APRIL 2024

THE CURRENT STATE OF HEALTHCARE IN RURAL SASKATCHEWAN

FINAL REPORT

SASKATCHEWAN POPULATION HEALTH AND EVALUATION RESEARCH UNIT

University of Regina

This research project was conducted by a team with the Saskatchewan Population Health and Evaluation Research Unit (SPHERU) at the University of Regina.

Project Team

Dr. Nuelle Novik (Project Lead)
Dr. Tom McIntosh (Project Team Member)
Dr. Bonnie Jeffery (Project Team Member)
Dr. Cheryl A. Camillo (Project Team Member)
May Ly (Research Assistant – Phases II, III, and IV)

Student Research Assistants

Bronwyn Heerspink (Phase I)
Jennifer Billington (Phase II)

This research project was funded by the Canadian Union of Public Employees (CUPE) Local 5430. While they provided access to their workers as research participants, they did not direct or design the research. The data collection, analysis, and interpretation are entirely the responsibility of the SPHERU team.

Recommended Citation:

Novik, N., Ly, M., McIntosh, T., Jeffery, B., & Camillo, C.A. (2024). *The current state of healthcare in rural Saskatchewan: Final report*. University of Regina: Saskatchewan Population Health and Evaluation Research Unit. Available at www.spheru.ca

TABLE OF CONTENTS

EXECUTIVE SUMMARY

A number of changes have occurred in recent years to the delivery of healthcare in rural Saskatchewan that elicit concerns from healthcare workers, patients, communities and the general public. To explore these changes and their impacts, the Saskatchewan Population Health and Evaluation Research Unit (SPHERU) embarked on a research project that examined the current state of healthcare in rural Saskatchewan.

This research project investigated rural healthcare in multiple phases, including a thorough literature review, analysis of provincial health service disruptions data, interviews with Key Informants, and a World Café event that brought together various stakeholders for discussion. Overall, four major themes emerged from all of the data and information examined inclusive of all phases of the project:

1. The quality of rural healthcare is at stake as patients ultimately take the burden of the existing systemic challenges and issues.
2. The creation of a single health authority failed to take into account the particularities of rural care delivery and, thus, created greater inequities in health service delivery in rural communities.
3. Health system workers are experiencing an overwhelming sense of loss, including loss of voice, morale, commitment to the health profession, and overall confidence in rural healthcare.
4. Healthcare is the “life-blood” of rural communities, and the recent changes in healthcare are impacting various aspects of communities well beyond healthcare services.

The findings in this report suggest that there are critical issues in rural healthcare that cannot be left unaddressed. The information in this report is intended to describe the scope of the current issues and demonstrate the need to support and invest in rural healthcare.

INTRODUCTION

A number of major changes have occurred in recent years to the delivery of healthcare in rural Saskatchewan. Concerns have been raised by patients, healthcare workers, and the public about these changes. To explore these concerns, SPHERU embarked on a multiphase research project that examined the landscape of rural healthcare through academic literature, media reports, publicly available data, statistical trends, individual accounts from workers, and discussions with stakeholders. This final report provides an overview of all of the data gathered as part of an examination of the current state of rural healthcare in Saskatchewan.

This report uses the Statistics Canada (2021) definition of rural, which includes communities outside of Census Metropolitan Areas (communities with a core population of 50,000 or greater and a total population of 100,000 or greater) and Census Agglomerations (communities with a core population of 10,000 or greater and total population below 100,000). In Saskatchewan, this includes all communities outside of Regina, Saskatoon, Prince Albert, Moose Jaw, Yorkton, North Battleford, Swift Current, Estevan, Weyburn, and Lloydminster. While this definition categorizes communities like Yorkton and North Battleford as urban, we recognize that there are unique challenges faced by small urban communities in the provision of healthcare to nearby rural communities that differ from those presented in Regina or Saskatoon.

PROJECT BACKGROUND

Among those who are concerned about shifts in the delivery of healthcare in rural Saskatchewan are healthcare workers and the unions that represent them. The Canadian Union of Public Employees (CUPE) Local 5430, which represents an array of healthcare workers, expressed an interest in understanding how recent changes in the delivery of healthcare in rural parts of the province have impacted their members and what these changes might mean for the overall direction of rural health service delivery in the province. Given that SPHERU has completed several research projects in the area of rural health, the opportunity to conduct a research project examining the delivery of rural healthcare was a relevant fit to this line of research. Thus, this project was initiated and funded by CUPE Local 5430, but SPHERU was entirely responsible for the research design, development, data collection, analysis, and findings, which were carried out independently. While attention was given to CUPE Local 5430 regions and members, SPHERU also expanded the focus of aspects of this research project to all rural areas of Saskatchewan in order to gain a more complete understanding of the state of rural healthcare in the province.

The experiences of the health system workers that CUPE Local 5430 represents are often overlooked in studies of the healthcare workforce, which tends to focus more on health professions like medicine and nursing. Yet these other health system occupations are necessary components to a positive patient experience within the system. Such health system workers, including licensed practical nurses, continuing care assistants, clerical staff, lab technologists, diagnostic technicians, security officers, custodians, cooks, dietary aides, housekeeping aides, and laundry aides, are represented by three labour unions in Saskatchewan, each covering different regions of the province (see Figure 1).

CUPE Local 5430 is the largest healthcare union in Saskatchewan, representing nearly 14,000 healthcare workers. CUPE Local 5430 is comprised of five regions:

- Region 1 (former Prairie North Health Region – North Battleford and surrounding area)
- Region 2 (former Prince Albert-Parkland Health Region – Prince Albert and surrounding area)
- Region 3 (former Regina-Qu'Appelle Health Region – Regina and surrounding area)
- Region 4 (former Sun Country Health Region – Estevan and surrounding area)
- Region 5 (former Sunrise Health Region – Yorkton and surrounding area)

The next largest healthcare union in the province is the **Service Employees International Union West (SEIU-West)**, which represents approximately 11,400 employees in a variety of support roles. SEIU-West was formed through a merger of three regions:

- Local 299 (former Five Hills Health Region – Moose Jaw and surrounding area)
- Local 333 (former Saskatoon and Heartland Health Regions – Saskatoon and surrounding area)
- Local 336 (former Cypress Health Region – Swift Current and surrounding area)

The **Saskatchewan Government and General Employees' Union (SGEU)** represents more than 2,600 health sector workers in northern and central Saskatchewan. While workers in other sectors (e.g., public service, education, Crown corporations) are also represented by SGEU, this union covers health sector workers in the following regions:

- Locals 3354-1, 3354-2, and 3354-3 (former Kelsey Trail Health Region – Melfort, Nipawin, Tisdale and surrounding area)
- Local 3328-2 (former Keewatin Yatthé health region – Buffalo Narrows, La Loche, Ile-a-la-Crosse and surrounding area)
- Local 3328-3 (former Mamawetan Churchill River health region – La Ronge, Sandy Bay, Pinehouse Lake and surrounding area)

The northernmost region of Saskatchewan is served by the Athabasca Health Authority, which is an integrated federal, provincial, and First Nations health services organization. The Athabasca Health Authority is therefore not covered by any of the three healthcare unions in Saskatchewan.

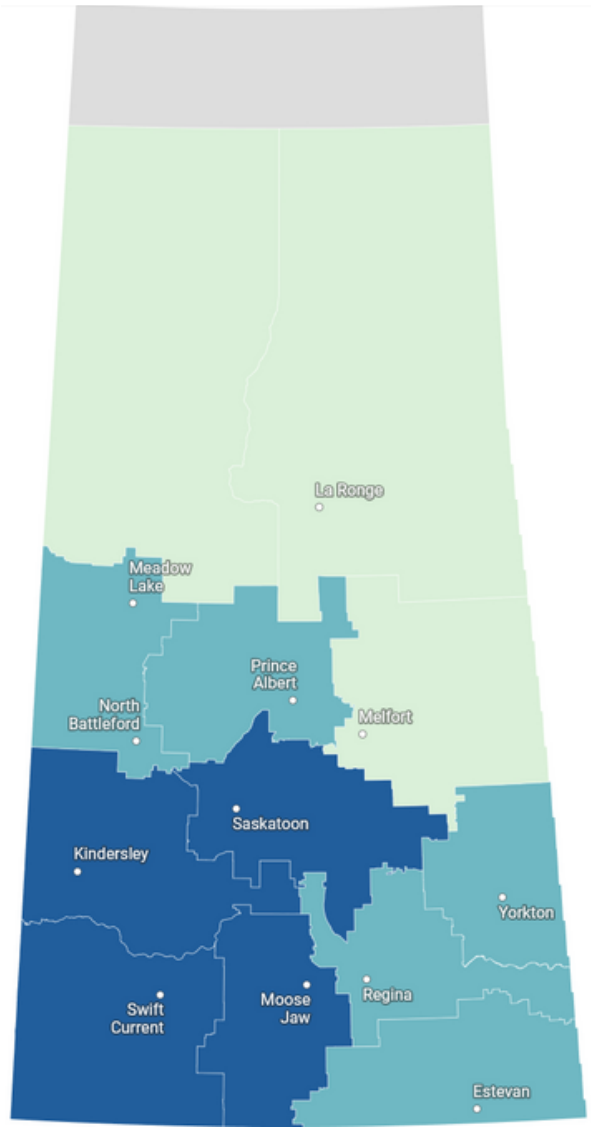


Figure 1. Regions covered by healthcare unions in Saskatchewan.

CUPE Local 5430 regions

SEIU-West regions

SGEU regions

Athabasca Health Authority

PURPOSE AND GOAL OF PROJECT

This project aimed to examine the current landscape of rural healthcare service delivery in Saskatchewan. This involved investigating what recent changes have occurred in rural healthcare, how this has impacted healthcare workers and the health system, responses to these changes, and identifying the additional issues or challenges that may have emerged. The goal of this project was to initiate a public dialogue around future policy directions that can protect and preserve access to quality health services for Saskatchewan's rural residents. To cover the scope of this project, SPHERU conducted the research in four key phases:

I. Collect existing information on the state of rural health in the province and the operation of rural healthcare.
II. Supplement that data with a series of semi-structured Key Informant interviews with healthcare workers and officials whose work involves rural healthcare.
III. Hold a virtual World Café event to explore the results of the data collection and interviews aimed at articulating clear areas where policy action is needed in order to improve rural health and healthcare access in Saskatchewan.
IV. Prepare a summary report, and other knowledge mobilization activities, on the material collected, including the results of the World Café event.

The information in this report summarizes the findings from data collected during phases I, II, and III. It is intended that this report will serve to inform readers on the current state of healthcare in rural Saskatchewan and initiate discussions on the future direction of rural healthcare.

RESEARCH METHODS

Information gathered for this project came from multiple sources, including a thorough literature review, provincial data on health service disruptions, interviews with Key Informants, and a virtual World Café event with stakeholders.

Literature Review

To form a basis of understanding of the state of healthcare in rural Saskatchewan, a review of the existing literature was conducted, drawing from several databases (e.g., PubMed, Google Scholar, Web of Science), websites (e.g., Government of Saskatchewan, Saskatchewan Health Authority), media sources (e.g., newspaper articles), and other publicly available data (e.g., data compiled by the Canadian Institute for Health Information). Archival information was also accessed through the Wayback Machine, which is part of Archive.org, a not-for-profit foundation based in the US that archives web pages. This service was particularly helpful for locating archived websites. The goal of this literature review was to identify major changes since 2017 that have impacted rural healthcare, as well as emerging issues that continue to have an impact.

Service Disruptions Data

The provincial data on health service disruptions was compiled by the Saskatchewan Health Authority. This data included information on all healthcare service disruptions in the province with a duration of at least 24 hours from August 2019 to July 2023. The data was used to examine the extent of, and trends in, service disruptions among health facilities. This data was first examined with a particular focus on health facilities located in CUPE Local 5430 regions, followed by an examination of data from all facilities across the province. This allowed for a comparison of service disruptions in CUPE Local 5430 regions and the entire province.

Interviews with Key Informants

To gather a range of perspectives on the delivery of rural healthcare, the SPHERU research team interviewed Key Informants from different sectors involved in rural healthcare. The Key Informants who participated in interviews were healthcare employees from CUPE Local 5430 and officials from CUPE Local 5430 and the SHA. Interviews allowed Key Informants to provide firsthand accounts of their experience in the current rural healthcare system, and expand on topics regarding recent changes to rural healthcare as identified in the literature review.

World Café

The World Café is a research method designed to explore issues of common concern using a combination of small and larger group discussions. To remove the geographical barriers to participation that rural residents of Saskatchewan often face, the World Café event was held virtually (via Zoom) to bring together as many stakeholders as possible. The World Café was organized as a half-day event that involved smaller virtual “table discussions” (utilizing break out rooms) about specific questions and topics posed by a table host, “harvests” in which each group reported on their conversations to the larger group, and a plenary discussion with the entire group. The goal of the World Café event was to bring together various stakeholders to discuss and validate the key issues and topics that emerged in other sources of data collection.

This project was approved on ethical grounds by the University of Regina Research Ethics Board (Nov. 2022 REB# 2022-098). This research project was not granted Operational Approval by the Saskatchewan Health Authority.

FINDINGS FROM LITERATURE REVIEW

A review of the relevant academic literature and other publicly available information has highlighted that since 2017, there have been four significant changes that occurred and are continuing to impact healthcare delivery in Saskatchewan. These include: the amalgamation of the regional health authorities into the Saskatchewan Health Authority (SHA), the closure of the Saskatchewan Transportation Company (STC), the COVID-19 pandemic, and an emerging emphasis on virtual care.

Health Authority Amalgamation

The Government of Saskatchewan proclaimed legislation to create a province-wide health authority in December of 2017 (Government of Saskatchewan, 2017g). This legislation transferred the operations of twelve regional health authorities, which were overseen by local boards, to the new SHA. The Minister of Rural and Remote Health at the time promised that the SHA would not result in the reduction or centralization of services outside of rural Saskatchewan. Despite this promise, many rural residents and healthcare professionals expressed fears that the opposite would be true in practice (Cowan, 2017; Greschner, 2017; Mandryk, 2017; Nikkel, 2017; SaskToday, 2017a, 2017b; The Canadian Press, 2017).

Saskatchewan Transportation Company

The Saskatchewan Transportation Company (STC) was a provincial Crown corporation that operated bus services throughout Saskatchewan beginning in 1946. In 2017, the Government of Saskatchewan (2017a) announced that they would discontinue providing operating and capital subsidies to STC, despite backlash from the Official Opposition and clients of the service. Without government subsidies, STC services phased out and the company ceased to exist. Many rural residents of the province saw STC as an integral part of rural Saskatchewan, as it helped them access important services like healthcare, education, and employment (Alhassan et al., 2021). In addition to passenger services, STC was used to transport medications, lab specimens, and medical equipment and supplies between some parts of the province. Given the importance of STC to some rural residents who travelled to access healthcare, a focus group participant in a study on the impacts of STC's closure viewed its termination as undercutting the mandate of the Saskatchewan Health Authority to serve all people in Saskatchewan. In the wake of the elimination of STC, many noted that this policy had disproportionate impacts on low-income, rural, and remote residents (Alhassan et al., 2021).

COVID-19

The COVID-19 pandemic exposed many issues inherent with healthcare delivery in rural parts of the province. COVID-19 outbreaks led to the conversion of emergency beds to alternative levels of care beds in many rural hospitals, including in Arcola, Assiniboia, Balcarres, Biggar, Broadview, Davidson, Herbert, Kerrobert, Lanigan, Leader, Oxbow, Preeceville, Radville, and Wolesley (Bodnar, 2020; Mandryk, 2020; Olson, 2020; Salloum, 2022; SaskToday, 2020; Simes, 2022a, 2022d; Stricker, 2020a, 2020b; White-Crummey, 2020). Further closures occurred in some rural communities in order to assist with overflowing capacity in larger centres' hospitals (Simes, 2022a). Healthcare workers and SHA staff noted that, while COVID-19 produced new challenges for the healthcare system, issues surrounding staffing and a lack of available facilities were longstanding and were further exacerbated by the pandemic (Simes, 2022c, 2022d; Vescera, 2022b).

Other factors also came to light during this time, including increased mental health challenges (Bramadat-Wilcock, 2020; McIntosh et al., 2021). Because the system was unprepared for the extent and duration of the pandemic, service delivery approaches, and services themselves, could not be easily adjusted. This resulted in the increased gaps between community mental health services and the healthcare system (McIntosh et al., 2021).

Virtual Care

To address the access to specialists in rural healthcare facilities, the Government of Saskatchewan has invested heavily in virtual technology in order to increase access to healthcare. In 2017, the province introduced Remote Presence Robotics, a program that uses a mobile robot or a small mobile device that allows a healthcare provider to perform real-time assessments, diagnostics, and provide patient care remotely to La Loche and Stoney Rapids. This program provides rural and remote residents with easy access to specialist care in their home community that they otherwise would have to travel to a larger urban centre to access (Conroy, 2021; Government of Saskatchewan, 2017d; Mendez, 2018; Wasko, 2022). When the technology was first introduced, the SHA claimed this was a step in the right direction to improve equity in healthcare access for rural, remote, and northern residents (Government of Saskatchewan, 2017b). Technology like this has continued to expand across the province, including in St. Joseph's Hospital in Gravelbourg which received the MELODY Telerobotic Ultrasound System in November 2022.

Virtual methods of care have seen an even greater uptake in Saskatchewan following the COVID-19 pandemic. There was a limited Telehealth program in place pre-pandemic, but in order to continue providing services during the pandemic, the government quickly changed the provider billing and payment policy to enable more virtual care. Between March and December 2020, 1.7 million hours were billed for virtual healthcare visits (Vescera, 2022a). It is estimated that Telehealth has saved Saskatchewan patients more than 6 million kilometres in travel (eHealth Saskatchewan, n.d.a). Patients and physicians have also reported high satisfaction with Telehealth and virtual care (Gondal, et al., 2022).

In 2022, new investments were made in developing a platform to offer virtual healthcare, entitled Saskatchewan Virtual Visit (eHealth Saskatchewan, n.d.b; Saskatchewan Health Authority, n.d.a; Vescera, 2022a). Saskatchewan plans on phasing out Telehealth by making videoconferencing more readily available. The provincial head of the Department of Surgery at the University of Saskatchewan estimated that 50% of patient-doctor interactions will be virtual in 5-10 years as the technology becomes more wide-spread (Olson, 2020).

Major Challenges Impacting Rural Healthcare Delivery in Saskatchewan

While there are a number of challenges influencing healthcare delivery in rural Saskatchewan, there were four that emerged through the literature review as particularly important that have resulted from the changes identified earlier.

1. Staffing Shortages
2. Service Disruptions
3. Access to Transportation
4. Broadband Access

Staffing

Since 2017, there has been a growth in the healthcare and social services sector in Saskatchewan in absolute numbers. However, there has also been a growth in staff vacancy rates.

Vacancy Rates

While the province's population has grown by 5% since 2019, the overall vacancy rate of positions within the Saskatchewan Health Authority has more than doubled to 5.1% in that timeframe. Overall vacancy rates are highest in the northern parts of the province, with 6.4% of positions vacant in the North West and 5.6% vacant in the North East. Chronic vacancy rates (positions that remain vacant for over 90 days), are also highest in the North West and North East, at 3.9% and 3%, respectively (Provincial Auditor of Saskatchewan, 2022).

While urban areas of the province have also struggled to recruit and retain healthcare workers, rural communities face a greater need and unique challenges to meet demand. While the number of nurse practitioners, registered nurses, occupational therapists, physiotherapists, and physicians have increased in urban areas of Saskatchewan since 2017, the number of workers in these professions has fallen in rural parts of the province during that same time span (Canadian Institute for Health Information, 2024). The decline of nurse practitioners in rural areas is particularly troubling, given that the government has noted that they are looking to use them more in rural communities to improve primary care access (Mandryk, 2022d). The number of registered psychiatric nurses, licenced practical nurses, and family physicians practicing in rural areas has also declined over the past five years (Canadian Institute for Health Information, 2024).

Recruitment and Retention

The Provincial Auditor has identified staffing as a major challenge facing healthcare in Saskatchewan. The provincial government has aimed to address this challenge through its Health Human Resources Action Plan (2022), by recruiting foreign-trained healthcare professionals, increasing seats in nursing education programs, and incentivising healthcare workers to practice in rural and remote areas of the province (Provincial Auditor of Saskatchewan, 2022). This policy follows a significant amount of lobbying by rural residents, unions, and municipal leaders to increase healthcare training seats (Peterson, 2022; Vescera, 2022c).

The workload of healthcare professionals in rural Saskatchewan is also an area of concern. Urban and rural physicians experience different clinical workloads, with rural physicians typically working more hours per week to address higher patient volume, and experiencing a much wider range of presenting issues (Harrison & Dhillon, 2018; Jami et al., 2022). In the media, many healthcare workers and their professional organizations expressed concerns about staff burnout, decreasing retention rates, and early retirements, particularly post-COVID-19 (Bodnar, 2020; Cairns, 2021; Salloum, 2021; Simes, 2022b; Vescera, 2020b, 2021, 2022b).

Beyond impacts related to burnout, rural physicians in low-volume rural regions only are exposed to certain medical conditions every few months or years, which means that they may be less skilled at treating these conditions (Irvine et al., 2022; Wasko, 2022). Access to supports for these professionals, such as training and resources in rural healthcare facilities, also impacts the quality of care they are able to provide (Jami et al., 2022).

Fewer staff and decreased access to specialists leads to increases in time to treatment for rural patients. For example, rural epilepsy patients experienced average wait times from diagnosis to assessment and from diagnosis to surgery that were 54 months and 60 months longer, respectively, than urban patients (Mahabadi et al., 2020). This lack of specialists also results in delayed diagnoses for conditions like cancer in rural and remote regions of the province (Shah, et al., 2021). Quality of care is also negatively impacted when specialists are not readily available in rural communities (Jaworsky, 2023).

In 2022, 49% of physicians practicing in Saskatchewan were internationally trained, compared to 27% across Canada (Canadian Institute for Health Information, 2024). There is a high volume of physician turnover in rural Saskatchewan, particularly for those trained outside of the province, which leads to disruptions in the continuity of care (Lewis, 2022; Wasko, 2022).

Reduction in Full-time Positions

A reliance on part-time and contract workers to meet labour needs has been consistent in Saskatchewan healthcare over recent years. From 2017 to 2022, 33-35% of hours worked by CUPE-affiliated healthcare workers were completed by part-time and casual employees. Discrepancies begin to appear when considering the differences between rural and urban healthcare workers. Rural CUPE-affiliated facilities, on aggregate, relied more on part-time and casual employees to work, as 47% of hours in these facilities were worked by part-time and casual employees, compared to 32% of hours in urban facilities. Of the 37 CUPE-affiliated healthcare facilities where over 50% of hours are being worked by part-time and casual employees, 33 are located in rural areas.

This reliance on precarious labour to fill positions has implications on service delivery. Many positions in rural communities, where over 50% of employees were designated as part-time or casual, were connected to oft-disrupted services like labs, x-rays, emergency services, and acute care. SEIU-West has identified labour precarity as one of the primary exacerbators of the rural healthcare crisis and has called on the government to create full-time permanent healthcare jobs in rural Saskatchewan (Vescera, 2022c). Of the 1,400 vacant jobs in healthcare represented by CUPE 5430 in December 2021, only 180 were for permanent, full-time positions (Salloum, 2021).

Service Disruptions

There is a lack of comprehensive, publicly available data on service disruptions, which obscures the true extent of the problems facing rural healthcare in Saskatchewan. In this context, service disruptions are defined as the documented health service disruptions lasting more than 24 hours. The Saskatchewan Health Authority publicly posts notices of service disruptions lasting seven or more days on their website, which can include information on temporarily unavailable services, reduced hours, or other facilities that patients may be referred to (Saskatchewan Health Authority, n.d.b). The services most impacted in the preliminary scan using the Wayback Machine as part of this literature review were labs, x-rays, emergency services, inpatient units, and obstetrics.

According to the media outlets, in July 2022, 37 service disruptions were recorded across Saskatchewan, many in rural communities (Vescera, 2022c). In that same month, 143 of the 1,269 planned healthcare beds in rural and remote Saskatchewan were closed. The primary reason underlying these closures and disruptions was cited as a lack of staffing (Simes, 2022d; Vescera, 2022b).

Despite promises made by the provincial government that healthcare services would not be centralized, both following the amalgamation of the health regions and during the COVID-19 pandemic, rural residents have been left to deal with a different reality. Staffing issues have led the SHA to move some services, such as microbiology, laboratory, and x-ray services to larger urban centres like Regina and Saskatoon (Baron, 2021; Salloum, 2022). As a result, rural residents are experiencing longer wait times, and are now required to travel to urban centres to access these services.

Access to Transportation

Saskatchewan residents living in rural and remote areas have less access to primary healthcare via family physicians and nurse practitioners than those in urban centres. Media interviews with rural residents outline the reality that many have to travel anywhere from 45 minutes to over an hour to access medically necessary services (Simes, 2022a).

Access to transportation has become a major focus in discussions on rural healthcare since the closure of the Saskatchewan Transportation Company (STC). Many rural residents who formerly used STC to access healthcare services have reported missing routine medical appointments since its closure (Korem Alhassan et al., 2021).

While a majority of the burden of finding transportation falls on the individual patient, some communities have developed programs to address this need. The former Sun Country health region funded a volunteer driver program to provide people living in the region with a ride to their appointments from volunteer drivers at a reduced cost (Wilson, 2017). While there have been efforts to fill the transportation gap, the responses continue to be piecemeal and precarious. In 2020, Métis Nation-Saskatchewan, with funding from the Canadian Partnership Against Cancer (CPAC), developed a pilot project to cover transportation costs to urban centres for treatment for registered Métis citizens who are cancer patients. As part of the program, individuals requiring cancer treatment must produce their own driver and vehicle, but can apply for reimbursement of travel and parking costs (Reis, 2020; Withham, 2022). There are currently several private bus companies that operate in Saskatchewan, providing passenger and freight services to communities throughout the province. The Connecting/ Contract Passenger and Freight Carriers are companies that have agreements with the provincial government to provide transportation services to some areas of province (Canada Maps, 2023). However, costs vary, and service routes are sometimes unpredictable and limited.

The further a person's location from healthcare services, the greater their reported barriers to accessing care are (Karunanayake et al., 2015). Geographical distance to treatment was observed to impact the utilization, time-to-treatment/referral, and quality of a variety of healthcare services in the literature (e.g., ultrasound imaging, cancer treatment, HIV treatment, epilepsy treatment, etc.) (Adams et al., 2022; Andkhoie & Szafron, 2020; Jaworsky, 2023; Karunanayake et al., 2015; Mahabadi et al., 2020; Shah et al., 2017, 2021).

A lack of access to transportation to receive these services has ramifications on the mental and physical health of persons requiring care (Irvine et al., 2022; Klager, 2022). Attempts to find ways to travel to urban communities for care may put stress on patients and their families, both mentally and financially (Irvine et al., 2022). A lack of accessible transportation also leads to greater inefficiencies in the healthcare and social services systems due to delayed treatments and increased transportation costs (Korem Alhassan et al., 2021). Many patients in rural communities who require acute care rely on the Shock Trauma Air Rescue Service (STARS) to transport them to larger urban centres (Government of Saskatchewan, 2017c; Pearce, 2021).

Broadband Access

Of the 48 communities with an SHA facility that does not have Telehealth equipment, five have less than 75% of households with broadband speeds of 50 Mb/s for downloads and 10 Mb/s for uploads (eHealth Saskatchewan, 2020; Government of Canada, 2022, 2023). Concerned rural residents are often told by SaskTel that service is not available in their area, and are advised to purchase supportive technology in the form of fusion internet and mobile internet services available through the SaskTel wireless network (Antony, 2020). Fusion is “a shared service with a finite amount of bandwidth available that is shared between all users on a particular tower” (Antony, 2020). Due to increased demand in rural areas, many towers have reached a maximum number of users and SaskTel then issues a "stop sell" of fusion on those towers. Not all rural residents can afford the additional costs of supportive technology which can run in the thousands of dollars (Anthony, 2020). Despite SaskTel continuing to work to bring 5G coverage to rural and remote locations across the province, the service is currently available to just over 50% of the population (Kiedrowski, 2024). Many rural parts of Saskatchewan still have only 3G coverage, if any at all (Antony, 2020). As Telehealth is phased out and videoconferencing becomes more common, virtual platforms like the Saskatchewan Virtual Visit may not be viable in some rural communities because internet access in rural areas remains inconsistent and unreliable (Morris, 2020).

Broadband access is required for many of the major investments the provincial government is making in improving rural and remote health, such as the Remote Presence Robotic Program. While these policies show promise, infrastructure to maintain them is necessary. This includes access to broadband in individuals’ homes, as remote presence technology may expand into home care in the future. As the province updates to a 5G network, broadband access to individual residences across parts of the province may increase.

Related Social Challenges

The loss of healthcare services is perceived as a serious threat to the vitality of rural communities. Rural residents derive a great deal of pride from their healthcare facilities and those who staff them (Pearce, 2022). Private citizens often band together to raise money to go towards purchasing equipment for their local healthcare facility, often cost-sharing with the government (Daniels, 2020; Government of Saskatchewan, 2017e, 2017f; Vescera, 2020a; Wilger, 2018; Yorkton This Week, 2022). Politically, these facilities hold the upmost significance to rural voters. The conversion of 52 rural hospitals into primary care clinics or long-term care homes by the Romanow government in 1993 is still mentioned in today's political discourse (Mandryk, 2022b, 2022c). This policy decision has gained a new significance post-COVID-19, as rural residents worry that disrupted services will lead to further closures. Such fears have sparked protests, such as the one occurring outside of the Kamsack Hospital in the summer of 2022 and another occurring outside of the Legislative Building in May 2020 (Mandryk, 2022c; Simes, 2022c; White-Crummey, 2020).

There is a vocal frustration among residents and representatives of rural Saskatchewan to address problems associated with service disruptions and temporary closures of healthcare services in their communities. Rural residents feel under-consulted in decisions made around healthcare delivery in their communities and the policies enacted to address issues (Argue, 2021; Bodnar, 2020). Many residents expressed that they may be forced to move to larger urban centres to access care (Olson, 2020; Salloum, 2022). There is also a worry that if this were to happen, their communities would slowly cease to exist (Simes, 2022a, 2022c).

Despite the connections held to these facilities, some healthcare personnel believe that it is no longer sustainable to operate acute care services in low-volume rural facilities (Lewis, 2022; Mandryk, 2022a; Wasko, 2022). Disparities in healthcare access in rural Saskatchewan also cut across racial and socioeconomic lines, with lower access recorded among poor and Indigenous rural residents (Adams et al., 2022; Carey et al., 2019; Shah et al., 2021).

FINDINGS FROM SERVICE DISRUPTIONS DATA

The findings discussed in this section of this report are based on data on health service disruptions in Saskatchewan facilities collected by the SHA. The original data is a list of documented health service disruptions lasting more than 24 hours from August 2019 to July 2023. For each disruption, there is information on the facility name, type of service disrupted (if reported), start and end dates of disruption, and duration of the disruption in days.

The analysis of this data first focuses on disruptions in CUPE Local 5430 regions, followed by an analysis of disruptions across Saskatchewan for comparison purposes. Therefore, the findings in this section are first reported for CUPE Local 5430 regions, then for all of Saskatchewan. As discussed in the literature review section, there is a lack of comprehensive publicly available data on health service disruptions in Saskatchewan. The following findings are intended to fill some gaps in information on service disruptions and provide an overview of service disruption patterns in the province.

SERVICE DISRUPTIONS IN CUPE LOCAL 5430 REGIONS

From August 2019 to July 2023, health facilities in CUPE Local 5430 regions experienced

533

service disruptions.

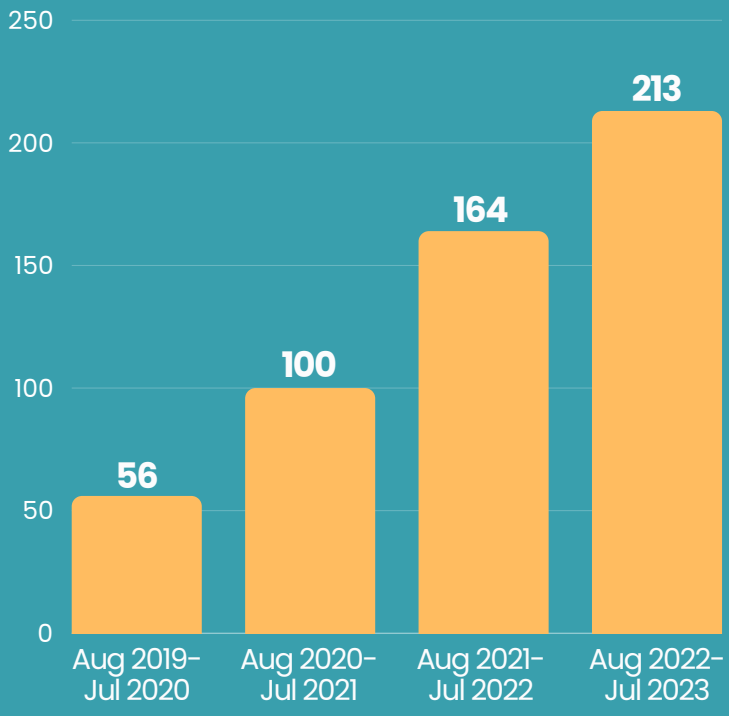
There was a total duration of

2932 days

or the equivalent of **8 years** of service disruptions across all facilities.

On average, service disruptions occurred once every three days, with the average disruption lasting approximately 5.5 days.

BETWEEN AUGUST 2019 AND JULY 2023, THE ANNUAL NUMBER OF DISRUPTIONS **INCREASED EACH YEAR.**

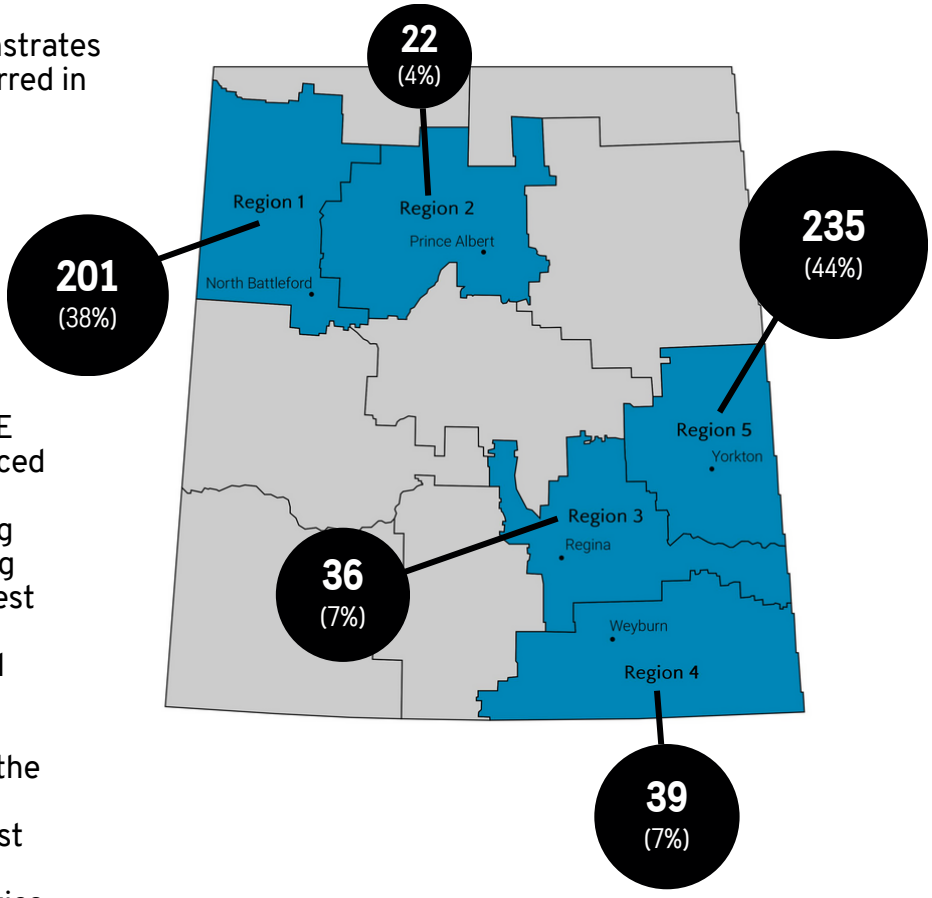


Note. A chart displaying the annual number of service disruptions in CUPE Local 5430 regions from August 2019 to July 2023. Data compiled by the Saskatchewan Health Authority (2023).

WHERE ARE SERVICE DISRUPTIONS OCCURRING?

The figure to the right demonstrates that service disruptions occurred in facilities across all five CUPE Local 5430 regions, with Regions 1 (former Prairie North health region) and 5 (former Sunrise health region) experiencing far more disruptions than other regions.

A total of 23 facilities in CUPE Local 5430 regions experienced service disruptions, with the number of disruptions varying from facility to facility. Among the 10 facilities with the highest number of disruptions listed below, Meadow Lake Hospital had the greatest number of disruptions, with nearly 2.5 times more disruptions than the next leading facility, Canora Hospital. While there is at least one facility in each region on this list, five of these 10 facilities with the most disruptions are located in Region 5 (former Sunrise health region).



Note. A map displaying the number of disruptions that occurred in each of the five CUPE Local 5430 regions.

Facilities with the Highest Number of Disruptions

Facility	Location	Number of Disruptions
1. Meadow Lake Hospital	Meadow Lake (Region 1)	169
2. Canora Hospital	Canora (Region 5)	68
3. St. Peter's Hospital	Melville (Region 5)	59
4. St. Anthony's Hospital	Esterhazy (Region 5)	41
5. Kamsack Hospital	Kamsack (Region 5)	31
6. Preeceville & District Health Centre	Preeceville (Region 5)	31
7. Battlefords Union Hospital	North Battleford (Region 1)	18
8. Redvers Health Centre	Redvers (Region 4)	18
9. Victoria Hospital	Prince Albert (Region 2)	14
10. Wolseley Memorial Hospital	Wolseley (Region 3)	14

Note. List of the 10 facilities in CUPE Local 5430 regions with the greatest number of service disruptions from August 2019 to July 2023. Data compiled by the Saskatchewan Health Authority (2023).

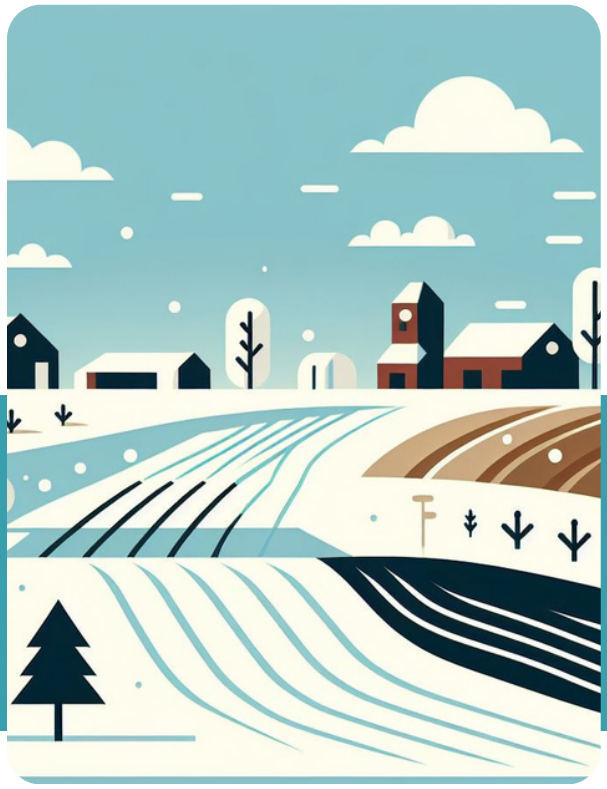
Another aspect of service disruptions that was analyzed was the duration of disruptions. The list below displays the 10 facilities in CUPE Local 5430 regions with the highest total duration of disruptions in days. In addition to experiencing the highest number of disruptions, Meadow Lake Hospital also experienced the most days of disruptions, equating to approximately 25 months. Meadow Lake Hospital had over 1.5 times the number of days disrupted than the second-ranking facility, St. Peter's Hospital in Melville. Five of the 10 facilities with the most days disrupted are located in Region 5 (former Sunrise health region).

Facilities with the Highest Number of Days with Disruptions

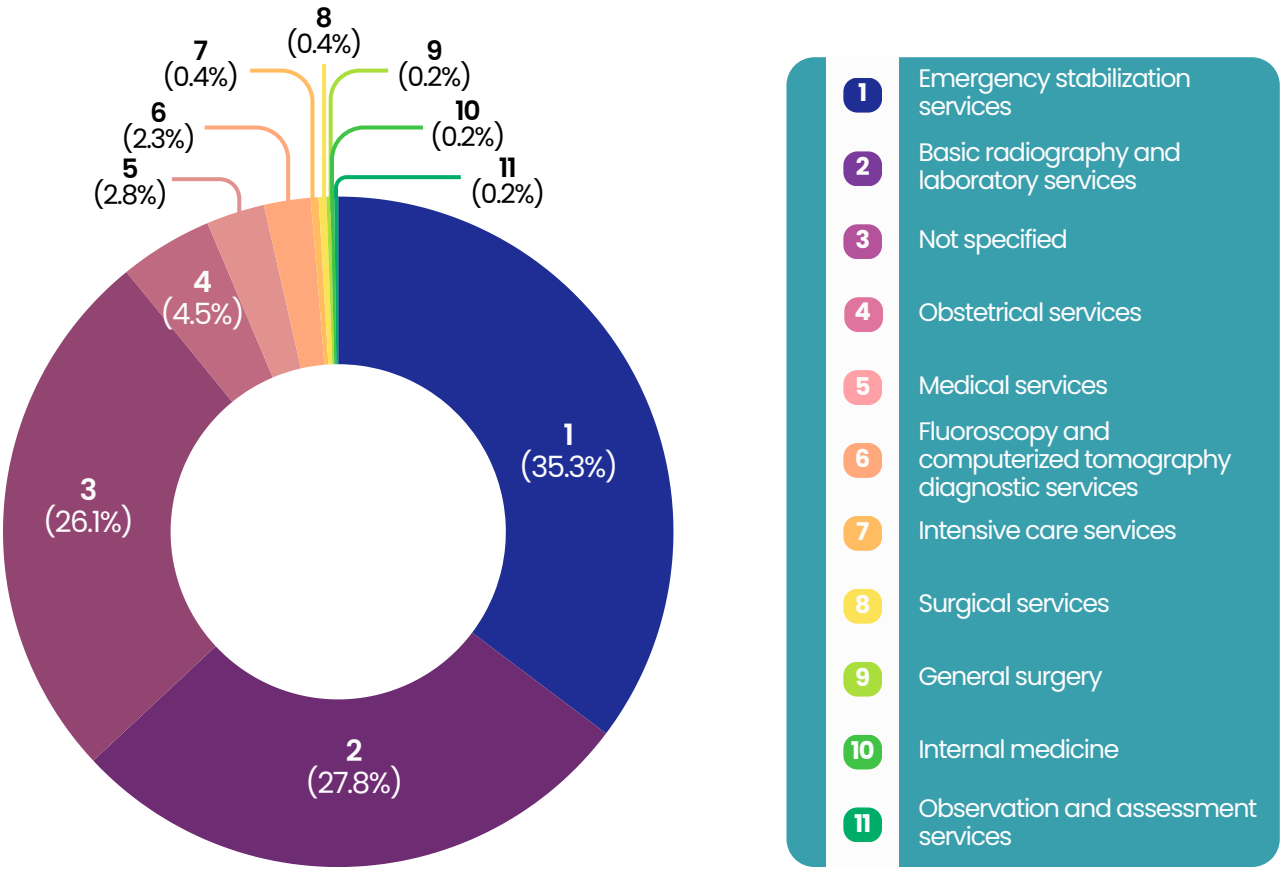
Facility	Location	Number of Days with Disruptions
1. Meadow Lake Hospital	Meadow Lake (Region 1)	774
2. St. Peter's Hospital	Melville (Region 5)	463
3. Kamsack Hospital	Kamsack (Region 5)	249
4. Preeceville & District Health Centre	Preeceville (Region 5)	207
5. Lloydminster Hospital	Lloydminster (Region 1)	197
6. Battlefords Union Hospital	North Battleford (Region 1)	162
7. Broadview Hospital	Broadview (Region 3)	160
8. St. Anthony's Hospital	Esterhazy (Region 5)	154
9. Canora Hospital	Canora (Region 5)	117
10. Arcola Health Centre	Arcola (Region 4)	108

Note. List of the 10 facilities in CUPE Local 5430 regions with the greatest number of days of disruptions from August 2019 to July 2023. Data compiled by the Saskatchewan Health Authority (2023).

Within CUPE Local 5430 regions, the further a community is from Regina or Saskatoon, the more health service disruptions were experienced by that community.



WHAT TYPES OF SERVICES ARE BEING DISRUPTED?



Note. Types and proportions of service disruptions occurring in CUPE Local 5430 regions. Service disruptions with missing information regarding the type of service are labelled as "Not specified" here. Data compiled by the Saskatchewan Health Authority (2023).

As displayed in the donut graph above, facilities in CUPE Local 5430 regions experienced disruptions in a variety of services, which were categorized into 11 types of services. Emergency stabilization services were the most common type of service disrupted, followed by basic radiography and laboratory services. Disruptions categorized as "Not specified" did not include information on the type of service disrupted, and was the third most common category of service disruption. Together, emergency stabilization services and basic radiography and laboratory services accounted for 63.1% of all service disruptions.

Of the five regions, Region 5 (former Sunrise health region) experienced the most disruptions to emergency services (88 out of 160 total disruptions) and basic radiography and laboratory services (137 out of 188 total disruptions).

SERVICE DISRUPTIONS ACROSS SASKATCHEWAN

For the purpose of comparison, similar aspects of service disruptions were examined with province-wide data. In the same timeframe from August 2019 to July 2023, Saskatchewan health facilities experienced

952

service disruptions.

There was a total duration of

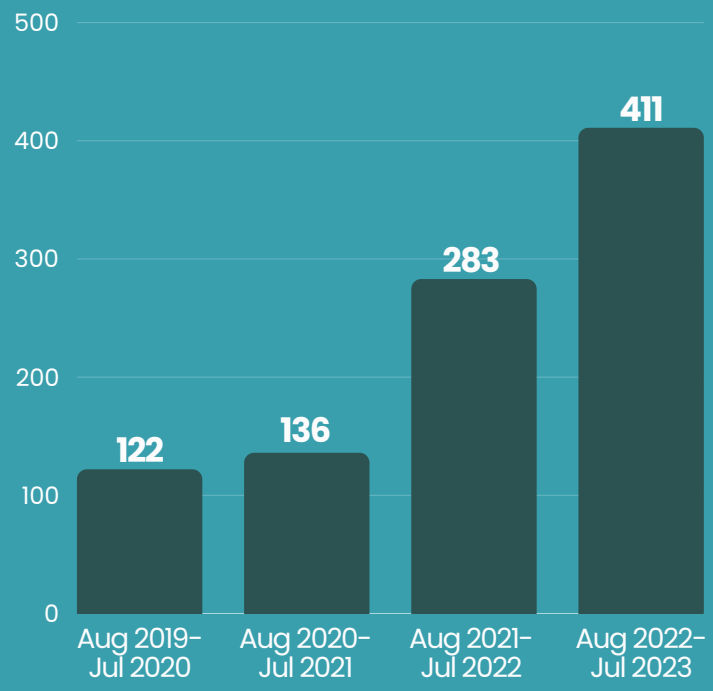
6795 days

or the equivalent of over 18 years of service disruptions across all facilities.

On average, there were two service disruptions every three days in the province, with an average duration of approximately 7 days for each disruption. A total of 51 health facilities across Saskatchewan experienced service disruptions. Of note is that there were no documented service disruptions in Regina and Saskatoon during the period of August 2019 to July 2023. Only facilities outside of these major urban areas had experienced service disruptions during this time, suggesting that service disruptions may be a distinct rural health issue.

The pattern of rising health service disruptions in CUPE Local 5430 regions was also observed when analyzing the province-wide data.

Across the province, the annual number of disruptions has also **increased each year.**



Note. A chart displaying the annual number of service disruptions across Saskatchewan from August 2019 to July 2023. Data compiled by the Saskatchewan Health Authority (2023).

The 10 facilities across Saskatchewan with the highest number of service disruptions are listed below. The three facilities with the most disruptions in CUPE Local 5430 regions (i.e., Meadow Lake Hospital, Canora Hospital, and St. Peter's Hospital) remained the top three facilities with the greatest number of disruptions in the province. While the locations of the facilities listed below demonstrate that service disruptions are occurring in several areas of the province, there is indication of greater issues in the former Sunrise health region, which five of the 10 facilities are located in.

Facilities with the Highest Number of Disruptions

Facility	Location	Former Health Region	Number of Disruptions
1. Meadow Lake Hospital	Meadow Lake	Prairie North	169
2. Canora Hospital	Canora	Sunrise	68
3. St. Peter's Hospital	Melville	Sunrise	59
4. Carragana Hospital	Porcupine Plain	Kelsey Trail	49
5. Herbert & District Integrated Facility	Herbert	Cypress	48
6. St. Anthony's Hospital	Esterhazy	Sunrise	41
7. Wynyard Hospital	Wynyard	Saskatoon	35
8. Biggar Hospital	Biggar	Heartland	31
9. Kamsack Hospital	Kamsack	Sunrise	31
10. Preeceville & District Health Centre	Preeceville	Sunrise	31

Note. List of the 10 facilities across Saskatchewan with the greatest number of service disruptions from August 2019 to July 2023. Data compiled by the Saskatchewan Health Authority (2023).

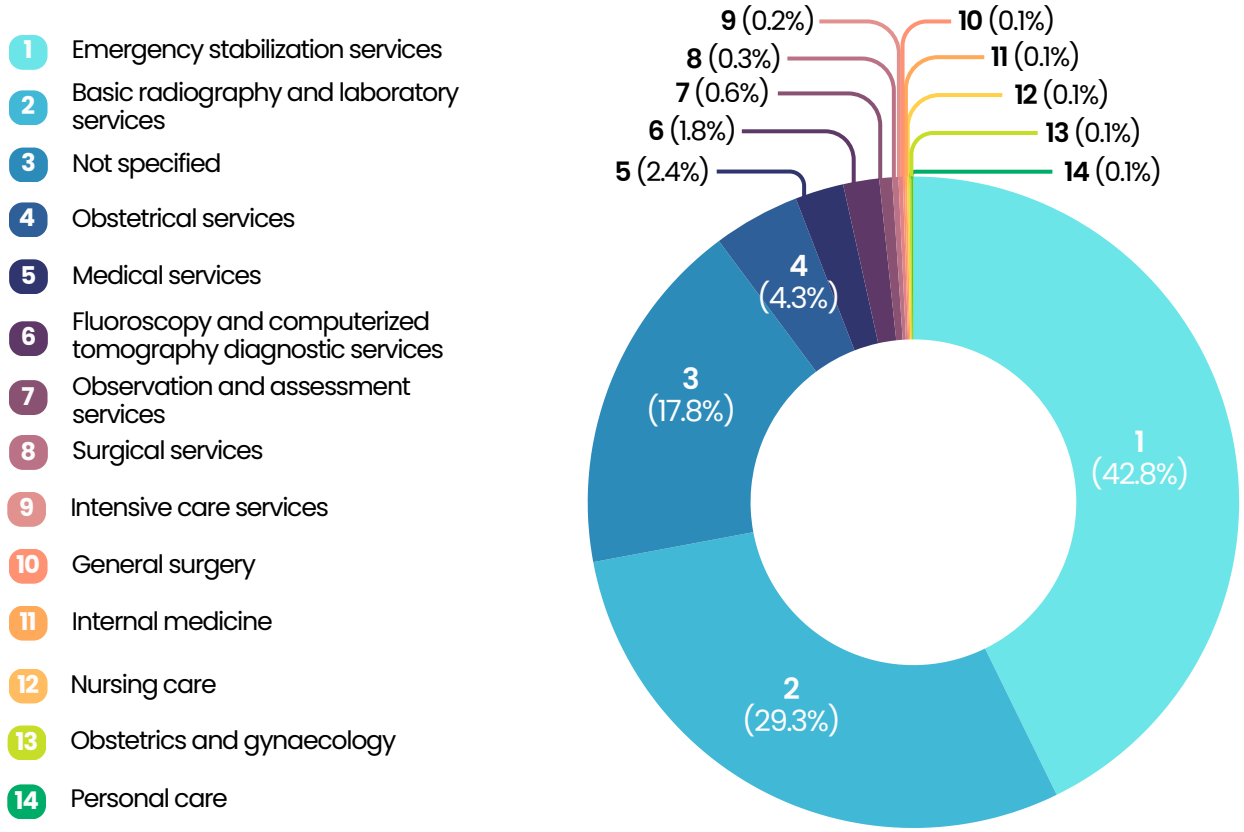
The list below displays the 10 facilities across Saskatchewan with the greatest total duration of disruptions in number of days. Herbert & District Integrated Healthcare Facility experienced the greatest number of days with disruptions, followed by Meadow Lake Hospital, then Lanigan Hospital. The disruptions at Herbert & District Integrated Healthcare Facility were approximately 31 months in total duration. The facilities listed below are located in various areas of the province, indicating that facilities across Saskatchewan are experiencing high numbers of days with service disruptions. An important note is that all 10 of the facilities below experienced a total duration of at least 6 months in service disruptions during the 48-month timeframe of this data.

Facilities with the Highest Number of Days with Disruptions

Facility	Location	Former Health Region	Number of Days with Disruptions
1. Herbert & District Integrated Facility	Herbert	Cypress	947
2. Meadow Lake Hospital	Meadow Lake	Prairie North	774
3. Lanigan Hospital	Lanigan	Saskatoon	731
4. St. Peter's Hospital	Melville	Sunrise	463
5. Outlook Union Hospital	Outlook	Heartland	337
6. Dr. F.H. Wigmore Regional Hospital	Moose Jaw	Five Hills	296
7. Kamsack Hospital	Kamsack	Sunrise	249
8. Preeceville & District Health Centre	Preeceville	Sunrise	207
9. Cypress Regional Hospital	Swift Current	Cypress	200
10. Lloydminster Hospital	Lloydminster	Prairie North	197

Note. List of the 10 facilities across Saskatchewan with the greatest number of days of disruptions from August 2019 to July 2023. Data compiled by the Saskatchewan Health Authority (2023).

WHAT TYPES OF SERVICES ARE BEING DISRUPTED?



Note. Types and proportions of service disruptions occurring across the province. Service disruptions with missing information regarding the type of service are labelled as "Not specified" here. Data compiled by the Saskatchewan Health Authority (2023).

Health facilities across Saskatchewan experienced several types of service disruptions, which were grouped into 14 categories. The two most commonly disrupted services (i.e., emergency stabilization services, and basic radiography and laboratory services) accounted for 72.1% of all health service disruptions experienced in the province. In other words, about 7 out of 10 disruptions occurring in Saskatchewan health facilities were due to issues with emergency services or radiography and laboratory services.

Comparing the service disruptions in CUPE Local 5430 facilities with all facilities across the province, there were similar trends and patterns observed in the findings of both areas of focus. The trend of increasing service disruptions over the years in CUPE Local 5430 regions are reflective of trends occurring in the province overall. With regard to specific areas of the province, the former Sunrise health region is not only experiencing high rates of service disruptions among CUPE Local 5430 regions, but also among all areas of the province. Emergency stabilization services and radiography and laboratory services are the most frequently disrupted services in both CUPE Local 5430 regions and the entire province. In summary, the patterns of service disruptions in CUPE Local 5430 regions are representative of the patterns occurring provincially. While this data was able to provide clarity on the trends in service disruptions, it did not provide explanations or reasons for these disruptions. The subsequent sections of this report are intended to provide more context regarding service delivery from the perspectives of Key Informants and stakeholders.

Data Caveat Notes

The SHA (2023) provided the following caveats for the data which should be considered when interpreting the findings discussed in this section of the report:

- This data does not include outages due to external factors, such as a power outage, only factors internal to the facility are included. The information varies in the level of detail and the Ministry of Health does not consistently receive cause of disruption, such as staffing shortages, unless it is specifically noted in the comment section of the report.
- The disruption reporting database dates all outages as occurring in the year in which the disruption was first reported. As a result, some years have facility specific disruptions for more days than there are in a year.
- Some outages were reported by more than one person at a facility, leading to duplicate entries.
- Facilities are required to report the resumption in service to ensure an appropriate end-time is recorded. There may be instances in which a facility does not properly report the resumption, resulting in incorrect type or length of time for the overall disruption.
- There are also situations where a facility had already reported a disruption, and then reported a second disruption during the same period. As a result, it is challenging to determine whether it was actually a second disruption, or if the same service disruption was reported twice.
- For example, a hospital reports a seven-day disruption of x-ray services. The following day, the hospital reports a three-day disruption of emergency stabilization services. In the database, this would record as 10 days of disruption; however, if the disruption of x-ray services also disrupted emergency stabilization services, then the actual length of the disruption was seven days, not 10.
- Fixing these data challenges would require a manual audit of the database, which would potentially put the reliability and accuracy of the database at risk, and lead to the ability for information to be added, deleted, or corrupted in a way that would render all information in the database unusable.
- During the time frame of this data, Broadview Hospital and Herbert and District Health Facility were temporarily using their acute care beds as Alternate Level of Care beds. These two sites listed may also be noted in the table, as they may have had a service disruption within their current model of care.

FINDINGS FROM INTERVIEWS

From June 2023 to November 2023, the SPHERU research team recruited Key Informants to participate in interviews to discuss their work experiences related to rural healthcare. CUPE Local 5430 assisted with recruitment by providing access to their members, including both officials and employees. SPHERU also sent interview requests to individuals in the SHA and Ministry of Health. All interviews took place virtually on Zoom and lasted up to one hour. Interview questions can be found in Appendix A.

Participants

A total of 17 Key Informants were interviewed (12 healthcare employees and 5 CUPE or SHA officials) whose work directly involves rural healthcare in some capacity. Of the 12 healthcare employees, 7 worked in nursing, 3 worked in support services, 1 worked in clerical services, and 1 worked in technical services. Additionally, 10 worked in long-term care facilities (vs. 2 in home care or hospital settings), 8 were full-time employees (vs. 4 part-time or casual), 7 had worked in their current position for less than 5 years, and 10 had over 15 years of experience working in healthcare. Finally, this sample was distributed across all CUPE Local 5430 regions.

Background

The following themes were generated from the views of all 17 participants. A common thread running through all of these themes is that these participants are not only healthcare workers in rural settings, but are also local community members with personal and meaningful attachments to their communities. Therefore, their stories reflect their perspectives as professional healthcare workers *and* as individuals who live in, contribute to, and care for these communities as part of the local population. Being at the intersection of these inseparable roles has shaped the experiences that these participants have had with rural healthcare. Setting the following themes within this context is important for fully understanding the perspectives and stories that participants shared about their experiences in the current landscape of rural healthcare in Saskatchewan.

THEMES

Staffing Crisis
- Contract Workers
- Wages or Income
- Job Security

Health Authority Amalgamation
- Centralized Management
- Inefficiencies & Inconsistencies on the Frontline
- Understanding Local Needs
- Increased Travel and Transportation
- Perceived Benefits of Amalgamation

COVID-19 Impacts

Loss
- Loss and Instability of Services
- Loss of Voice
- Loss of Morale Among Staff
- Loss of or Decreased Commitment to Profession
- Loss of Confidence in Rural Healthcare

Ripple Effects through Personal, Patient, and Community Experiences
- Impacts to Personal Lives
- Impacts to Patient and Community Care
- Impacts to Community

Impacts of Increasing Pressures and Demands
- Mental Health of Workers
- Work-Life Balance
- Moral Dilemma
- Negative Interactions with Other Workers
- Safety and Health of Workers
- Equipment, Supplies, and Infrastructure Not Up to Standards

Protective Factors
- Shared Goals and Values with Other Workers
- Humanity
- Small Wins

Suggestions for Change

STAFFING CRISIS

All participants highlighted the current staffing crisis as a major issue in the healthcare system. Participants discussed how short staffing has led to overtime, mandated work, increased work stress, and burnout, among other issues. The shortage of staff has exacerbated many problems that rural health facilities are facing.

> *"We're short staff everywhere, in every department. Extremely stressful. We have so many more calls than we used to. Sick calls and people just not showing up for work. … It creates stress on everybody in the workforce." (Healthcare Employee H)*

Contract Workers

In response to the staffing crisis, temporary solutions have involved hiring contract workers to fill in gaps in staffing. Concerns about this model of contracting work were expressed by multiple participants.

> *"Then when you bring nurses from another country into Saskatchewan to try to cover the shortage, that gets a lot of people upset as well because there are nurses here that actually would like a position, but they're not creating them." (Healthcare Employee B)*

Wages or Income

Another aspect contributing to staffing shortages is that wages and incentives, which have not increased in recent years, are not competitive enough to recruit and retain staff in rural areas.

> *"As healthcare workers, we haven't seen a wage increase in the last two collective agreements – like nothing. … We're just going into bargaining come September and the message that we're getting from all of our members is we need to come back with more money." (CUPE/SHA Official C)*

Job Security

Staffing is also affected by job security, which is not guaranteed in the many positions posted that are not permanent or full-time. Among some current staff, there are concerns that job security is at risk due to closures, administrative changes, or lower prioritization of less senior staff.

> *"Often the positions that they are posting are precarious work. So I'm going to have a casual worker or a part-time worker. … So first and foremost, like you have to offer me a permanent full-time job for me to go work somewhere in rural. Otherwise people are not interested." (CUPE/SHA Official B)*

HEALTH AUTHORITY AMALGAMATION

The health authority amalgamation was identified as the source of many major changes in rural healthcare. In general, many participants indicated that the amalgamation has had negative impacts on rural healthcare.

> *"The amalgamation was probably the worst of the healthcare. It was probably one of the worst things they've ever done. They always say bigger is better. No, it's not. We are really being forgotten." (Healthcare Employee G)*

Centralized Management

The amalgamation centralized many processes that affected the operations of rural health facilities. Most notably, the centralization of management has caused frustration for many healthcare workers. The current management structure consists of managers overseeing a department in multiple facilities. For example, one operational support manager will be assigned to lead operational supports in several facilities, sometimes in different communities. Many participants reported that their managers are rarely present in their facility as "they have so many facilities to look after that they cannot be good managers."

> *"Almost every department has a different manager in one facility. … So in our facility we have four managers. Whereas before when it was one manager who looked after everything, things were so much better. If you want, needed to talk to someone, get an answer right away, you had someone to go to." (Healthcare Employee G)*

Inefficiencies and Inconsistencies on the Frontline

While centralization is intended to streamline processes and procedures, participants described experiencing several inefficiencies and inconsistencies occurring on the frontline.

> *"I believe the cost in dietary budgets could be lowered if they went back to the way it was before the amalgamation. Laundry has been taken out of the facilities as well only leaving personal laundry done in house. Problems with running out of linen and towels, clothes, resident aprons have happened. [We] have to wait for [the] truck to deliver." (CUPE/SHA Official A)*

Understanding Local Needs

There was an emphasis on the need to understand the local needs of rural areas, suggesting that there has been a shift in decision-making authority since the amalgamation.

> *"There's all these little things that have a little bit of a different rule set when you're in a rural community. And I don't think when you have people that are making the decisions that are not, or can't appreciate, or don't even realize that that's an issue, it becomes a greater issue." (Healthcare Employee D)*

Increased Travel and Transportation

While travelling long distances to access services is part of the reality of living in rural areas, the amalgamation has shifted the availability of health services away from many rural communities. Combined with the termination of the provincial transportation system, residents have been forced to travel more often and farther distances for healthcare.

> *"I'm seeing more and more people going further out of town to doctor, to get lab work done, going to emergency. People just travel, because they can't depend on whether there's going to be somebody there when they need them in the facility that we're in." (Healthcare Employee L)*

Perceived Benefits of Amalgamation

While most participants perceived the impacts of the amalgamation as negative, some participants identified benefits. For example, one employee discussed that a positive impact of the amalgamation has been increased access to updated resources on training, education, and policies.

> *"My operating manual in my kitchen was last updated in 1989. Also it was done with a typewriter. That is rural healthcare. … The e-learning and us becoming one health district definitely made a big help. Without that, small places like us will just have no chance of resources." (Healthcare Employee P)*

In times of crisis, another benefit of the amalgamation was being able to redistribute resources and support to rural areas.

> *"I think where it's been successful is in more of those smaller regions who were limited in the capacity that they had. And you saw this particularly during the response to the pandemic. The ability to pull providers or services from different parts of the province and pull them to help an area in crisis was a lot easier." (CUPE/SHA Official E)*

COVID-19 IMPACTS

The COVID-19 pandemic amplified existing issues in rural healthcare, including understaffing, mental health, and management. Healthcare employees are wondering if lessons have been learned from the pandemic.

> *"I felt through the pandemic, to me what was more stressful was the indecisiveness of every two days, it was changing. … I guess I wonder if the same mistakes are going to happen again." (Healthcare Employee N)*

Additionally, the pandemic created unique issues with vaccinations, safety, burnout, and patient care.

> *"COVID didn't do us any favors. We stepped up to the plate, we worked, we bent over backwards to provide care for the residents. Now we're burnt out. Our level of care being provided to residents and patients, whether it's in acute care or long-term care, is falling." (Healthcare Employee E)*

IMPACTS OF INCREASING PRESSURES AND DEMANDS

Healthcare workers are experiencing increasing pressures and demands due to the changes in healthcare. Many workers feel they do not have adequate supports to manage the changes in their workloads and workplaces. This has led to impacts on mental health, work-life balance, health and safety, and an increase in moral dilemmas, which all contribute to the cycle of issues in healthcare.

Mental Health of Workers

Healthcare workers are experiencing mental health issues, described by participants as exhaustion, trauma, burnout, extreme stress, frustration, and not being able to cope. Many participants talked about the declining mental health of workers.

> *"I've come to realize that I have PTSD because of our management situations, and not just in one facility I worked at, but because of the management situations that were happening over the last 10 years out there." (Healthcare Employee A)*

Work-Life Balance

Participants also described impacts to work-life balance in various ways, such as uprooting themselves from their families, not having enough time for other obligations (e.g., childcare), working overtime or through breaks, mandated work, and being denied requests for leave.

> *"I haven't taken a half hour lunch break in 6 months. I very rarely get out at 2 o'clock at quitting time." (Healthcare Employee H)*

Moral Dilemma

Several participants described situations that reflected moral dilemmas between their personal values and being part of a healthcare system that they viewed as harmful.

> *"And there are times when I just feel like I know I can't fix this myself. But I don't want to leave because it's just contributing to the problem. But in the same resort, or same breath, can I stay in this profession for another 20 years at the same rate it's going? No, I can't." (Healthcare Employee D)*

Negative Interactions with Other Workers

The stressors of the current healthcare environment are not only impacting workers individually, but have also contributed to strained interactions among coworkers.

> *"As a care aide, it is not up to us to oversee our fellow care aides on what they're doing or not doing. This creates problems. It puts you in a very hard spot. … I want to see each resident looked after well as that's what they deserve. So when you have the next person that doesn't and there isn't anybody overlooking that, it's frustrating and mentally taxing." (Healthcare Employee J)*

Safety and Health of Workers

The mounting workloads and stressors have also raised some concerns about the health (e.g., physical and mental fatigue) and safety (e.g., performing tasks unsafely) of staff.

> *"I needed more help. I was asking people that were around because they were supposed to be training [me]. ... That, you know, was frustrating that I asked for help, and then I got an injury because I wasn't trained." (Healthcare Employee I)*

Equipment, Supplies, and Infrastructure Not Up to Standards

Beyond the toll that the increasing pressures and demands have on workers, participants also felt that the equipment, supplies, and infrastructure were not up to standards that would allow them to handle these demands appropriately.

> *"We don't get the funding that is needed to keep our equipment up to date or working, or a backup system that if one instrument goes down. Yeah, like it has been a struggle over the year to get capital equipment for labs." (Healthcare Employee N)*

LOSS

Recent changes to the delivery of rural healthcare were characterized by workers as losses in different forms. There is a sense of grief among healthcare workers regarding the way things have changed.

Loss and Instability of Services

Services that were once a part of communities (e.g., obstetrics, ambulance, emergency services) are no longer reliable or available due to closures, a dwindling workforce, and uncertainty in plans to restore these services.

> *"But I think it's kind of that thing where local communities, when they're seeing their services aren't what they expect them to be, they're not as robust as they were, you know, 3 years ago. And particularly those where they've lost something substantive like either a partial disruption or closure of a hospital. They aren't doing local deliveries anymore, or you know emergency rooms are closed, or even it's harder to get an appointment with your local physician." (CUPE/SHA Official E)*

Loss of Voice

Healthcare workers also expressed frustration that their concerns are not being heard or that their perspectives are not being valued by those in leadership positions.

> *"And then another problem is the nurses and care aides don't feel we're being heard. It doesn't matter if we're bringing concerns to them about resident care or patient care. We're not being heard." (Healthcare Employee E)*

Loss of Morale Among Staff

Many workers have also noticed a decline in morale among healthcare workers, which has changed the overall work culture and environment.

> *"I've been working in the same facility for 20 years. I know just about all the staff by name. … And I've noticed a big difference in staff morale. Like the staff morale is so bad now. It's just, it's horrible." (Healthcare Employee H)*

Loss of or Decreased Commitment to Profession

Healthcare staff described a decreasing sense of passion and enthusiasm for working in healthcare, resulting in lower commitment to their job or profession.

> *"I think you just become a number, and there, and I think over time you don't feel as obligated, or as wanting in your profession to give them everything of you. So, you used to be able to go to bat and be there and pick up shifts and do what you could to help, because that's what nursing, you know, you go into is to help people. But I don't feel like people are doing that anymore." (Healthcare Employee B)*

Loss of Confidence in Rural Healthcare

The continuous changes and losses have led to a diminishing sense of confidence in the rural healthcare system and its ongoing capacity to support people as workers, patients, and community members.

> *"I think they're worried about whether their services are going to be sustained. … Some doubt whether we want to bring those services back, and or have the ability to return the services to where they were. … You end up with communities getting concerned about what that means about their healthcare. And if they truly have a crisis, will the healthcare be there to meet their needs?" (CUPE/SHA Official E)*

RIPPLE EFFECTS THROUGH PERSONAL, PATIENT, AND COMMUNITY EXPERIENCES

Current issues in rural healthcare have resulted in impacts that have rippled through the personal lives of healthcare workers, their patients' experience within the health system, and aspects of their communities beyond healthcare.

Impacts to Personal Lives

Healthcare workers are also local community members who have personal connections to their communities. Issues in the healthcare system affect them as both healthcare workers and users, as well as the people in their personal lives.

> *"On a personal level, I live in this area, and I have four teenagers. So, having no emergency rooms open at times really causes a lot of stress as a mother. And somebody that lives very rurally." (Healthcare Employee D)*

Impacts to Patient and Community Care

All participants acknowledged that the issues in rural healthcare have undoubtedly had an impact on patient and community care, whether directly at the patient level or through a series of system-level changes.

> *"Our patients are suffering due to well, like I said, everything just has a trickle-down effect. And they are the end recipient. They are the reason why we're here, but they're also the recipient of all these poor choices." (Healthcare Employee D)*

Impacts to Community

Rural healthcare issues have resulted in broader impacts to communities, including losing community members, attracting fewer new residents, impacts on the local economy, and a weakened sense of community due to residents being dispersed or moving away.

> *"More and more of the elderly people are moving out of our community because of the healthcare there. It's not dependable. And they want to be somewhere where it's easily accessible to them. So a lot of them are moving closer to the cities or to larger centers where there is more healthcare available for them." (Healthcare Employee L)*

SUGGESTIONS FOR CHANGE

Participants identified a number of areas where changes could be made to improve rural healthcare, including staffing incentives, staff morale, funding for services or supplies/ infrastructure, education and training, management, and consistent practices across the health authority. For example, one participant emphasized the importance of adequate training:

> *"I would really like the management to invest more on the proper training because it is really hard to just rely on the number of things that these new people, like new hires, are you know, just being let go to work on the floor without the proper training." (Healthcare Employee F)*

Healthcare workers demonstrated that they had strong insight into various issues as frontline workers, and felt that they should be consulted more on how to address issues in their facilities.

> *"I think we should have a little more say in how and what the residents want as we're with them everyday. We hear what their complaints are. We hear what their concerns are, and what they would like. And unfortunately, we're not always able to give them what they want." (Healthcare Employee L)*

PROTECTIVE FACTORS

Despite the current challenges, some participants were able to identify what was working well in healthcare, suggesting that these are the protective factors that have helped sustain the healthcare system through the current crisis.

Shared Goals and Values with Other Workers

Having strong connections and shared values and goals with fellow team members has an important role in the current healthcare environment. A good working relationship with fellow co-workers served as a positive aspect of the work environment for many workers.

> *"I think all of us are very patient-focused, very client focused. I think that works well when we all come together, and we want the best outcome for that person, and we try our best to give them the best healthcare that we can." (Healthcare Employee B)*

Humanity

Additionally, a prevailing sense of care, compassion, and altruism contributes to the resilience of rural healthcare workers.

> *"I think what's keeping the staff that are there now still there is the residents, the patients. … They don't want to see them have nowhere to go, and they do the best they can in the setting that they're in to make it their home." (CUPE/SHA Official D)*

Small Wins

While the scale of current issues in rural healthcare appears overwhelming, some participants were able to identify specific things that were working well that provides some hope.

> *"Ambulance is actually, they have improved lately. And I think it's because of the fact of the ERs being closed down. But they have brought in and [are] paying ambulance people full-time wages so that they're not just volunteers." (CUPE/SHA Official A)*

SUMMARY OF WORLD CAFÉ EVENT

On February 29, 2024, the SPHERU research team hosted a virtual World Café event that gathered various stakeholders to discuss both current issues in the delivery of rural healthcare in Saskatchewan and findings of the data collected in earlier phases of the project.

Preparation

In preparation for the World Café event, findings from all previous phases of the project (i.e., literature review, service disruptions data, and interviews) were reviewed with consideration for the topics that would be most pertinent to discuss with a diverse group of stakeholders. These key topics would shape the discussion questions for the World Café event. While there were a number of relevant topics, the focus was narrowed to two recurring themes in the data: the staffing crisis and the health authority amalgamation. Thus, the World Café questions focused on generating conversations about these two topics.

Participants

A total of 13 stakeholders participated in the virtual World Café event. Stakeholders included individuals who worked in rural healthcare (frontline workers, medical professionals), local and national union representatives, health-related associations, professional regulatory bodies, and municipal associations.

Process

The World Café event opened with a welcome to participants, a brief round of introductions, and explanation of the World Café process. The SPHERU research team then presented an overview of the research project and findings gathered to that point to ensure that all participants had the same background information prior to engaging in discussions. Participants were then placed into three groups consisting of 4-5 participants for “table discussions.” There were two rounds of discussions and for each round, participants were shuffled into groups with different individuals to allow for diverse perspectives to crosscut. A table host in each group posed the specific questions that prompted participants to think about a particular issue, and a note-taker ensured that discussion points were captured. Participants were encouraged to share their thoughts and reactions with others in the group. The two questions that were posed to the groups were:

1. Staffing is one of the major issues being faced by rural health facilities. Currently, some of the solutions involve contract workers, temporary re-allocation of workers, and wage incentives. What other strategies might there be for recruitment and retention of healthcare staff in rural areas? Have you seen successful examples of recruitment/retention strategies in other sectors or provinces/areas? What are some changes that could be made?
2. The health authority amalgamation has formed one large provincial health authority responsible for healthcare in all of Saskatchewan. New challenges have emerged in rural health facilities since the amalgamation, such as multiple managers in each facility and barriers to getting support for workplace concerns. What are some ways that rural health facilities, communities, and the provincial health authority can engage with one another, or other entities, to ensure that rural healthcare needs are being addressed?

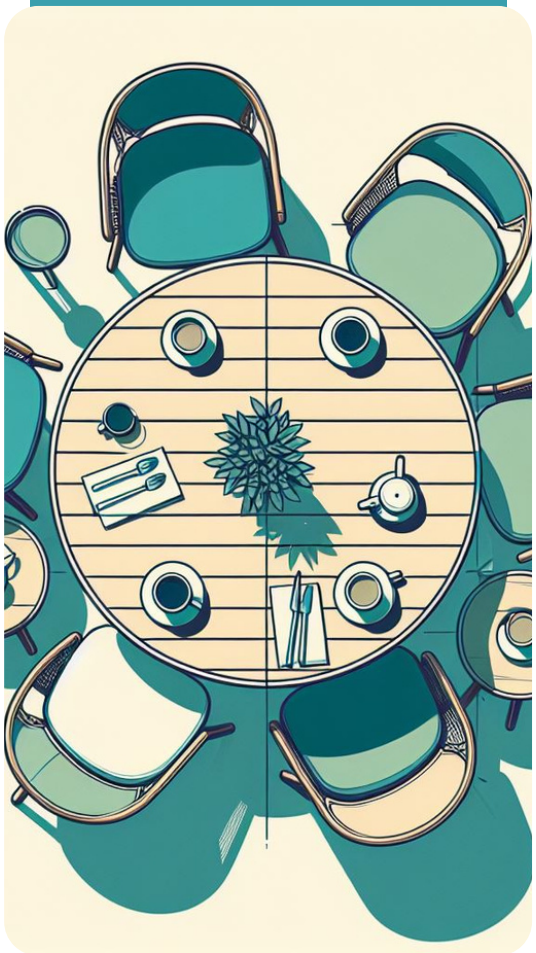
After each round of table discussions, each table reported highlights from their conversation back to the larger group, summarizing any key themes, messages, or conclusions that may have been reached. Finally, a plenary discussion was held with all participants in one shared conversation. The question that was presented to the group to guide this final plenary discussion was:

1. Recent changes to the delivery of rural healthcare are resulting in impacts beyond how healthcare is delivered in rural communities. Research participants identified ways that their personal lives, families, friends, and their communities as a whole have been impacted both directly and indirectly. What are some strategies that could mitigate these impacts to rural communities?

Summary of Discussions

The World Café event generated discussions about a number of important topics related to rural healthcare. In the first round of table discussions, participants highlighted the need to offer permanent and full-time positions, education and training opportunities within local communities, wages that are competitive compared to contract work, and incentives and transitional supports for those who are interested in relocating to rural areas. In all three discussion groups, participants also emphasized the quality of the work environment as an important factor in recruiting and retaining staff, as well as the impacts that the current staffing crisis has had on patient quality of care. This suggested that participants shared a mutual perspective that recruitment and retention of staff are directly impacted by the multitude of related factors identified during the table discussions.

In the second round of table discussions, participants raised several concerns about the impacts of the health authority amalgamation on rural healthcare. Using the phrase “one-size-fits-all” to describe the approach to amalgamation, participants discussed the cumbersome structure of centralized management, limited lines of communication between frontline staff and those in leadership positions, insufficient training for managers, issues with applying a generalized approach to urban and rural facilities, lack of support for frontline workers who have concerns, and issues with a top-down approach in the health system. All three groups communicated a pattern of issues that have emerged in rural health facilities across the province since the amalgamation. Participants expressed a general sense of disconnect between the larger health authority and the smaller rural facilities, suggesting that rural facilities require a different approach and set of considerations from non-rural facilities.



The final plenary discussion engaged all participants at the World Café event in a conversation about mitigating impacts to communities. Participants discussed the need for public education and awareness about the issues in rural healthcare, as this can empower members of the public to voice concerns, rally, and advocate for change. It was also suggested that the delivery of education and training programs should be re-evaluated to better promote healthcare careers to the next generations of workers. From a policy perspective, it was suggested that there could be greater investment in programs, such as the government's Graduate Retention Program that encourage students to stay and work in the province. Many participants supported the idea that recruitment efforts should focus on the local population, rather than competing with other provinces and countries for workers, as the local population is more likely to commit to working and living in Saskatchewan. Participants expressed a need for a general shift in how rural Saskatchewan is promoted, especially with regard to the benefits of living and working in rural communities. Throughout these topics of discussion, there was an underlying conversation about power and autonomy. Participants emphasized the need for a local advisory structure or processes in place for patients, families, and community members to provide feedback, ideas, and contributions to decisions that would affect their communities. Participants understood that their voices needed to be heard in order to advocate for change, and that this would help shift some degree of power and autonomy back into the hands of rural communities.

Overall, participants at the World Café event echoed the concerns and observations that emerged in other phases of data collection. While the World Café questions were oriented toward facilitating a dialogue about policy action, the discussions that arose were primarily focused on the current issues in rural health. This may suggest that participants felt that prior to engaging in policy discussions, it was important to establish an understanding of the issues impacting rural healthcare. Additionally,it is important to note that, although invitations to participate in the World Café event were widely distributed to those with policy and programming expertise from the SHA and the Ministry of Health, response rates were very low. Therefore, the voices of those who could focus on policy action were absent from this discussion. Nonetheless, the issues emphasized in Key Informant interviews, trends in service disruptions, and issues found in the literature were consistent with what participants shared in the World Café event. This provided validation that the themes that emerged from other sources of data were recognized across a variety of professions and organizations involved in rural healthcare. This served as further evidence that the themes identified in this report are important factors that contribute to the distinct issues found in rural healthcare.

KEY THEMES

The data for this research project came from multiple sources: a literature review, service disruptions data, Key Informant interviews, and a World Café event. While each source of data provided unique information about the delivery of rural healthcare, there were common themes that emerged consistently. These key themes are highlighted below and are pulled together to give a sense of the overall landscape of rural healthcare.

Key Theme 1: Quality of rural healthcare at stake

While many of the concerns expressed by participants were directly related to internal system issues, it was clear that there were also concerns about how this reflected in the quality of healthcare provided to patients. Ultimately, patients take the burden of the existing systemic challenges and issues. Facility closures, service disruptions, longer wait times, less attention to detail from exhausted healthcare providers, and an insufficient number of staff to provide care are among some of the ways in which patients are impacted by the issues in the healthcare system in rural locations.

Key Theme 2: One size does not fit all

Participants were undoubtedly frustrated with the outcomes of the health authority amalgamation in rural communities. Although the goal of the amalgamation was to streamline services and processes more efficiently across the province, it was abundantly clear that this did not work out as intended for rural facilities. The amalgamation applied a "one-size-fits-all" approach to healthcare across urban and rural areas, and participants consistently expressed that rural communities were experiencing inequities in healthcare due to this approach.

Key Theme 3: Overwhelming sense of loss

Related to the key theme above, another recurring theme was the sense of loss felt by rural healthcare workers due to the many changes that have occurred since the amalgamation. The loss of voice, staff morale, commitment to the health profession, and confidence in rural healthcare conveyed by Key Informants also came across in the World Café discussions. It can also be inferred by the findings of the literature review and service disruptions data that communities are experiencing a loss of health services. These losses are a result of a system that, since the amalgamation, appears to be disorderly on the frontlines in terms of decision making, lines of accountability, and organizational structure.

Key Theme 4: Healthcare changes lead to community changes

In the words of one Key Informant, healthcare is the "life-blood" of rural communities. Therefore, changes in healthcare bring about changes in the whole community. As echoed by many participants, if healthcare services are not adequate, then communities respond as evidenced through demographic shifts, such as residents moving away, fewer jobs available, and less activity in the local economy. These widespread community impacts are beyond healthcare and can affect the overall wellbeing and quality of life in rural communities.

CONCLUSION

The information presented in this report represents a summary of the findings of a multiphase and multimethod research project investigating the current state of healthcare in rural Saskatchewan. Together, the different sources of data examined in this research project suggest that there are distinct challenges and issues existing in rural health that are not apparent in urban centres. These issues are overwhelming rural healthcare workers, contributing to a shrinking workforce, and posing risks to the delivery of rural healthcare.

Strengths and Limitations

This research project had a number of strengths. This project was the first to examine the current state of rural healthcare in Saskatchewan through a comprehensive research process that involved multiple phases, multiple research methods, and multiple informants. Information was integrated from publicly available sources, statistical data, individual perspectives of workers, and discussions among stakeholders. Further, this project focused on both CUPE Local 5430 regions and all rural areas of the province, resulting in an investigation of rural health issues in various parts of the province. While not included in the analysis, multiple interview and World Café participants expressed that they were hopeful about this research project and grateful that their voices were being heard and considered.

Along with these strengths, this research project was also subject to limitations. One of the challenges during the literature review phase was the lack of academic literature regarding current rural healthcare delivery in Saskatchewan, suggesting that this is an under-examined area of research. Another limitation, as mentioned in the literature review section, was that it was difficult to gather publicly available data and information regarding service disruptions. The service disruptions data that the SPHERU team was able to analyze revealed that there may be inconsistencies in how this information is being recorded, as demonstrated through the data caveat notes (p. 21) and the large proportion of missing information on types of services being disrupted. Challenges and limitations were also present in the Key Informant interviews phase. Despite multiple invitations and efforts made to recruit interview participants from the various groups of Key Informants, the final sample size represented only a small proportion of rural healthcare workers, and union and health authority officials. Perspectives from the government were missing, and there was limited involvement from the health authority, partly due to the project not obtaining SHA Operational Approval. Similar challenges emerged in the World Café event, which lacked participation from those who work in policy and programming. Without these important perspectives, the opportunity to discuss and understand rural health issues from a policy lens was limited. All strengths and limitations considered, the findings of this research project brought light to several important aspects of the current state of rural healthcare in the province.

Final Thoughts

The concerns that Key Informants expressed during interviews were reflected in the World Café event, consistent with reports found through the literature review, and provided context to the patterns of service disruptions observed across the province. The findings presented in this report indicate that there are not only distinct issues in rural health that warrant further investigation and policy attention, but there is also a need for some immediate action to address these issues on the part of the government and Saskatchewan Health Authority. Rural healthcare is under profound stress in the province and workers in these parts of the system clearly feel that no one is paying attention to the kinds of concerns they raised with the SPHERU research team during the conduct of this research. As a first step, the voices of rural healthcare (from both patients and providers across the continuum of care) need to be brought into the centre of a conversation about the reconfiguration of publicly administered healthcare in Saskatchewan.

REFERENCES

Adams, S.J., Yao, S., Mondal, P., Lim, H., Mendez, I., & Babyn, P. (2022). Sociodemographic and geographic factors associated with non-obstetrical ultrasound imaging utilization: A population-based study. *Canadian Association of Radiologists Journal, 73*(2), 327–336. https://doi.org/10.1177/08465371211041148

Alhassan, J.A., Smith, C. & Hanson, L. (2021). Politics, transportation, and the people's health: A socio-political autopsy of the demise of a 70-year-old bus company. *Critical Public Health, 32*(4), 556-567. https://doi.org/10.1080/09581596.2021.1905152

Andkhoie, M., & Szafron, M. (2020). The impact of geographic location on Saskatchewan prostate cancer patient treatment choices: A multilevel and spatial analysis. *Journal of Rural Health, 36*(4), 564–576. https://doi.org/10.1111/jrh.12471

Antony, J. (2020, May 12). Coronavirus crisis highlights internet access inequality across Saskatchewan. *CBC*. https://www.cbc.ca/news/canada/saskatchewan/internet-rural-remote-saskatchewan-covid-19-1.5562476

Argue, J. (2021, October 24). Concerns for healthcare in Nokomis and Rural Saskatchewan. *Toronto Star*. https://www.thestar.com/news/canada/2021/10/24/concerns-for-healthcare-in-nokomis-and-rural-saskatchewan.html

Baron, D.A. (2021, May 25). Are health services centralizing? *Saskatoon Star-Phoenix.* https://thestarphoenix.com/opinion/letters/letters-is-the-shas-agenda-to-centralize-everything

Bodnar, J. (2020, May 22). Small town hospitals taking stand together in fight to keep emergency doors open. *SaskToday*. https://www.sasktoday.ca/south/opinion/small-town-hospitals-taking-stand-together-in-fight-to-keep-emergency-doors-open-4149632

Bramadat-Willcock, M. (2020, March 25). La Ronge shelter hangs by a thread amid COVID-19 crisis. *National Observer*. https://www.nationalobserver.com/2020/03/25/news/la-ronge-shelter-hangs-thread-amid-covid-19-crisis

Cairns, J. (2021, November 25). Ryan Meili brings rural health care tour to Battlefords. *SaskToday*. https://www.sasktoday.ca/north/local-news/ryan-meili-brings-rural-health-care-tour-to-battlefords-4799504

Canadian Institute for Health Information. (2024). *The state of the healthcare workforce in Canada, 2022.* Canadian Institute for Health Information. https://www.cihi.ca/en/the-state-of-the-health-workforce-in-canada-2022

Canada Maps. (2023, March 5). *Exploring Saskatchewan's bus network with the Saskatchewan bus map.* https://www.canadamaps.com/saskatchewan-bus-network-map/

Carey, A., Cockburn, L., & Langlois, S. (2019). Investigating the provision of occupational therapy services: A case study. *Canadian Journal of Occupational Therapy, 86*(5), 412-422. https://doi.org/10.1177/0008417419835377

Conroy, D. (2021, March 10). Substance abuse help, support, and training available from Saskatchewan Health Authority. *Discover Weyburn*. https://www.discoverweyburn.com/articles/substance-abuse-help-support-and-training-available-from-saskatchewan-health-authority

Cowan, P. (2017, January 7). MDs hopeful fewer health regions will improve care. *Saskatoon Star-Phoenix*. https://pressreader.com/article/281676844591881

Daniels, C. (2020, May 29). Health Foundation co-chair reports at AGM. *SaskToday.* https://www.sasktoday.ca/central/local-arts/health-foundation-co-chair-reports-at-agm-4149996

eHealth Saskatchewan. (n.d.a). *Telehealth.* https://www.ehealthsask.ca/services/telehealth

eHealth Saskatchewan. (n.d.b). *SK Virtual Visit technical requirements*. https://www.ehealthsask.ca/services/virtualcare/Documents/Virtual%20Visit/Technical%20Requirements.pdf

eHealth Saskatchewan. (2020, September). *Telehealth community list*. https://www.ehealthsask.ca/services/telehealth/Documents/Community%20List%20%20-%20Sept%202020.pdf

Gondal, H., Abbas, T., Choquette, H., Le, D., Chalchal, H.I., Iqbal, N., & Ahmed, S. (2022). Patient and physician satisfaction with telemedicine in cancer care in Saskatchewan: A cross-sectional study. *Current Oncology, 29*(6), 3870–3880. https://doi.org/10.3390/curroncol29060309

Government of Canada. (2022, November 8). *National broadband internet service availability map*. https://www.ic.gc.ca/app/scr/sittibc/web/bbmap?lang=eng#!/map

Government of Canada. (2023, March 17). *High-speed internet access dashboard*. https://www.ic.gc.ca/app/scr/stsidcr/web/high-speed-internet-canada/en/universal-access/broadband-dashboard.html

Government of Saskatchewan. (2017a, March 22). *Government ends Saskatchewan transportation company (STC) subsidy - bus company to be wound down*. https://www.saskatchewan.ca/government/news-and-media/2017/march/22/budget-stc-wind-down

Government of Saskatchewan. (2017b, April 13). *Increased access to health services in La Loche*. https://www.saskatchewan.ca/government/news-and-media/2017/april/13/remote-presence-technology

Government of Saskatchewan. (2017c, April 24). *Government announces $20.5 million in funding on 5th anniversary of STARS in Saskatchewan*. https://www.saskatchewan.ca/government/news-and-media/2017/april/24/stars-anniversary

Government of Saskatchewan. (2017d, August 9). *Increased access to medical care in Stony Rapids*. https://www.saskatchewan.ca/government/news-and-media/2017/august/09/medical-care-in-stony-rapids

Government of Saskatchewan. (2017e, September 29). *New CT Scanner to improve service for patients in the Battlefords Area*. https://www.saskatchewan.ca/government/news-and-media/2017/september/29/ct-scanner-in-battlefords

Government of Saskatchewan. (2017f, November 24). *New CT scanner improves services for patients in Lloydminster area.* https://www.saskatchewan.ca/government/news-and-media/2017/november/24/ct-scanner-for-lloydminster

Government of Saskatchewan. (2017g, December 4). *Legislation proclaimed to launch Saskatchewan Health Authority.* https://www.saskatchewan.ca/government/news-and-media/2017/december/04/launch-of-sha

Greschner, J. (2017, December 2). Prairie North holds final meeting before new health authority begins. *SaskToday.* https://www.sasktoday.ca/north/local-news/prairie-north-holds-final-meeting-before-new-health-authority-begins-4114488

Harrison, E., & Dhillon, P.B.A. (2018). A quantitative day in the life of a Saskatchewan rural physician. *Canadian Journal of Rural Medicine, 23*(2), 45–49.

Irvine, J.D.C., Rolzing, G., Doyle, K., Martel, N., Tsang, T., & Ramsden, V.R. (2022). Exploring how pregnant women in a remote northern community select a delivery location. *Canadian Family Physician, 68*(6), 446–451. https://doi.org/10.46747/cfp.6806446

Jami, M. A., Malik, R., Stempien, J., Goodridge, D., & Oyedokun, T. O. (2022). Trauma experiences of rural practitioners: A self assessment. *Canadian Journal of Rural Medicine, 27*(1), 9–15. https://doi.org/10.4103/cjrm.cjrm_88_20

Jaworsky, D. (2023). Building more bridges: Indigenous leadership in a study assessing the impact of distance to care on markers of quality HIV care in Saskatchewan. *Canadian Journal of Rural Medicine, 28*(1), 7-17. https://doi.org/10.4103/cjrm.cjrm_3_22

Karunanayake, C. P., Rennie, D. C., Hagel, L., Lawson, J., Janzen, B., Pickett, W., Dosman, J. A., Pahwa, P., & The Saskatchewan Rural Health Study Group (2015). Access to specialist care in rural Saskatchewan: The Saskatchewan Rural Health Study. *Healthcare, 3*(1), 84–99. https://doi.org/10.3390/healthcare3010084

Kiedrowski, R. (2024, April 3). Cell service upgraded to 5G in Eastern Saskatchewan. *Prince Albert Daily Herald.* https://paherald.sk.ca/cell-service-upgraded-to-5g-in-eastern-saskatchewan/

Klager, T. (2022, March 2). Rural addiction has special challenges. *SaskToday.* https://www.sasktoday.ca/central/agriculture/rural-addiction-has-special-challenges-5117763

Korem Alhassan, J.A., Abonyi, S., Neudorf, C., & Hanson, L. (2021). "It feels like somebody cut my legs off": Austerity, transportation and the 'web of dispossession' in Saskatchewan, Canada. *Social Science & Medicine, 282*, 114147. https://doi.org/10.1016/j.socscimed.2021.114147

Lewis, S. (2022, April 14). Lewis: Sask. needs to address its failures to recruit more doctors. *Regina Leader-Post.* https://leaderpost.com/opinion/columnists/lewis-sask-needs-to-address-its-failures-to-recruit-more-doctors

Mahabadi, S.M., Fehr, C., Wu, A., Hernandez-Ronquillo, L., Rizvi, S.A., & Tellez-Zenteno, J.F. (2020). Evaluation of wait times for assessment and epilepsy surgery according the geographic area of residence in the province of Saskatchewan, Canada. *Seizure, 79*, 80-85. https://doi.org/10.1016/j.seizure.2020.04.014

Mandryk, M. (2017, Januray 19). Politics - One health board may be better. *SaskToday*. https://www.sasktoday.ca/central/opinion/politics-one-health-board-may-be-better-4102252

Mandryk, M. (2020, May 26). Mandryk: Brkich exposes Moe's COVID-19 decision-making short-comings. *Regina Leader-Post*. https://leaderpost.com/opinion/columnists/mandryk-brkich-exposes-moes-covid-19-decision-making-shortcomings

Mandryk, M. (2022a, April 27). Mandryk: Government needs a serious response to doctor shortage. *Regina Leader-Post*. https://leaderpost.com/opinion/columnists/mandryk-government-needs-a-serious-response-to-doctor-shortage

Mandryk, M. (2022b, May 11). Nurse practitioners vital in rural care. *Regina Leader Post*. https://leaderpost.com/opinion/columnists/mandryk-nurse-practitioners-show-how-primary-care-can-work-better

Mandryk, M. (2022c, July 16). Mandryk: Fiery Kamsack hospital protest burns Sask. Party government. *Regina Leader-Post*. https://leaderpost.com/opinion/columnists/mandryk-fiery-kamsack-hospital-protest-burns-sask-party-government

Mandryk, M. (2022d, November 16). Murray Mandryk: Moe should listen to doctors' pleas for pay changes. *Regina Leader-Post*. https://leaderpost.com/opinion/columnists/murray-mandryk-moe-should-listen-to-doctors-pleas-for-pay-changes

McIntosh, T., Novik, N., DeCorby, A., Muhajarine, N., Jeffery, B., & Kallio, N. (2021). *Mental health and COVID-19 in Saskatchewan adults: Report from a world café event*. Regina/Saskatoon: Saskatchewan Population Health and Evaluation Research Unit.

Mendez, I. (2018, December 11). How robots are helping doctors save lives in the Canadian North. *The Conversation*. https://theconversation.com/how-robots-are-helping-doctors-save-lives-in-the-canadian-north-104462

Morris, A. (2020, June 25). COVID-19 has pushed ahead virtual solutions to improve health care in rural and remote communities. *CBC*. https://www.cbc.ca/news/canada/saskatchewan/covid-19-has-pushed-ahead-virtual-solutions-to-improve-health-care-in-rural-and-remote-communities-1.5615732

Nikkel, G. (2017, March 1). Plans for health care need rethinking. *SaskToday*. https://www.sasktoday.ca/south/opinion/plans-for-health-care-need-rethinking-4104046

Olson, M. (2020, December 17). Robots & remote care; Access to health care in rural communities has long been a sticking point - and there is no clear solution. *Saskatoon Star-Phoenix*. https://thestarphoenix.com/news/saskatchewan/robots-and-remote-care-search-for-rural-health-care-solutions-continues-bolstered-by-covid-19

Pearce, N. (2021, April 9). 'A flying ICU': Rural and remote emergency services fly COVID-19 patients to safety. *SaskToday*. https://www.sasktoday.ca/north/local-news/a-flying-icu-rural-and-remote-emergency-services-fly-covid-19-patients-to-safety-4169397

Pearce, N. (2022, February 24). Bridges: Kamsack doctor delivers decades of care in rural Sask. *Saskatoon Star-Phoenix*. https://thestarphoenix.com/life/bridges/bridges-kamsack-doctor-delivers-decades-of-care-in-rural-sask

Peterson, J. (2022, November 15). Saskatchewan rural municipalities to vote on health care, border ports. *Saskatoon Star-Phoenix*. https://thestarphoenix.com/news/local-news/saskatchewan-rural-municipalities-to-vote-on-health-care-border-ports

Provincial Auditor of Saskatchewan. (2022, December). *Provincial Auditor 2022 Report Volume 2*. https://auditor.sk.ca/pub/publications/public_reports/2022/Volume%202/2022-report-volume-2-full-report.pdf

Reis, N. (2020, July 27). Transportation pilot program assists rural cancer patients travelling to urban centers. *battlefordsNOW*. https://battlefordsnow.com/2020/07/27/transportation-pilot-program-assists-rural-cancer-patients-travelling-to-urban-centers/

Salloum, A. (2021, December 2).'We're drowning': President of health-care union calls on province for assistance. *Regina Leader-Post*. https://leaderpost.com/health/were-drowning-president-of-health-care-union-calls-on-province-for-assistance

Salloum, A. (2022, August 8). For much of the past two years, town of Balcarres has been without emergency care, laboratory services. *Regina Leader-Post*. https://leaderpost.com/news/politics/for-much-of-the-past-two-years-town-of-balcarres-has-been-without-emergency-care-laboratory-services

Saskatchewan Health Authority. (2023). [Service disruptions records] [Unpublished raw data]. Saskatchewan Health Authority.

Saskatchewan Health Authority. (n.d.a). *Saskatchewan virtual visit*. https://www.saskhealthauthority.ca/your-health/conditions-diseases-services/all-z/virtual-care/virtual-visit-home/saskatchewan-virtual-visit

Saskatchewan Health Authority. (n.d.b). *Service disruptions*. https://www.saskhealthauthority.ca/news-events/service-disruptions

SaskToday. (2017a, January 5). NDP, CUPE slam single-health-authority plan. *SaskToday*. https://www.sasktoday.ca/north/local-news/ndp-cupe-slam-single-health-authority-plan-4101644

SaskToday. (2017b, January 11). Editorial - Health plan may be blueprint for more change. *SaskToday*. https://www.sasktoday.ca/central/opinion/editorial-health-plan-may-be-blueprint-for-more-change-4101921

SaskToday. (2020, June 16). Arcola Health Centre's emergency room is open again. *SaskToday*. https://www.sasktoday.ca/south/local-news/arcola-health-centres-emergency-room-is-open-again-4150882

Shah, T.I., Milosavljevic, S., & Bath, B. (2017). Determining geographic accessibility of family physician and nurse practitioner services in relation to the distribution of seniors within two Canadian Prairie Provinces. *Social Science & Medicine, 194*, 96–104. https://doi.org/10.1016/j.socscimed.2017.10.019

Shah, D.B., Tyan, C., Rana, M., Goodridge, D., Hergott, C.A., Osgood, N.D., Manns, B., & Penz, E.D. (2021). Rural vs urban inequalities in stage at diagnosis for lung cancer. *Cancer Treatment and Research Communications, 29*, 100495. https://doi.org/10.1016/j.ctarc.2021.100495

Shah, D.B., Tyan, C., Rana, M., Goodridge, D., Hergott, C.A., Osgood, N.D., Manns, B., & Penz, E.D. (2021). Rural vs urban inequalities in stage at diagnosis for lung cancer. *Cancer Treatment and Research Communications, 29*, 100495. https://doi.org/10.1016/j.ctarc.2021.100495

Simes, J. (2022a, January 14). Anger rising over hospital shutdowns in rural areas; Residents driving for hours to access care feel vulnerable as ER departments close. *Regina Leader-Post*. https://leaderpost.com/news/saskatchewan/concerns-mount-as-rural-sask-hospital-services-remain-closed

Simes, J. (2022b, January 25). Rural Sask. hospital transfers not feasible: SUN. *Regina Leader-Post*. https://leaderpost.com/news/saskatchewan/rural-sask-hospital-transfers-not-feasible-sun

Simes, J. (2022c, July 14). Crowd confronts Sask. minister, MLA over Kamsack Hospital bed closures. *Regina Leader-Post*. https://leaderpost.com/news/saskatchewan/crowd-confronts-sask-minister-mla-over-kamsack-hospital-bed-closures

Simes, J. (2022d, August 17). Assiniboia bed closures mark ongoing saga of Sask. health disruptions. *Regina Leader-Post*. https://leaderpost.com/news/local-news/sask-politics/assiniboia-bed-closures-mark-ongoing-saga-of-sask-health-disruptions

Statistics Canada (2021). *Rural area (RA)*. Dictionary, census of population, 2021. https://www12.statcan.gc.ca/census-recensement/2021/ref/dict/az/Definition-eng.cfm?ID=geo042

Stricker, J. (2020a, May 16). SHA temporarily converts seven rural community emergency rooms with five more to come. *SaskToday*. https://www.sasktoday.ca/south/local-news/sha-temporarily-converts-seven-rural-community-emergency-rooms-with-five-more-to-come-4149344

Stricker, J. (2020b, June 8). Re-open dates for closed rural emergency rooms including Preeceville. *SaskToday*. https://www.sasktoday.ca/central/local-news/re-open-dates-for-closed-rural-emergency-rooms-including-preeceville-4150489

The Canadian Press. (2017, November 3). Doctors worried about delivering services to rural areas of Saskatchewan. *National Post*. https://nationalpost.com/pmn/news-pmn/canada-news-pmn/doctors-worried-about-delivering-services-to-rural-areas-of-saskatchewan

Vescera, Z. (2020a, January 26). Melfort raising $600,000 to build hospital heliport. *Saskatoon Star-Phoenix*. https://thestarphoenix.com/news/local-news/melfort-raising-600000-to-build-hospital-heliport

Vescera, Z. (2020b, October 23). Doctors weigh in on health-care priorities for next government. *Saskatoon Star-Phoenix*. https://thestarphoenix.com/news/saskatchewan/doctors-weigh-in-on-health-care-priorities-for-next-government

Vescera, Z. (2021, August 26). Saskatchewan's health care workers are burning out, unions say. *Saskatoon Star-Phoenix*. https://thestarphoenix.com/news/saskatchewan/saskatchewans-health-care-workers-are-burning-out-unions-say

Vescera, Z. (2022a, April 15). Sask. gov inks $4.8 million deal to revamp virtual health. Saskatoon Star-Phoenix. https://thestarphoenix.com/news/saskatchewan/sask-government-inks-4-8-million-deal-to-revamp-virtual-health

Vescera, Z. (2022b, July 19). 'Falling apart': Burnout and backlogs hammer Sask. emergency rooms. *Saskatoon Star-Phoenix*. https://thestarphoenix.com/news/saskatchewan/falling-apart-burnout-and-backlogs-hammer-sask-emergency-rooms

Vescera, Z. (2022c, August 24). Sask. to offer rural health staff incentives. *Saskatoon Star-Phoenix*. https://www.pressreader.com/canada/regina-leader-post/20220824/281599539301362

Wasko, K. (2022, May 24). Health care in Sask needs urgent attention; As I leave a province I love, I truly hope the system can evolve to better serve its people, Dr. Kevin Wasko writes. *Saskatoon Star-Phoenix*. https://thestarphoenix.com/news/local-news/opinion-sask-s-health-care-system-requires-urgent-attention-in-five-key-areas

White-Crummey, A. (2020, May 25). As anger increases, plan coming to restore rural ERs. *Regina Leader-Post*. https://leaderpost.com/news/saskatchewan/regina-rally-planned-to-fight-temporary-er-closures-in-rural-sask

Wilger, D. (2018, December 8). Rural health. *SaskToday*. https://www.sasktoday.ca/central/local-arts/rural-health-4127554

Wilson, S. (2017, May 3). Sun Country ride program garnering attention. *Discover Weyburn*. https://www.discoverweyburn.com/articles/sun-country-ride-program-garnering-attention

Withham, S., Carr, T., Badea, A., Ryan, M., Stringer, L., Barreno, L., & Groot, G. (2022). Sâkipakâwin: Assessing Indigenous cancer supports in Saskatchewan using a strength-based approach. *Current Oncolology, 29*(1), 132-143. https://doi.org/10.3390/curroncol29010012

Yorkton This Week. (2022, July 20). Editorial: No new news of hospital for Yorkton. *SaskToday*. https://www.sasktoday.ca/central/opinion/editorial-no-new-news-of-hospital-for-yorkton-5599005

APPENDIX A

INTERVIEW QUESTIONS FOR KEY INFORMANTS

Interview Questions for CUPE Healthcare Workers and Officials

1. I would like to begin by asking you about your current job.
    a. How long have you been in your current position?
    b. Is your position full-time, part-time, or casual?
        - Probe: Is that by choice, or is that dictated by your situation/circumstances, or is that dictated by what positions are available?
    c. Is your work based out in the community, or specifically in a facility?
    d. Do you work in a single facility, or do you work in multiple facilities?
    e. How much interaction do you have with other workers in the system?
        - Probe: How would you describe the quality of those interactions?
2. Can you please describe what your typical work day consists of (tasks, roles, responsibilities)?
3. Do you believe that you have been impacted (in your job) by recent changes to the delivery of healthcare in rural settings? (i.e., emergency room closures, changes to lab services, ambulance service changes, facilities openings or closures, understaffing) Yes/No
    a. If you have been impacted directly, what have those impacts looked like? (e.g., wages/income, work-life balance, work stress, job security, commitment to your job/profession)
    b. If you have not been impacted directly, have you noticed these changes to rural healthcare delivery impacting directly upon colleagues? (e.g., wages/income, work-life balance, work stress, job security, commitment to their job/profession, retirements, move to contract workers to fill vacant positions)
4. Have you had the experience in your current position of working alongside contract workers brought in to temporarily fill vacant positions?
    a. If you have had the opportunity to work alongside contract workers, how has that experience impacted you in your job? How has that experience impacted the delivery of rural healthcare in your community?
5. Do you believe that the changes to delivery of healthcare in rural settings is impacting patient and community care? Yes/No
    a. If you do believe that these changes are impacting patient and community care, could you please explain the impacts that you are seeing?
        - Probe: Can you provide examples of this?
6. Have you noticed if the changes to delivery of healthcare in rural settings is impacting other people around you? (e.g., co-workers, family, friends)
7. Have you noticed if the changes to delivery of healthcare in rural settings is having an impact on the community? (e.g., population, availability of other community services)
8. What are some emerging challenges to the delivery of healthcare in rural settings that are most concerning or worrying to you (e.g., health authority amalgamation, elimination of provincial transportation system, move towards virtual healthcare, limited broadband and Internet access, lingering impacts of the pandemic, etc.)?
    a. Why are these particular changes most concerning to you?
9. What do you think is working well in your current work environment? (e.g., specific to your personal work conditions or specific to the conditions in your healthcare setting(s))
10. What do you think needs to be changed in your current work environment? (e.g. personal work conditions and/or conditions in your healthcare setting(s))
11. Would you like to share anything else about your current healthcare work that you think is important that I have not asked about?

Interview Questions for SHA Officials

1. I would like to begin by asking you about your current job.
    a. How long have you been in your current position?
    b. How much of your job involves direct interaction with employees in the system?
        - Probe: How would you describe those interactions?
2. What are your key responsibilities specific to rural healthcare?
3. What would you characterize as the biggest challenges facing rural healthcare over the last five years?
4. What steps has the SHA taken to meet those challenges?
    - Probe: Have these changes been part of planned and coordinated changes; or have these changes been ad hoc responses to changes in circumstances?
5. How successful do you think the SHA have been in the past few years in communicating these changes to the public?
    - Probe: How confident do you think the public is in the current state of rural healthcare?
6. How did the amalgamation of the health authorities into the SHA impact rural healthcare delivery? Were there challenges posed? Advantages created?
7. What are the key challenges about coordinating and delivering healthcare in rural Saskatchewan that you wish the public better understood?
8. How would you characterize the SHA's vision for rural healthcare in the province? What might it look like in five years' time?

ABOUT SPHERU

The Saskatchewan Population Health and Evaluation Research Unit (SPHERU) is based at both the University of Regina and University of Saskatchewan. SPHERU is a leader in population health research, which is the study of factors that affect the wellbeing of groups within a population. SPHERU has a unique focus on not only understanding health inequities, but also addressing inequities through actions and changes to policies, programs, research, funding, or any other action that influences population health outcomes. For more information, please visit www.spheru.ca.

SASKATCHEWAN POPULATION HEALTH AND EVALUATION RESEARCH UNIT