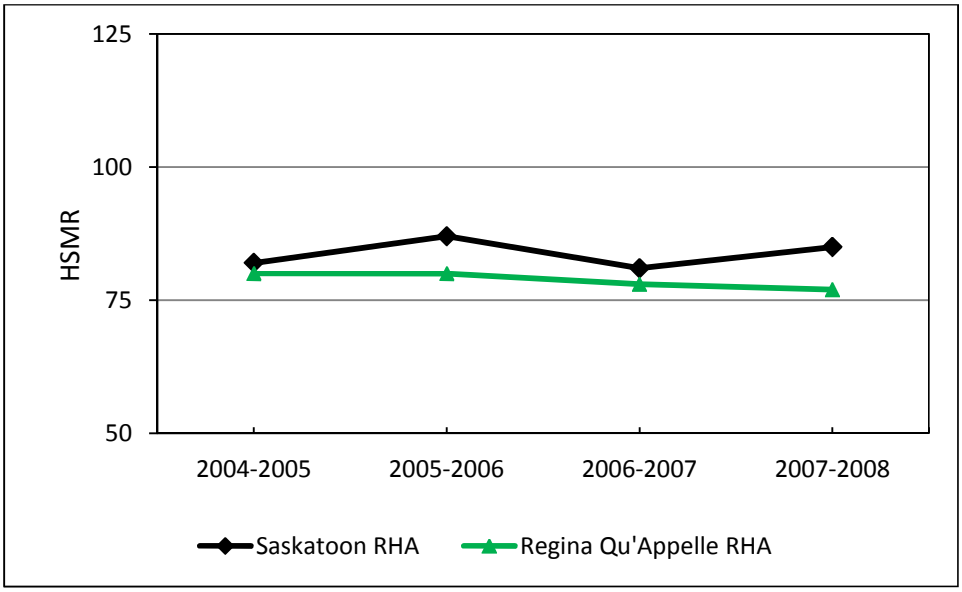
[1] *The Regional Health Services Act* makes regional health authorities responsible to provide, coordinate, and evaluate health services (s.27-2) and to comply with any prescribed standards applicable to those health services (s.11).

[2] Baker, G.R., Norton, P.G., Flintoft, V., et al. (2004). The Canadian adverse events study: The incidence of adverse events among hospital patients in Canada. *Canadian Medical Association Journal 170* (11).

[3] HSMR calculations focus on 65 diagnosis groups accounting for about 80% of in-hospital deaths in Canada, excluding patients identified as having received palliative care. The HSMR is adjusted for factors that may influence in-hospital mortality (e.g., demographics, diagnoses, how patient arrived at hospital).

Exhibit 1—Trends in patient safety measured by in-hospital mortality



Source: CIHI 2008 Hospital Standardized Mortality Ratio (HSMR all cases) http://www.cihi.ca/cihiweb/dispPage.jsp?cw_page=hsmr2008_canada_e (6 Nov 2009)

An HSMR of less than 100 suggests that local in-hospital mortality is lower than the average national experience, given the types of patients.[4] A single measure such as the HSMR is a useful starting point for further analysis.

Audit objective, criteria, and conclusion

The objective of this audit was to assess whether the Regina Qu'Appelle Regional Health Authority had adequate processes, as at August 31, 2009, for patient safety in its health care facilities. We focused on risks to hospital patients and long-term care residents. In particular, we focused on adverse health events related to medications, surgical complications, and falls (e.g., due to equipment failure while lifting patients).

An "adverse health event" means a complication, unintended injury, or death caused by health care management rather than the patient's underlying disease process.[5] Health care management includes the

[4] The CIHI uses a 2004-2005 baseline HSMR of 100 for comparisons.
[5] Saskatchewan Critical Incident Reporting Guideline, 2004 at www.health.gov.sk.ca/critical-incident-guidelines.

systems and care processes that guide the actions of individual staff members, as well as specific actions taken at a point in time.

To conduct this audit, we followed *The Standards for Assurance Engagements* established by The Canadian Institute of Chartered Accountants. To evaluate the RHA's processes, we used criteria based on our related work, reviews of literature including reports of other auditors, consultations with management, and the advice of an external expert that the Canadian Patient Safety Institute recommended. The RHA agreed with the criteria (see Exhibit 2).

Exhibit 2—Audit criteria: Processes for patient safety

To have adequate processes for patient safety in its healthcare facilities, the Regina Qu'Appelle Regional Health Authority should:

1. **Clarify board and management expectations for patient safety**
   - 1.1 display commitment to patient safety
   - 1.2 assign responsibility for patient safety processes
   - 1.3 require reporting of adverse health events
   - 1.4 require reporting of patient safety trends regularly

2. **Require the use of patient safety processes**
   - 2.1 communicate priority patient safety risks
   - 2.2 train to use patient safety processes
   - 2.3 supervise the use of patient safety processes

3. **Monitor patient safety**
   - 3.1 analyze causes of safety concerns reported by patients
   - 3.2 analyze causes of adverse health events reported by staff and physicians
   - 3.3 report patient safety results to the board and management

4. **Take corrective action**
   - 4.1 immediately reduce urgent risks to patient safety
   - 4.2 improve patient safety processes for priority patient safety risks

We concluded that, as of August 31, 2009, Regina Qu'Appelle Regional Health Authority had adequate processes for patient safety in its health care facilities except for regular analysis of patient safety reports to learn from its experience.

Key findings and recommendations

In this section, we describe our findings and recommendations by criteria.

Board sets expectations for patient safety

The RHA's Board and management displayed commitment to patient safety through their policies and actions. The Board's strategic plan and values statement included patient safety. Its safety philosophy – "We strive to deliver safe care to all patients, at all times" was evident on its website and in its "Patients First…Safety Always!" poster. The RHA also showed its commitment by allocating resources for a Patient Safety and Quality Support work unit that coordinated projects related to safe, quality patient care.

The Board's policies expected all staff and physicians to keep patients safe with the support of the RHA's established processes. The RHA assigned oversight of region-wide improvements in patient safety processes to a senior executive director.

Provincial legislation[6] and RHA policies required staff to report adverse health events occurring in hospital or long-term care facilities. The RHA also encouraged staff to report "near miss" events that endanger but do not actually harm patients. Managers confirmed that staff reported adverse health events consistently and also reported near misses.[7] In addition, the RHA encouraged comments from patients about their care.

As of August 31, 2009, the Board did not have a policy requiring regular reports about patient safety trends. Appointed in February 2009, the Board was considering what reports it would need regularly.

The RHA had adequate processes to clarify its expectations for patient safety but needed to determine what information was needed to monitor progress.

[6] *The Regional Health Services Act,* section 58.
[7] A "near miss" is an adverse health event that did not reach the patient because of timely intervention or good fortune.

Use of patient safety processes

To communicate priority risks requires identifying the risks, setting priorities, and telling those who need to know about the risks. The Ministry of Health identified serious risks reported to it and sent "safety alerts" to regional health authorities. The RHA's work units posted the safety alerts and some units required staff to sign that they had read them.

The RHA identified that the most common adverse health events in its facilities involved patient falls and medications. However, the RHA did not explain to staff the factors contributing to these events. Contributing factors could include unclear drug labels or poor drug storage practices, lack of equipment to move patients safely, or the patient's age (e.g., the elderly are at greater risk).

The RHA's primary communication tool was its newsletter "Patients First…Safety Always!" Newsletters highlighted general risk areas and outlined solutions to some safety issues for the attention of all staff and physicians. For example, the newsletter explained the RHA's policy to compare medications taken by the patient at home with medications the physician ordered when admitting the patient to hospital (i.e., medication reconciliation). However, the newsletter did not list the high-risk drugs that were commonly involved in adverse health events. In order to be alert to risks, staff and physicians need to better understand the highest risk situations and take precautions.

The RHA identified three types of drugs commonly involved in adverse health events but did not adequately tell staff about these high-risk drugs or the actions that would reduce the risks related to their use. Managers could not name all three types of drugs the RHA had identified as high risk (i.e., narcotics, anticoagulants, insulin-type drugs).

1. We recommend the Regina Qu'Appelle Regional Health Authority communicate to its staff and physicians the highest risks to patient safety, the factors contributing to them, and recommended action.

The RHA provided training about patient safety processes to staff and managers. New staff and managers received an orientation on clinical

issues including patient safety. The extent of the orientation varied from one day to one week depending on the complexity of care and the expectations of unit managers. In addition, staff received training on the medication reconciliation process, reporting adverse health events, and safe methods for lifting patients to prevent falls.

The RHA provided a variety of learning opportunities about patient safety to staff and physicians. Multi-disciplinary groups held regular discussions about clinical practice issues that could affect patient safety (e.g., surgical team weekly meeting). The RHA offered physicians and staff opportunities to attend conferences related to patient safety.

The RHA also provided formal direction about safe patient care through its policies, care guidelines, and standing orders. For example, the RHA had a policy to restrain agitated patients as little as possible as restraints reduce mobility and increase the risk of damage to skin. The RHA had guidelines for providing safe and supportive care to patients who were less mobile due to excessive weight. In some areas, such as cardiac surgery, the RHA used routine physician standing orders to guide effective care.

Unit managers supervised the use of patient safety processes in various ways. Unit managers told us that they observed the quality of care and patient safety several times daily. The RHA provided training to all managers to analyze potential causes of adverse health events. Such training helped managers to identify patient safety concerns and explain them to staff (e.g., during shift-change reports). To help monitor the use of patient safety processes, some work units assigned a staff member to review charts and patient care using a checklist. Some unit managers discussed patient safety during performance reviews.

The RHA had adequate processes for requiring the use of patient safety processes except that it needed to communicate to staff and physicians the highest risks to patient safety, the factors contributing to those risks, and recommended action.

Monitoring patient safety needs strengthening

The RHA monitored patient safety primarily in two ways: patients reported their concerns to a client representative[8] and staff reported adverse health events to the Risk Management Unit.

Twice yearly, client representatives reported to management, the Board, and the Ministry of Health about concerns expressed by patients. These reports focused on activities (i.e., number of concerns handled, time to resolve concerns), and the type of concern (e.g., access to care, nature of care, parking). Client representatives also reported to the Board details of concerns expressed by a few patients whose identity was kept confidential. However, the RHA did not have a process to analyze and document trends in the factors contributing to these concerns.

The RHA required staff to report adverse health events and near misses that did not actually harm patients. The RHA recognized that staff may be unaware of (and not report) some events that do not cause immediate harm or symptoms. The RHA urged its staff to report all identified adverse health events.

When staff reported adverse health events, the form requested information about the causes of patient falls and medication–related events. The RHA did not collect information about the causes of other types of adverse health events. Risk management staff reviewed the report of each adverse health event for correct coding, completeness, and the adequacy of action taken immediately or planned. In serious cases, a multi-disciplinary team also assessed the factors related to adverse health events and made recommendations for further action.

The RHA did not analyze (e.g., on a facility or region-wide basis) the information that staff reported about the causes of falls and medication-related events. In 2008, the RHA began using new software that could support this analysis but did not produce any reports about the causes of adverse health events in the region.

The RHA used international literature to identify potential factors contributing to adverse health events in the region and directed its

[8] The RHA's client representatives act as a link between patients and the staff, physicians, and administration. They listen to, look into, and document patients' concerns.

solutions toward the most likely causes. Specific, local information about the factors contributing to adverse health events would help the RHA to focus its patient safety resources for more effective and timely results.

To learn more about the factors leading to adverse health events, the RHA periodically used committees (e.g., to develop a strategy about preventing patient falls). The RHA's senior management team also visited several work units annually to identify factors contributing to adverse health events and encourage staff to report these events (i.e., "safety walks").[9] After safety walks, management had processes to take follow up action in the unit and across the region when necessary.

2. We recommend the Regina Qu'Appelle Regional Health Authority analyze the factors contributing to reported events causing harm to patients and use that analysis to guide region-wide action.

The RHA reported, at least annually, on trends in the volume of adverse health events reported by staff. These reports showed trends over three years by type of event (e.g., falls, infections, medications). Other reports included the rate of reported adverse health events per 1,000 inpatients, the prevalence of falls in long-term care, and a hospital standardized mortality ratio. Neither management nor the Board received reports that compared its patient safety results to targets or described risks to patient safety that the RHA had not yet addressed.

The RHA stopped making these reports while the Board reconsidered the nature and timing of reports it needs for monitoring patient safety. Management told us it plans to begin providing information to the Board in late 2009.

3. We recommend the Regina Qu'Appelle Regional Health Authority receive, at least annually, a report of patient safety results including targets, outstanding patient safety concerns, and feasible options to resolve them.

The RHA had adequate processes to monitor patient safety except that it needed to analyze the factors contributing to common adverse health

[9] Senior management conducted 14 safety walks in the region in 2008 and eight up to October 2009.

events to guide region-wide solutions and report patient safety results to the Board regularly.

Taking corrective actions

The RHA identified situations that require immediate attention through the staff's reports of adverse health events. The RHA required unit managers to report adverse health events and actions taken within 48 hours of the event. Risk management staff assessed if the actions taken were adequate to prevent future harm to patients on that unit and sometimes requested additional action to protect patients. The RHA did not have processes to decide if reported adverse health events that occurred on one unit might also occur on other units or to provide consistent feedback to staff and physicians. Earlier in this chapter, we recommend the RHA address these processes.

The RHA used the Ministry of Health's safety alerts to identify those risks that applied broadly across the region. The RHA monitored the action it took on recommendations related to these safety alerts.

To improve patient safety processes over the long term, the RHA used formal processes such as pre-surgery checklists recommended by the Canadian Patient Safety Institute and Accreditation Canada. The RHA also used 25 continuous quality improvement teams to build capacity for patient safety. Usually these teams identified the nature of the issue, measured the baseline status, planned an approach, and conducted pilot projects. Management then arranged to spread the new processes across the region and monitored whether staff used the new processes.

The RHA had adequate processes to take corrective action for individual patient safety concerns reported by staff. It needed to do more to apply the lessons it learned across the region promptly. The RHA monitored international literature and had processes to move toward better patient safety.

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