

Chapter 20

Saskatchewan Health Authority—Maintaining Healthcare Facilities in Saskatoon and Surrounding Areas

1.0 MAIN POINTS

The Saskatchewan Health Authority has more work to do in regards to maintaining healthcare facilities located in Saskatoon and surrounding areas. By July 2022, for the ten recommendations we first made in 2019, we found it implemented two recommendations, partially implemented seven recommendations, and did not make progress on one recommendation.

The Authority regularly reports to senior management about maintenance activities for its key facilities and components in Saskatoon and surrounding areas. Analysis and reporting of maintenance results enables the Authority to assess whether effective maintenance of its key facilities and components is occurring.

While the Authority formally assessed its facility conditions in 2020, it still needs to establish measurable service objectives to assist in determining potential facilities or components at risk and those in immediate need of maintenance. Having minimum condition standards supports taking a risk-informed approach to maintenance planning. Also, the Authority needs to consistently maintain documentation to support its prioritization of capital maintenance projects. Documenting rationale helps to demonstrate selection of projects that best address its needs.

We found the Authority is developing a Building Operations Maintenance Plan for its facilities across the province. The Authority expects the Plan to provide guidance to maintenance staff in several areas, such as standardized preventative maintenance activities (e.g., frequency of maintenance) and guidelines for prioritizing maintenance requests received on demand (i.e., reactive maintenance).

In addition, the Authority initiated a process to begin designing a new maintenance IT system with improved functionality to help staff prioritize work and improve the reliability and completeness of its maintenance data. The Authority expects the new IT system may enable incorporation of planned maintenance activities into future maintenance budgets. The Authority needs to know the expected timing and total dollars needed to sufficiently maintain assets over their entire life cycle.

Lack of accurate information about all key facilities and components increases the risk that the Authority may not effectively prioritize maintenance activities, or make inconsistent decisions about approaches to maintenance.

The Authority's latest assessment of its facilities' conditions in Saskatoon and surrounding areas indicated, overall, facilities are in critical condition. Not completing timely maintenance increases the risk that an asset may fail and cause harm to residents, patients, visitors, or staff.



2.0 INTRODUCTION

2.1 Background

The Saskatchewan Health Authority, under *The Provincial Health Authority Act*, is responsible for planning, organizing, delivering, and evaluating health services in the province. It is also responsible for constructing, renovating, altering, and managing its healthcare facilities.

In 2021–22, the Authority spent \$75.1 million on repairs and maintenance expenses, along with \$126.8 million on additions to buildings and improvements, and on in-progress construction.¹

Over 50 healthcare facilities located in the City of Saskatoon and surrounding areas serve more than 360,000 residents in more than 100 communities, which include cities, towns, rural municipalities, and First Nations communities. Facilities located in Saskatoon and surrounding areas include 10 hospitals, 29 long-term care facilities, and 18 health centres and other healthcare facilities.^{2,3} See **Section 4.0** for a listing of facilities.

2.2 Focus of Follow-Up Audit

This chapter describes our first follow-up audit of management's actions on the recommendations we first made in 2019.

In 2019, we assessed the Saskatchewan Health Authority's processes to maintain healthcare facilities located in the City of Saskatoon and surrounding areas. Our *2019 Report – Volume 1*, Chapter 12, concluded that for the 12-month period ending November 30, 2018, the Authority did not have effective processes to maintain healthcare facilities located in Saskatoon and surrounding areas.⁴ We made 10 recommendations.

To conduct this audit engagement, we followed the standards for assurance engagements published in the *CPA Canada Handbook—Assurance* (CSAE 3001). To evaluate the Authority's progress toward meeting our recommendations, we used the relevant criteria from the original audit. The Authority agreed with the criteria in the original audit.

To complete this follow-up audit, we discussed actions taken with management, reviewed the Authority's policies and procedures, and examined documents related to maintenance activities completed and planned. We observed the Authority's capital infrastructure and equipment system and reviewed the draft Building Operations Maintenance Plan.

¹ Saskatchewan Health Authority, *2021–22 Annual Report*, p. 53 and p. 76.

² Information provided by the Saskatchewan Health Authority.

³ The Saskatchewan Health Authority owns 30 facilities in the City of Saskatoon and surrounding areas, with the remainder owned by healthcare affiliates. Healthcare affiliates are designated and responsible for providing contracted health services on behalf of the Authority. The Authority is not responsible for maintaining affiliate facilities but may complete maintenance upon request.

⁴ *2019 Report – Volume 1, Chapter 12*, pp. 187–205.

3.0 STATUS OF RECOMMENDATIONS

This section sets out each recommendation including the date on which the Standing Committee on Public Accounts agreed to the recommendation, the status of the recommendation at July 31, 2022, and the Authority's actions up to that date.

3.1 Service Objectives for Guiding Maintenance Not Set

We recommended the Saskatchewan Health Authority establish measurable service objectives for its key healthcare facilities and critical components located in the City of Saskatoon and surrounding areas.

(2019 Report – Volume 1, p. 193, Recommendation 1; Public Accounts Committee agreement March 1, 2022)

Status—Partially Implemented

While the Saskatchewan Health Authority identified its key facilities and key components and updated the assessments of the facilities' conditions, it has yet to establish measurable service objectives (e.g., a minimum acceptable facility condition index [FCI] rating needed to meet future operations).⁵

We found the Authority last formally assessed its facility conditions in 2020. The Authority's FCI for facilities in Saskatoon and surrounding areas is worsening.

In 2019, the average FCI was 50% for facilities in Saskatoon and surrounding areas. At July 2022, the average FCI for the Authority's facilities in Saskatoon and surrounding areas was 62%—meaning overall in critical condition (see **Figure 1**). **Figure 1** shows 46 out of 52 facilities in Saskatoon and area as critical condition.

Figure 1—Facility Condition Index for the Authority's Saskatoon-area Facilities at July 2022

Facility Condition Index %	Condition ^A	Number of Facilities in Category
0–5	Good	1
5–10	Fair	2
10–30	Poor	3
>30	Critical	46
Total		52^B

Source: Adapted from information provided by the Saskatchewan Health Authority and retrieved from the International Facility Management Association knowledge library.

^A The International Facility Management Association Knowledge Library defines building condition in terms of facility condition index, www.community.ifma.org/fmpedia/w/fmpedia/2459 (20 September 2022).

^B The Authority did not complete facility condition assessments for the Jim Pattison Children's Hospital, Strasbourg and District Health Centre, or three leased facilities.

The Authority has not established measurable service objectives (e.g., minimum acceptable FCI) for the facilities. For example, the Authority could aim to maintain its facilities at a standard FCI of 10%—meaning, overall, facilities would be in fair condition.

⁵ Facilities condition index (FCI) is the total cost of existing deficiencies (maintenance needs) in a particular facility (FCI Cost or cost of deferred maintenance) divided by its replacement value. It is represented as a decimal point or as a percentage. The lower the FCI, the better the condition of the asset.



In May 2022, the Authority signed an agreement with the Ministry of SaskBuilds and Procurement in relation to refreshing the FCI data for all of the Authority's owned and operated facilities by March 31, 2024. The Ministry developed a model to assess facility conditions, and calculate FCI consistently using a common methodology for government.

In addition, the Authority established which equipment and components it considers to be critical (e.g., boilers, nurse call systems, generators).

Having minimum condition standards enables taking a risk-informed approach to maintenance planning. It facilitates comparisons of assets' current conditions to those standards to identify particular facilities or components at risk. This supports determining the extent of resources needed for maintenance, and deciding where best to focus maintenance efforts.

3.2 Accuracy and Reliability of Maintenance Data Improved

We recommended the Saskatchewan Health Authority control the accuracy and reliability of maintenance data in its IT system for key healthcare facilities and components located in the City of Saskatoon and surrounding areas. (2019 Report – Volume 1, p. 195, Recommendation 2; Public Accounts Committee agreement March 1, 2022)

Status—Partially Implemented

We recommended the Saskatchewan Health Authority maintain complete information on each of its key healthcare facilities and components located in the City of Saskatoon and surrounding areas to enable the preparation of a comprehensive maintenance plan. (2019 Report – Volume 1, p. 196, Recommendation 3; Public Accounts Committee agreement March 1, 2022)

Status—Implemented

The Saskatchewan Health Authority updated information in its maintenance IT system (i.e., Work Manager) for its owned facilities and key components in Saskatoon and surrounding areas. It is planning to design and implement a new maintenance IT system to further improve the accuracy, reliability, and completeness of information in its maintenance IT system.

Since 2019, the Authority updated its IT system for 29 of its 30 owned facilities in Saskatoon and surrounding areas for critical components.⁶ This resulted in the Authority adding almost 900 assets (e.g., generators, boilers) to the system.

In June 2022, the Authority initiated a monthly review of user access to Work Manager. We reviewed user access to the system and found all users with significant roles had appropriate access based on their position. Over 80 maintenance staff have access to Work Manager (compared to 196 staff in 2019).

⁶ The Authority indicated it determined one of its smaller owned facilities did not have any critical components to include in the maintenance IT system.

However, unchanged from our 2019 audit, we found user access to data in Work Manager is not restricted to facilities the users are assigned to maintain, and the system does not track changes users make to key facility and component information. As a result, users could make inappropriate or erroneous changes to any existing data without the Authority having a way to easily identify the changes made (i.e., the system can identify if a change was made, but cannot identify what changed and by whom).

At July 2022, the Authority was in the process of identifying a third-party to design and implement a new maintenance IT system. It anticipates having a new system in place by March 31, 2024.

Insufficient controls in Work Manager may result in data being inaccurate or incomplete. Lack of accurate information about all key facilities and components increases the risk that the Authority may not effectively prioritize maintenance activities, or may make inconsistent decisions about maintenance. This could lead to increased future repair costs or replacing facilities or components earlier than intended.

3.3 Preventative Maintenance Activities Inconsistent

We recommended the Saskatchewan Health Authority consistently set the nature, extent, and frequency of preventative maintenance activities for similar categories of key healthcare facilities and components located in the City of Saskatoon and surrounding areas. (2019 Report – Volume 1, p. 198, Recommendation 4; Public Accounts Committee agreement March 1, 2022)

Status—Partially Implemented

The Saskatchewan Health Authority has inconsistent preventative maintenance activities established for similar categories of key healthcare facilities and components. The Authority is developing a Building Operations Maintenance Plan where it expects to standardize its preventative maintenance activities.

We tested 30 preventative maintenance activities and found 24 activities with inconsistent maintenance frequencies between similar pieces of equipment. For example, preventative maintenance for beds ranges from inspections every month to every two years.

In addition, we found four maintenance activities did not align with code requirements, along with 14 activities where the Authority was unable to provide the related code or support for the manufacturer's recommended maintenance interval.⁷ For example, we found preventative maintenance frequencies (i.e., inspections) for 533 floor-lifts varied from monthly to every two years—the Authority was unable to provide support for how it determined these frequencies. This increases the risk of doing maintenance at inappropriate intervals (i.e., too late or too early).

⁷ Codes are a set of standards for specific trades to follow; examples include building codes, electrical codes or plumbing codes.



Our analysis of all preventative maintenance activities for facilities located in Saskatoon and surrounding areas from August 2021 to July 2022 identified similar issues. For example, we identified 72 nurse call systems with varying maintenance frequencies (i.e., 33 with monthly inspections, 16 with quarterly inspections, three with inspections every four months, six with semi-annual inspections, and 14 with annual inspections).

We also found maintenance frequencies for emergency eyewash and shower stations did not align with the applicable code requiring weekly inspections.⁸ For example, of the 720 preventative maintenance activities for emergency eyewash and shower stations, we found 236 had monthly inspection frequencies instead of weekly as required.

At July 2022, the Authority was developing a Building Operations Maintenance Plan for its operations across the province. Our review of the draft Plan found the Authority is working on standardizing preventative maintenance frequencies based on equipment type and available guidance (e.g., related code requirements).

Not making consistent decisions and aligning the frequency of maintenance activities with standards (e.g., manufacturer and code requirements) increases the risk that key facilities and component assets are not maintained appropriately or, conversely, resources are used inefficiently. Inadequately maintained assets may put patients, residents, visitors, and staff at risk of injury if an asset fails.

3.4 Need to Consider Planned Maintenance Activities When Setting the Maintenance Budget

We recommended the Saskatchewan Health Authority use its planned maintenance activities as an input to setting its Saskatoon-area maintenance budget. (2019 Report – Volume 1, p. 199, Recommendation 5; Public Accounts Committee agreement March 1, 2022)

Status—Not Implemented

The Saskatchewan Health Authority does not use planned maintenance activities as an input to setting its maintenance budget.

We found the Authority continues to establish its maintenance budgets based on historical figures, as its maintenance IT system limits its ability to accurately predict the cost of planned maintenance activities in future years. Linking the maintenance budget to planned maintenance activities can help mitigate potential differences between actual and planned maintenance costs.

In addition, as the Authority has not set measurable service objectives (see **Section 3.1**), the Authority may not be budgeting for maintenance activities required to maintain its assets to a desired condition.

⁸ www.gesafety.com/downloads/ANSIGuide.pdf (26 July 2022).

As described in **Section 3.2**, the Authority is in the process of identifying a third-party to design and implement a new maintenance IT system, as well as improve the reliability and completeness of its maintenance data. The Authority indicated its new system may help enable it to incorporate planned maintenance activities into future budgets.

Not using planned maintenance activities to set budgets increases the risk of having insufficient funds for all required maintenance. This may result in the Authority not completing maintenance at appropriate times or in maintenance deferrals; this can negatively affect the delivery of healthcare, safety, and future costs.

3.5 Improvements to Timely Preventative Maintenance Ongoing

We recommended the Saskatchewan Health Authority complete preventative maintenance on its key healthcare facilities and components located in the City of Saskatoon and surrounding areas within expected timeframes. (2019 Report – Volume 1, p. 200, Recommendation 6; Public Accounts Committee agreement March 1, 2022)

Status—Partially Implemented

The Saskatchewan Health Authority does not always conduct preventative maintenance activities on facilities in Saskatoon and surrounding areas in a timely manner.

Work Manager's preventative maintenance plans continue to set out the expected timing of maintenance of facilities and component assets (e.g., maintenance should occur monthly). However, the Authority does not have established guidance about how long the maintenance should take staff to complete. The Authority expects to provide further guidance to maintenance staff about expected timelines for completion of preventative maintenance in its draft Building Operations Maintenance Plan (see **Section 3.3**).

We tested 30 preventative maintenance activities and found that eight (27%) were not completed timely and lacked reasonable explanations for the delay (e.g., supply issues). For example, we found an emergency generator inspection expected to occur on a weekly basis did not occur until 30 days after the scheduled inspection date. This is a slight improvement from our 2019 audit, where our testing found 47% of preventative maintenance activities not completed in a timely manner.

Our analysis of all preventative maintenance activities for facilities from August 2021 to July 2022 found maintenance staff completed approximately 20% of preventative maintenance activities untimely.

The Authority expects the functionality of its new maintenance IT system (see **Section 3.2**) may include functionality for notifying maintenance staff in advance of planned maintenance activities and establishing a deadline for completing the work.

Not completing timely preventative maintenance increases the risk that an asset may fail and cause harm to residents, patients, visitors, or staff. This could also lead to increased future repair costs.



3.6 Demand Maintenance Guidance Updated, But Not Always Followed

We recommended the Saskatchewan Health Authority have written guidance for classifying and prioritizing requests for demand maintenance on key healthcare facilities and components located in the City of Saskatoon and surrounding areas. (2019 Report – Volume 1, p. 201, Recommendation 7; Public Accounts Committee agreement March 1, 2022)

Status—Partially Implemented

We recommended the Saskatchewan Health Authority complete demand maintenance in line with priority rankings for key healthcare facilities and components located in the City of Saskatoon and surrounding areas. (2019 Report – Volume 1, p. 201, Recommendation 8; Public Accounts Committee agreement March 1, 2022)

Status—Partially Implemented

The Saskatchewan Health Authority updated its guidance for prioritizing and completing demand maintenance requests, but staff do not always follow the guidance.

The Authority updated its work standard for prioritizing demand maintenance requests in 2022. The work standard establishes a priority rating for requests on a scale of 1 to 20 (with 1 as the highest priority). Work Manager automatically calculates and assigns a priority rating to each request based on the information call centre staff enter into the system. Work Manager also includes functionality for priority rating overrides, where call centre staff can assign the highest priority rating to a request. The Authority's work standard sets out guidance for staff use of overrides—this is reserved for requests that contain key words or phrases (e.g., flood, no power, plugged toilet/sink).

As discussed in **Section 3.3**, the Authority is in the process of developing a Business Operations Maintenance Plan. We reviewed the draft Plan and found it includes updated guidance for prioritizing demand maintenance requests using a scale from 1 to 25 (with 1 as the highest priority). Similar to Work Manager, the Authority expects its new maintenance IT system (see **Section 3.2**) to calculate the priority ratings for demand maintenance requests based on the information staff enter into the system.

The Authority's draft Plan also outlines expected timelines for staff completion of demand maintenance requests (based on priority categories). For example, the Plan expects staff to complete "extreme" requests within one day and "low risk" requests within six months.

We tested 60 demand maintenance requests and found 23 requests with priority ratings inconsistent with the work standard and without reasonable explanations for the difference in ratings. For example, the Authority ranked maintenance to a cupboard in a common area as a priority four (i.e., completed within one day to one week) when it should have been ranked as a priority six (i.e., completed within one week to one month). In addition, we found 18 instances where staff did not complete maintenance within expected timelines and without rationale for the delays (e.g., waiting for required parts).

Additionally, we analyzed all demand maintenance activities from August 2021 to July 2022—the Authority’s Saskatoon-area facilities received over 25,000 demand maintenance requests during this period. Our analysis of the requests found:

- Call Centre staff applied priority rating overrides (i.e., increased to highest priority rating) for almost 7,100 requests (29%). Our further analysis of the overrides found almost three-quarters of the overrides did not contain the key words or phrases set out in the Authority’s work standard.
- The average time taken to complete each request was 7.79 days, with maintenance staff generally completing higher priority requests faster than lower priority requests. However, our analysis identified, on average, maintenance staff completed requests with priority ratings of 2 and 5 faster than requests ranked as the highest priority - 1 (i.e., with the lower priority requests completed approximately a day sooner on average).

When demand maintenance requests are not appropriately prioritized, there is increased risk that maintenance of assets critical for the delivery of healthcare services is not done first. Not completing timely demand maintenance in order of priority increases the risk that key assets may remain unrepaired longer than they should.

3.7 Capital Maintenance Project Prioritization Inconsistently Documented

We recommended the Saskatchewan Health Authority consistently document the priority of capital maintenance projects undertaken in the City of Saskatoon and surrounding areas. (2019 Report – Volume 1, p. 202, Recommendation 9; Public Accounts Committee agreement March 1, 2022)

Status—Partially Implemented

The Saskatchewan Health Authority selects Saskatoon-area capital maintenance projects based on priority, but does not consistently maintain documentation supporting its rationale for changing project priorities.

Capital maintenance projects are larger or more complex maintenance activities (e.g., roof repairs, boiler replacement).

We found the Authority uses an online database to assign priority ratings for its annual capital maintenance projects. The database automatically calculates priority ratings based on various project details (e.g., likelihood of failure, safety concerns, non-compliance with fire code). A team of directors (representatives from the Authority’s various locations across the province) meet to review the calculated ratings, assigning each project a rating of low to critical and determining which projects to fund.

We tested 20 capital maintenance projects and found seven projects included in the Authority’s 2021–22 capital funding request where it changed prioritization of the projects without documented rationale to do so. We discussed these projects with management and found they provided reasonable verbal rationale for prioritization of these projects.



Without documentation of rationale for selecting projects, there is increased risk of the Authority prioritizing and completing capital maintenance projects that do not best address its needs. In addition, it increases the risk of not using resources (e.g., staff, budget) effectively.

3.8 Reporting of Maintenance Activities Occurring

We recommended the Saskatchewan Health Authority report to senior management the results of maintenance activities for its key healthcare facilities and components located in the City of Saskatoon and surrounding areas. (2019 Report – Volume 1, p. 204, Recommendation 10; Public Accounts Committee agreement March 1, 2022)

Status—Implemented

The Saskatchewan Health Authority regularly reports to senior management about maintenance activities for its key facilities and components in Saskatoon and surrounding areas.

We found maintenance staff provide senior management with daily and monthly reports about ongoing maintenance activities.

Daily reports include information about the longest outstanding demand and preventative maintenance requests (i.e., 10 oldest maintenance requests), as well as the average age of outstanding requests. We found maintenance staff review these reports at daily meetings with senior management (i.e., directors, executive directors, vice presidents). We reviewed the Authority's daily meeting logs for two months and found staff also discuss other matters such as workflow, demand for maintenance, and safety issues.

Maintenance staff prepare monthly reports to update management about the status of capital projects. We reviewed two monthly capital project reports and found the reports set out the Authority's capital projects along with their completion status (e.g., complete, deferred), budget status, and commentary specific to the projects (e.g., updates to project budgets, status of related procurements, details for project delays).

In June 2022, staff closed 60.8% of preventative maintenance requests generated during the month for facilities in Saskatoon and surrounding areas. As at June 30, 2022, the Saskatoon-area had 563 open demand maintenance requests of which 30.2% were older than 30 days.

Analysis and reporting of maintenance results enables the Authority to assess whether effective maintenance of its key facilities and components is occurring, or whether maintenance funding is sufficient and efficiently used.

4.0 SASKATOON AND SURROUNDING AREA FACILITIES

Hospitals (Acute Care) and Location		
Authority-Owned		
Royal University Hospital (Saskatoon)	Saskatoon City Hospital	St. Paul's Hospital (Saskatoon)
Humboldt District Health Complex	Lanigan Hospital	Rosthern Hospital
Wadena Hospital	Watrous District Health Complex	Wynyard Hospital
Jim Pattison Children's Hospital (Saskatoon)		
Health Centre and Other Facilities		
Authority-Owned		
Cameco Renal Health Centre (Saskatoon)	Wakaw Primary Health and Collaborative Emergency Centre	Kinsmen Children's Centre (Saskatoon)
Larson House Brief Detox (Saskatoon)	Youth Resource Centre (Saskatoon)	Borden Primary Health Centre
Delisle Community Health & Social Centre	LeRoy Community Health & Social Centre	Nokomis Health Centre
Quill Lake Community Health & Social Centre	Rosthern Community Services Building	Watson Community Health Centre
Healthcare Affiliates		
Our Neighbourhood Health Centre (Saskatoon)	Calder Centre (Saskatoon)	Strasbourg & District Health Centre
South East Health Centre (Saskatoon)	Westwinds Primary Health Centre (Saskatoon)	Idylwyld Health Centre (Saskatoon)
Long-Term Care Facilities		
Authority-Owned		
Cudworth Nursing Home/Health Centre	Golden Acres (Wynyard)	Last Mountain Pioneer Home (Strasbourg)
Manitou Lodge (Watson)	Parkridge Centre (Saskatoon)	Pleasant View Care Home (Wadena)
Quill Plains Centennial Lodge (Watson)	St. Mary's Villa (Humboldt)	
Healthcare Affiliates		
Central Haven Special Care Home (Saskatoon)	Circle Drive Special Care Home (Saskatoon)	Extencare Special Care Home (Saskatoon)
Luther Special Care Home (Saskatoon)	Oliver Lodge (Saskatoon)	Porteous Lodge (Saskatoon)
Saskatoon Convalescent Home	Sherbrooke Community Centre (Saskatoon)	St. Ann's Home (Saskatoon)
St. Joseph's Home (Saskatoon)	Stensrud Lodge (Saskatoon)	Sunnyside Adventist Care Centre (Saskatoon)
Spruce Manor Special Care Home (Dalmeny)	Lutheran Sunset Home (Saskatoon)	Bethany Pioneer (Middle Lake)
Goodwill Manor (Duck Lake)	Lakeview Pioneer Lodge (Wakaw)	Langham Senior Citizen's Home
Mennonite Nursing Home (Rosthern)	Warman Mennonite Special Care Home	Samaritan Place (Saskatoon)

Source: Adapted from information provided by the Saskatchewan Health Authority.

