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Main points

The Ministry of Health (Health) prepared its surgical wait times report in accordance with the reporting principles of reliability, understandability, and consistency except the limitations in the wait times information is not adequately described. As a result, the report is not as useful as it could be in providing patients with an estimate of the time they will wait for surgery or where to have surgery, or to help management make decisions on health service allocations.

The Saskatchewan Association of Health Organizations (SAHO) has addressed three of our four recommendations for the payroll system it uses to provide payroll services to approximately 40,000 people in almost all health care agencies in the province. SAHO has strengthened its processes to ensure the integrity and availability of its payroll system. It continues to make progress on ensuring the security of the payroll system.

Health has made progress addressing our past recommendations on Saskatchewan's *Health Workforce Action Plan*. Health is working with other jurisdictions to develop a workforce projection model to provide information on the gaps in health sector human resources. It has also provided public information on strategies to develop the current health workforce.

Introduction

Effective November 2007, the Department of Health became the Ministry of Health. The mandate of the Ministry of Health (Health) is to protect and improve the health of Saskatchewan people. To do this, Health provides policy direction, direct services, and funding to health providers and health agencies.

This chapter includes the results of our audit of Health's surgical wait times report. It also describes progress on recommendations we made in two audits in 2006. The first was on Health's human resource plan and the second was on the Saskatchewan Association of Health Care Organizations' payroll system.

Surgical wait times report

Similar to other jurisdictions in Canada, Saskatchewan residents are concerned about the length of time they wait for necessary medical procedures such as surgery. According to Health, during the six months ended June 30, 2007, residents of Saskatchewan waited from less than three weeks to more than eighteen months for surgery, depending upon the type of procedures required.

Health uses the Surgical Care Network Surgery Registry (Registry) to improve the management of wait lists and to provide residents waiting for non-emergency surgery with information on wait times.

We audited whether the surgical wait times report for Regina Qu'Appelle Regional Health Authority is reliable, understandable, and consistent.

Background

Health maintains the provincial Surgical Care Network Surgery Registry based on data provided by regional health authorities (RHA) that provide surgical services in the Province. This registry is a centralized database of wait times information for surgical procedures anticipated or already performed in operating rooms (as opposed to surgery performed in procedure rooms). Health uses the database to make decisions on health

service allocations and to prepare public reports on wait times placed on Health's website.[1]

Good management decisions on the allocation of health services within the province require reliable, understandable, and consistent data in the Registry. The same is true for good public information on wait times.

Each day, Health receives information from the RHAs on patients who are either waiting for or have had surgery. Health records this information in the Registry. Health encourages patients to use this information when considering their options such as the possibility of getting a referral to another specialist or hospital to receive treatment sooner.

Health also requires each RHA to use the wait list information from the Registry as one measure for publicly reporting their performance in their annual reports.

Audit objective

The objective of this audit is to conclude whether Health's surgical wait times report for the Regina Qu'Appelle Regional Health Authority (RQHR) at June 30, 2007 is prepared in accordance with the reporting principles of reliability, understandability, and consistency.[2] We did not assess the fairness or relevance of the measures (that is, whether this is the right information for report users to make decisions).

Health prepared the June 30, 2007 surgical wait times report (Report) using Registry information. The Report contains the number of patients waiting at June 30, 2007, the percentage of surgeries performed within specific time frames (e.g., within 3 weeks, 4-6 weeks), and the number of procedures completed between January 1 and June 30, 2007. These numbers are reported in total, categorized by surgical type and length of wait.

We based our criteria on practices recommended by The Canadian Institute of Chartered Accountants (CICA) for public performance reporting (Exhibit 1). Health agreed with the criteria.

[1] http://www.sasksurgery.ca/
[2] CICA, Statement of recommended practice – public performance reporting, SORP-2. (September 2006).

Exhibit 1—Criteria

For the surgical wait times report to be reliable, understandable, and consistent, performance information reported must be:

1. reasonably reliable
    1.1. free from significant error
    1.2. free from significant omissions
    1.3. produced by systems that control quality
    1.4. represents what it claims to represent (e.g., calculation methods reflect defined measures)
2. reasonably understandable
    2.1. appropriately explained
    2.2. provides the source of key data (e.g., information system or agency)
    2.3. discloses data limitations, if any
    2.4. discloses unusual events or circumstances impacting results
3. reasonably consistent
    3.1. prepared using consistent policies or practices
    3.2. compares results to prior or expected results
    3.3. explains if results are comparable to prior period

Source: The Canadian Institute of Chartered Accountants, Public sector statement of recommended practice, SORP-2, Public Performance Reporting, September 2006

To do our audit, we followed the Standards for Assurance Engagements of The Canadian Institute of Chartered Accountants.

The information in the June 30, 2007 Report is the responsibility of management of Health and RQHR. Management are responsible for the integrity and objectivity of the performance information reported in Health's surgical wait times report for RQHR at June 30, 2007. We expected Health and RQHR to maintain appropriate systems of internal control to prepare reliable wait times reports.

We examined the processes that Health and RQHR use to prepare and present a report that contains reliable, understandable, and consistent information. We obtained an understanding of these processes and evaluated whether they operated as Health and RQHR intended.

Audit conclusion

The information presented in the Ministry of Health's surgical wait times report for Regina Qu'Appelle Regional Health Authority at June 30, 2007 is prepared in accordance with the reporting

principles of reliability, understandability, and consistency except the limitations in the information are not adequately described.

As a result, the Report is not as useful as it could be in providing patients with an estimate of the time they will wait for surgery or where to have surgery, or to help management make decisions on health service allocations.

Also, we make three recommendations to help Health improve the information presented in its surgical wait times report.

The following describes our findings by criteria.

Findings by criteria

Reliability

To produce reliable results, we expected Health and RQHR to use systems that ensure their wait list information is reasonably accurate and complete (i.e., has no major errors or omissions). We anticipated Health and RQHR would collect and protect related data in a way that would control the quality of the data. We expected Health and RQHR to take steps to ensure reported results fairly represent the related objective and measure.

Each quarter, Health prepares the surgical wait times report (Report) for the public. The Report includes detailed breakdowns at the RHA level. Health relies on processes established at each regional health authority to collect data on the number of people waiting for each type of surgery and the number of surgeries performed each period.

Health documents the definitions and methods it uses to calculate the number of patients waiting and the surgeries performed. At each quarter-end date, Health calculates the number of surgeries performed in an operating room by surgical specialty. It also calculates the number of patients waiting for surgeries in an operating room by surgical specialty at the end of each quarter, and the length of time patients waited for surgery in an operating room by surgical specialty.

Health needs to better follow its processes to control the quality of the information it collects. The Registry uses a series of system edits to control the quality of information by identifying obvious data errors. For example, the Registry will flag an error if the booking date is before the birth date, or if the procedure or surgeon codes are not on the list of valid codes. The Registry automatically flags records with obvious data errors at the time of data entry or upload. Health expects each RHA to review these data errors and make corrections as necessary.

RQHR was not correcting all of the errors. Three per cent of the RQHR files contained data errors that either were detected by the Registry's edit checks or could not be properly processed. The missing and inaccurate data understated the reported number of patients waiting and the number of surgeries performed. RQHR and Health corrected most of these errors in the June 2007 data after we advised Health.

1. We recommend that the Ministry of Health and Regina Qu'Appelle Regional Health Authority follow established processes to correct data errors in the Saskatchewan Surgical Care Network Registry.

Management told us that Health and RQHR are now correcting all identified data errors in the Registry.

Understandability

To help ensure the information reported is understandable, we expected Health to report information in a way that people considering or waiting for surgery could understand and allow people to make informed health care decisions. We expected Health to explain the data, state the source of the data (e.g., surgical forms), and disclose significant limitations (e.g., gaps in data). We also expected Health to explain major events or situations that influenced the results.

The Report indicates that Health presents the Registry information to provide the public with the most accurate wait time information available. One of the purposes of the Report is to provide patients with a general estimate of time they will have to wait for surgery. On the website, Health encourages patients to consider their options, including the possibility of

seeking a referral to another specialist or hospital to receive treatment sooner.

Information in the Report is presented in a clear manner. The measures are relatively simple. For example, the measures include the number of surgeries performed in an operating room by speciality, number of patients waiting for surgery in an operating room by speciality, and the percentage of surgeries performed within specified time frames, e.g., within 3 weeks, 4-6 weeks, etc.

However, the Report and accompanying news release do not explain factors that influenced the results in the Report. For example, the Report does not explain the impact of a reduced number of surgeons on wait times. Although the Report states that the measures have gone up or down it does not explain why.

The Report explains that information reported is based on data submitted by the RHAs to the Registry. The Report describes data limitations under the tab "Data Sources."

The data limitations do not provide sufficient information to allow readers to meet a stated purpose of the website: to estimate the time they will wait for surgery. The Report's defines "patient waiting" as the number of persons included in the patient waiting totals by surgical speciality when a surgeon has informed the booking office that the patient is waiting for a procedure in an operating room. As such, the definition excludes many less complicated procedures that can be alternatively done in a procedure room rather than a fully-equipped operating room.

The Report advises readers that surgical locations, i.e., operating rooms versus procedure rooms, vary for the same surgical procedures by hospital, by surgeon, and by RHA but does not provide enough information for the reader to understand the impact on the report for different types of surgeries. For example, in RQHR, various tendon surgeries and non-replacement knee surgeries are done in both operating rooms and procedure rooms. The data limitations should inform the reader that if surgery is performed outside of an operating room, it is not tracked or reported in the Registry. The Report should also describe the amount of surgery done outside of an operating room to the extent this

information is known. We estimate that 35% of the surgeries at RQHR are done outside of operating rooms.

Patients considering their options need to know if the surgery they require is typically done in an operating room or a procedure room at each RHA before they can understand what the reported wait times mean and be able to use this information to make a decision. The current information may mislead people who are comparing the wait times between two RHAs because a specific surgery could be carried out in different places and by different types of surgical specialists but only the wait times for surgery performed in the operating room grouped by surgical speciality is reported.

The Report also notes that wait times do not include any delays that may occur between the date of the decision to have surgery and the date that the surgeon submits the booking form to the hospital. The Report states that while such delays should normally be short; there may be some cases where longer delays occur.

We found that some surgeons wait until very close to the actual date of the surgery to notify the hospital booking office. In 19% of the booking records we examined, patients had signed the surgical consent form at least three weeks before they were reported as waiting for surgery on the Registry. This statistic suggests that surgeons do not notify the hospitals' booking offices as promptly as Health expects.

The Report should describe the impact on waiting times resulting from the delays in submitting surgical requests.

2. We recommend the Ministry of Health and Regina Qu'Appelle Regional Health Authority periodically monitor how well surgeons follow the established processes to book patients in the Saskatchewan Surgical Care Network Registry and encourage them to follow the processes.

3. We recommend the Ministry of Health disclose sufficient information in the surgical wait times report so that readers can better understand the limitations of the information presented.

Consistency

We expected Health to use processes to provide wait list information on a consistent basis. For each measure, we expected Health to compare its reported result to a prior period. We also expected Health to calculate its results in the same way as in prior years (or, if not, explain the change).

In the Report, Health compares surgeries performed and people waiting for each Regional Health Authority by surgery to prior period numbers. Health uses reasonably consistent methods to calculate the result. It advises readers of significant changes to the calculation, e.g., new surgery types that were not counted in the previous report. It uses the same methods to calculate the information from one period to the next.

Currently, RHAs report the number and types of surgeries performed in operating rooms. Because the surgery location (operating rooms versus other procedure rooms) varies from region to region for less invasive procedures, the reported numbers of patients waiting, reported number of surgeries performed, and the reported length of the wait are not always comparable between RHAs.

Selected references for surgical wait times report

Canadian Institute of Chartered Accountants. (2006). Statement of recommended practice SORP-2: Public performance reporting. *Public sector accounting and auditing*. Toronto: Author.

CCAF-FCVI. (2002). *Reporting principles-Taking public performance reporting to a new level.* Ottawa: Author.

CCAF-FCVI. (2006).*Toward producing and using better public performance reporting*: *Perspectives and solutions*. Ottawa: Author.

MicroStrategy. (2004). *Best Practices for Using Dashboards and Scorecard to Communicate Performance Results*. Http://bi.knowledgestorm.com/shared/write/collateral/WTP/13054_03292_88952_scorecards.pdf?ksi=1369791&ksc=1263707492. (18 Apr 2008)

Saskatchewan Health. (2006). *Annual report* 2005-2006. Regina: Author.

Saskatchewan Association of Health Organization's controls to secure the payroll system—a follow-up

The purpose of Saskatchewan Association of Health Organizations (SAHO) is to provide leadership, support, and services that will assist its membership in effectively delivering a comprehensive range of health services to the people of Saskatchewan. Services SAHO provides to its members include communications and advocacy, collective bargaining, human resources, administration, payroll, materials management, health and safety, and education. Its members are various healthcare providers within the province. The largest members are the regional health authorities (RHAs).

SAHO provides payroll services on a cost recovery basis. SAHO processes payroll for approximately 40,000 people. The total payroll expenses from the payroll system exceed $1.5 billion. SAHO has a Human Resource Management Steering Committee represented by members from the RHAs. The Steering Committee makes recommendations to management of SAHO about changes to the human resource and payroll system.

The payroll system is comprised of three separate computer systems known as Payroll Front End (PFE), Batch Calculations (BATCH), and Internet Personnel Front End (IPFE). PFE is a system some SAHO members still use to transfer payroll data to SAHO for processing. This system is several years old and is in the process of being replaced. BATCH does all payroll calculations. BATCH also maintains data such as sick day and vacation accruals. IPFE will replace PFE. In addition to allowing SAHO members to transfer information to BATCH, IPFE also stores all payroll transactions processed. Therefore, SAHO members can use IPFE for reporting purposes.

In 2006, we audited SAHO's central controls to secure transactions on the payroll system. The central controls are SAHO's policies and procedures for ensuring the confidentiality, availability, and integrity of the payroll system. We reported our findings in Chapter 2E of our 2006 Report – Volume 3 and made four recommendations for SAHO to help improve its processes.

We recommended that SAHO:

- monitor the security controls of its Internet Personnel Front End (IPFE) service provider to protect SAHO's systems and data

- monitor the security controls of its external network service provider to protect SAHO's systems and data

- only allow authorized users access to its systems and data, follow established password standards, and protect its systems from known security risks

- appropriately test and document payroll system changes

The Standing Committee on Public Accounts considered these matters in June 2007 and agreed with our recommendations.

In January 2008, we assessed SAHO's progress to address our recommendations. We set out the results of our work below.

Monitoring the IPFE service provider

During 2007, SAHO assessed the controls at its IPFE service provider to ensure the security of the payroll information captured and reported by IPFE. SAHO determined it needs regular reporting on security from the IPFE service provider.

At the end of 2007, SAHO began receiving security reports monthly from the IPFE service provider. These reports include information on system availability, security breaches, and where the system may be vulnerable to outside attacks. However, these reports do not provide enough details to SAHO to allow it to assess whether security controls are working effectively. For example, SAHO should receive detailed findings of system vulnerability scans and review the follow-up actions taken by the IPFE service provider. SAHO told us it is working with its IPFE service provider to receive more details on security in the monthly reports.

SAHO also needs to include monthly reporting requirements into its agreement with its IPFE service provider. SAHO told us that it is drafting

a new agreement with the IPFE service provider that will encompass service level expectations.

We continue to recommend that SAHO monitor the security controls of its Internet Personnel Front End (IPFE) service provider to protect SAHO's systems and data.

Monitoring its external network service provider

SAHO now monitors the security controls provided by its external network service provider. SAHO performs its own internal monitoring of the security service that was previously provided by the external network service provider. Therefore, SAHO knows it is protecting its systems from unauthorized users.

Strengthening security for its payroll system

SAHO has strengthened its security processes to protect its system and data. SAHO has established password standards and is following them. Also, SAHO has implemented controls to protect its systems from security risks.

SAHO is now providing periodic user access lists to members (i.e., various healthcare providers within the province) that use the payroll system to allow them to remove and update users on a timely basis.

Testing system changes appropriately

SAHO now documents all of its test plans for changes to the payroll system and gets these test plans approved. Appropriate testing of changes helps protect the integrity and availability of the payroll system. SAHO is also maintaining all test results from those test plans.

Health sector human resources plan—a follow-up

In 2006, our office assessed whether *Saskatchewan's Health Workforce Action Plan* (2005) and related documents contained the key elements of a sound human resource plan. Our 2006 Report – Volume 1, Chapter 2 described our findings. We made two recommendations to the Ministry of

Health (Health). Our recommendations are set out in italics under the subheadings below.

The Standing Committee on Public Accounts agreed with our recommendations in October 2006.

This follow-up examined Health's progress up to March 31, 2008 to address our recommendations.

Information on gaps in health sector human resources

We recommended that Health present information on significant shortfalls or surpluses in human resources in its health sector human resource plan.

Health told us it is in the process of renewing its strategic direction for the health sector through initiatives such as a Patients' First Review and a Seniors Strategy. After it confirms its strategic direction, Health will be better able to project the human resources that the health sector will require over the long term.

Health is working with other Canadian jurisdictions to develop a workforce projection model. This model would help Health use data about the population and its health needs to forecast the human resources required in the health sector. Health told us it anticipates using this workforce projection model in future, after it renews the health sector's strategic direction.

Information on strategies to develop health workforce

We recommended that Health present information on succession planning and development strategies for its current workforce in its health sector human resource plan.

Health uses media releases to inform the public about its strategies to address issues in health human resources (e.g., international recruiting, compensation, professional development). Also, during 2007, Health reported publicly about its succession planning and development strategies for its workforce. For example, in February and April 2007, Health provided the public with formal updates of its health sector human

resource plan (*Progress Report Highlights: Saskatchewan's Health Workforce Action Plan).*

These *Progress Reports* explained action taken to address specific workforce issues including the number of physicians, laboratory technicians, registered nurses, registered psychiatric nurses, and licensed practical nurses. The *Progress Reports* also included information on training for succession purposes as members of the health workforce retire. The *Progress Reports* explained that Health provided resources for health agencies to help their staff upgrade or complete new training to prepare them for vacancies anticipated in the future.

Health is actively involved in strategies to recruit and retain a strong health workforce. When Health completes its renewal of the strategic direction for the provincial health system, it will be better able to make public a comprehensive long-term plan for human resources in the health sector. We will continue to monitor health sector human resources planning.

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