

# PROJECT REPORT: RURAL HEALTHCARE IN SASKATCHEWAN

PHASE I: LITERATURE REVIEW AND DOCUMENT ANALYSIS



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Prepared by SPHERU



SASKATCHEWAN POPULATION HEALTH AND EVALUATION RESEARCH UNIT

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

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This research project is funded by CUPE Local 5430 and while they have provided access to their workers as research participants they have not directed or designed the research. The data collection, analysis and interpretation is entirely the responsibility of the SPHERU team.

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# INTRODUCTION

In recent years, concerns have been raised by healthcare workers, and by the public, about shifts in the delivery of healthcare in rural Saskatchewan. CUPE Local 5430, which represents an array of healthcare and ancillary workers, has 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. CUPE Local 5430 is the largest healthcare union in Saskatchewan, with over 13,600 members and representing healthcare providers in practice areas including clerical, technical, nursing, support and plant operations from five regions across the Province. Thus, SPHERU has embarked on a research project to examine the current state of rural healthcare in Saskatchewan.

The goal of this research project is to provide a picture of what changes have occurred over the past five years by beginning with a document and literature analysis (Phase I). This research project will seek to understand how those changes have impacted workers within the system and how they perceive the state of healthcare in rural Saskatchewan through a series of semi-structured key informant interviews (Phase II). Finally, a facilitated policy dialogue about the current state and potential future directions of rural healthcare delivery will be initiated by bringing together healthcare workers, policy makers, stakeholders and patient advocates in a virtual World Cafe Event (Phase III).



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This report highlights the information gathered during Phase I of this research project, and will begin by discussing major shifts impacting the delivery of healthcare in rural Saskatchewan between 2017 and 2022 that were identified through an examination of existing literature and documents. Specific challenges impacting the delivery of healthcare services in rural areas will also be identified and discussed. Finally, this material will be explored in relation to potential impacts on healthcare workers, with particular attention to Canadian Union of Public Employees (CUPE) Local 5430 workers who occupy positions in the system that often get overlooked in healthcare workforce studies.

For the purposes of this report, the Statistics Canada definition of rural, consisting of 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), will be used. 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 these communities in the provision of healthcare that differ from those presented in Regina or Saskatoon.



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## RESEARCH METHODS

In order to gain a clearer perspective on the state of healthcare in rural Saskatchewan, this report reviewed publicly available academic and grey literature published between 2017 and 2022, as well as other publicly available data. Only publications that were relevant to the provision of, access to, or disruption of healthcare services in rural Saskatchewan were deemed relevant for this report.



To find such information, several databases (including PubMed, Google Scholar, Web of Science, CINAHL), the Government of Saskatchewan and the Saskatchewan Health Authority's websites, and newspapers were searched. Relevant newspaper articles were identified using the PressReader, ProQuest Daily Readers, and Canadian Business and Current Affairs databases as well as the SaskToday website to find articles published by smaller municipalities' newspapers. Staffing data was collected from the Canadian Institute for Health Information and from the dues records of CUPE Local 5430.

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# MAJOR SHIFTS IMPACTING SASKATCHEWAN HEALTHCARE SINCE 2017

Four major shifts impacting healthcare delivery have occurred in Saskatchewan since 2017, 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 a new emphasis on **virtual care**.



## HEALTH AUTHORITY AMALGAMATION

The government proclaimed legislation to create a province-wide health authority in December of 2017 (Government of Saskatchewan, 2017f). This legislation transferred the operations of twelve regional health authorities, which were operated by local boards, to the Saskatchewan Health Authority (SHA). The then Minister of Rural and Remote Care, Greg Ottenbreit, 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 feared 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. In 2017, the Government of Saskatchewan announced that they would privatize STC, despite backlash from the Official Opposition and clients of the service. 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). Given the importance of STC to some rural residents who travelled to urban areas to access healthcare, a focus group participant in a study on the impacts of STC's closure, viewed its privatization as undercutting the mandate of the Saskatchewan Health Authority to serve all people in Saskatchewan. In the wake of the privatization and elimination of STC, many noted that this policy had disproportionate impacts on low-income, rural residents (Alhassan et al., 2021).

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## COVID-19

The COVID-19 pandemic exposed many issues inherent with healthcare delivery in rural parts of the province. COVID outbreaks led to the conversion of emergency beds to alternative levels of care beds in many rural hospitals, including Arcola, Assiniboia, Balcarres, Biggar, Broadview, Davidson, Herbert, Kerrobert, Lanigan, Leader, Oxbow, Preeceville, Radville, and Wolesley (Bodnar, 2020; Mandryk, 2020; Olson, 2020; Salloum, 2022a; 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 note that, while COVID-19 produced new challenges for the healthcare system, issues surrounding staffing and a lack of available facilities were longstanding and only exacerbated by the pandemic (Simes, 2022c, 2022d; Vescera, 2022b). Other factors impacting health also came to light during this time, including homelessness in rural and northern communities (Bramadat-Wilcock, 2020).



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## VIRTUAL CARE

To address the access to specialists in rural healthcare facilities, the Government of Saskatchewan has invested heavily in virtual means to access 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 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 had to travel to a larger urban centre to access (Conroy, 2021; Government of Saskatchewan, 2017c; Mendez, 2018; Wasko, 2022). When the technology was first introduced, the SHA noted that this was a step in the right direction to improve equity in healthcare access for rural, remote, and northern residents (Government of Saskatchewan, 2017a). Technology like this has continued to expand across the province, most recently with St. Joseph's Hospital in Gravelbourg receiving 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 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 kms in travel (eHealth Saskatchewan, n.d.). Patients and physicians also report high satisfaction with Telehealth and virtual care (Gondal, et al., 2022).

In 2022, new investments were made in developing a new platform to offer virtual healthcare, entitled Saskatchewan Virtual Visit (Saskatchewan Health Authority, n.d.; 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, Ivar Mendez, estimates that 50% of patient-doctor interactions will be virtual in 5-10 years as the technology becomes more wide-spread (Olson, 2020).

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# MAJOR CHALLENGES IMPACTING HEALTHCARE DELIVERY IN RURAL SASKATCHEWAN

While there are a number of challenges influencing healthcare delivery in rural Saskatchewan, there were four that emerged as particularly impactful. Each will be discussed in detail.

## 1. STAFFING SHORTAGES

This report notes ongoing challenges related to the staffing of healthcare positions across Saskatchewan. The biggest challenges related to staffing these positions continues to occur in locations outside of urban centres.

## 2. SERVICE DISRUPTIONS

While there remains a lack of comprehensive data available on healthcare service disruptions in rural Saskatchewan, hospitals and program closures are reported by SHA, and in the media on a regular basis.

## 3. ACCESS TO TRANSPORTATION

With no provincial public transportation available, Saskatchewan residents living outside of large urban centres are disproportionately impacted by the inability to easily access health and mental health supports and services.

## 4. BROADBAND ACCESS

Individuals living in rural and remote areas of Saskatchewan do not have adequate nor consistent access to broadband, which means that they have limited access to virtual healthcare initiatives.

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# 1. STAFFING SHORTAGES

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 vacancy rates over the past five years. While the province's population has grown by 5% since 2019, the overall vacancy rate of positions within the SHA 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 (Saskatchewan Provincial Auditor, 2022).*



While urban areas of the province have also struggled to recruit and retain healthcare professionals, 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 practicing in these professions has fallen in rural parts of the province in that same time span (CIHI, 2022).

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The decline of nurse practitioners in rural areas is particularly troubling, given that the government has noted that they are looking to use these professionals more in rural communities to improve primary care access (Mandryk, 2022d). The number of registered psychiatric nurses, licensed practical nurses, and family physicians practicing in rural areas has also declined over the past five years (CIHI, 2022).

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, by recruiting foreign-trained healthcare professionals, increasing seats in nursing education programs, and financially incentivising healthcare workers to practice in rural and remote areas of the province (Provincial Auditor of Saskatchewan, 2022). The implementation of this Action Plan 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 (Harrison & Dhillon, 2018; Jami et al., 2022). In the media, many healthcare workers and their professional organizations expressed concerns around burnout, decreasing retention rates, and early retirements, particularly post-COVID-19 (Bodnar, 2020; Cairns, 2021; Salloum, 2021; Simes, 2022b; Vescera, 2020b, 2021, 2022b). Beyond burnout, rural physicians in low-volume rural regions only are exposed to, and are thus required to treat certain medical conditions every few months or years, which means that they are not highly skilled at treating these conditions (Wasko, 2022). Thus, many people would rather go to urban centres for care (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 experience an average wait time from diagnosis to assessment to surgery 54 months and 60 months longer respectively than urban patients (Mahabadi et al., 2020).

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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).

Half of the physicians practicing in Saskatchewan in 2020 were internationally trained (Mandryk, 2022a). For a variety of reasons, there is a high volume of physician turnover in rural Saskatchewan, particularly for those trained outside of the province. This turnover can lead to disruptions in the continuity of care (Lewis, 2022; Wasko, 2022).

A reliance on part-time and contract workers to meet labour needs has been consistent in Saskatchewan healthcare over the past five years. From 2017 to 2022, 33-35% of hours worked by CUPE-affiliated healthcare workers were done 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. Of the 1,400 open jobs in healthcare represented by CUPE Local 5340 in December 2021, only 180 (12.9%) were for permanent, full-time positions (Salloum, 2021).

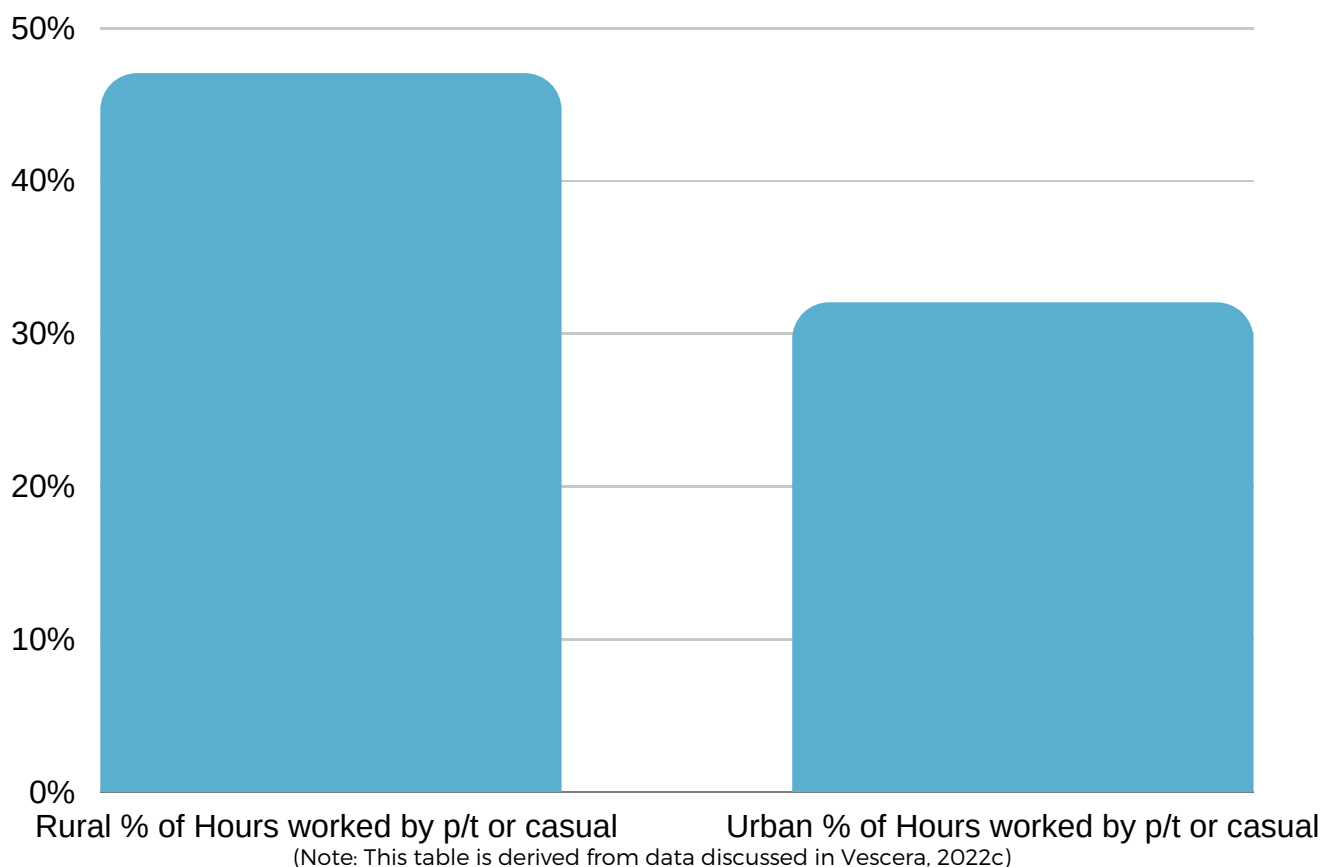
## CUPE PERMANENT FULL-TIME POSITIONS AVAILABLE



**12.9%**

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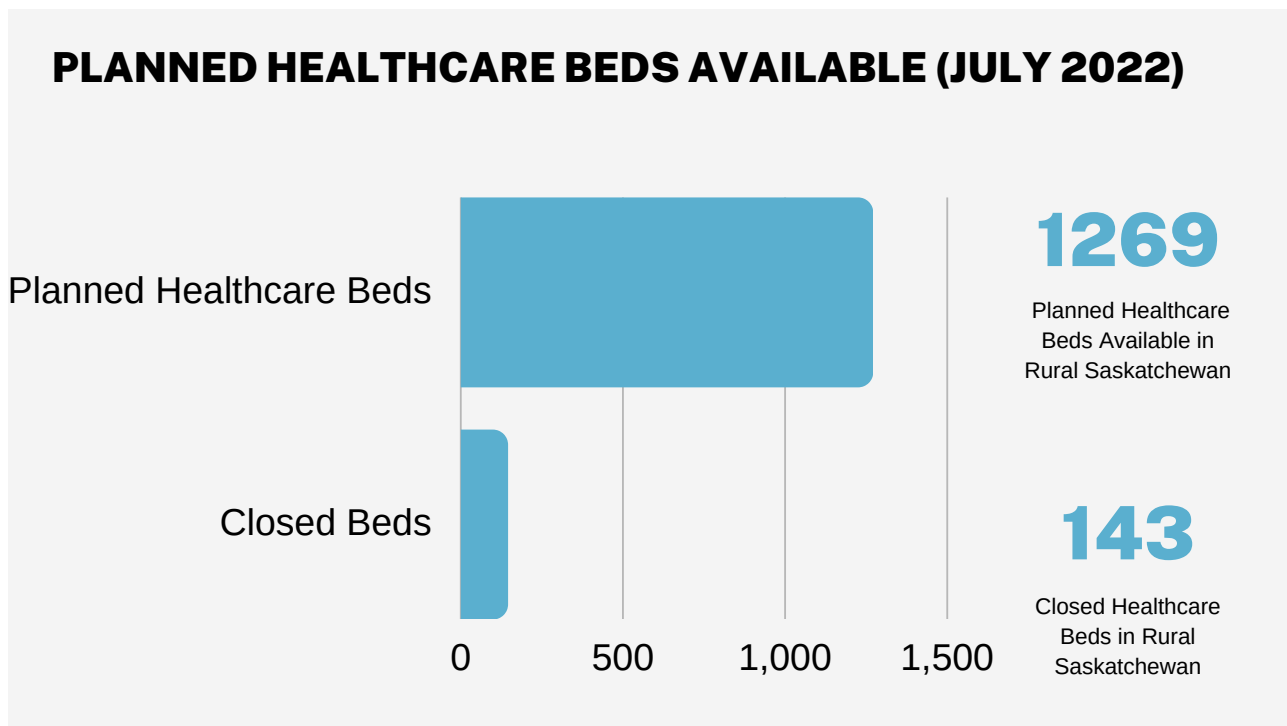
## PERCENTAGE OF HOURS WORKED BY PART-TIME OR CASUAL EMPLOYEES (2017-2022)



This reliance on precarious labour to fill positions has implications on service delivery and on continuity of care. 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 precarity as one of the primary exacerbators of the rural healthcare crisis and have called on the government to create full-time permanent healthcare jobs in rural Saskatchewan (Vescera, 2022c).

Of the CUPE-affiliated facilities that had at least 50% of hours covered by part-time and casual employees, 33 (89%) were facilities located in rural Saskatchewan.

## 2. SERVICE DISRUPTIONS



There is a lack of comprehensive, public data on service disruptions, which obfuscates the true extent of the problems facing rural healthcare in Saskatchewan. The services most impacted in our preliminary scan using the Wayback Machine were labs, x-rays, emergency services, inpatient units, and obstetrics.

In July 2022 alone, 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 a lack of staffing (Simes, 2022; 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 begun to question whether this is actually the case. Staffing issues have led the SHA to shift some services to larger urban centres like Regina and Saskatoon (Baron, 2021; Salloum, 2022a).



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## 3. ACCESS TO TRANSPORTATION

Saskatchewan residents living in rural and remote areas have decreased 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 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 STC. Many rural residents who formerly used STC to access healthcare services have reported missing routine health appointments since its closure (Korem Alhassan et al., 2021).

While a majority of the burden of finding transportation falls on the shoulders of the individual patient, some communities have developed programs to address this need. The former Sun Country health region, which served southern Saskatchewan with its office in Weyburn, uses a volunteer driver program which allows people living in the region to get a ride to their appointments from volunteer drivers at a reduced cost (Wilson, 2017).

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).

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The further a person's location from care, 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).

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, 2017b; Pearce, 2021).

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## 4. 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). This means that the Saskatchewan Virtual Visit may not be viable in rural communities without proper access. These same concerns have been identified in relation to virtual mental healthcare access in the province with identified challenges including a general lack of technology in rural and remote communities, deficiencies in internet access, and a lack of financial stability for patients and clients needing to access technology and/or an internet connection (McIntosh, et al., 2021).

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, the infrastructure to maintain them is necessary. This includes access to broadband in individuals' homes, as remote presence technology may expand into homecare in the near future. As the province updates to a 5G network in 2023 and 2024, this problem may be addressed.



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## RELATED SOCIAL CHALLENGES

The loss of healthcare services is perceived as a serious threat to rural communities' vitality. Rural residents derive a great deal of pride from their healthcare facilities and those who staff them (Pearce, 2022). Local rural communities often band together to raise money to go towards purchasing equipment for their local facility, often cost-sharing with the government (Daniels, 2020; Government of Saskatchewan 2017d, 2017e; Vescera, 2020a; Wilger, 2018; Yorkton This Week, 2022). Politically, these facilities hold the upmost significance to rural voters. The closure or conversion of 52 rural hospitals to primary healthcare clinics or long-term care facilities 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 Legislature 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 or temporary closures 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, 2022a). There is also a worry that if this were to happen, that 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).

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## POSSIBLE IMPACTS FOR CUPE LOCAL 5430

There are concerns that the current state of healthcare in rural Saskatchewan will further push healthcare workers out of the public sector (primarily government ministries), into urban communities, or into a new career entirely. The Saskatchewan Union of Nurses has reported that many of their members have quit, begun working fewer hours, or gone into the private sector because of unreasonable job expectations (Vescera, 2022c).

Of particular concern to CUPE Local 5430 is the rise of contract workers in rural healthcare. Over 100 nurses currently working in rural areas of the province are under private contract (Fominoff, 2023). Most of the companies providing contract workers are based in Ontario and include: Solutions Staffing, T-Bone Consulting, Royal Home Health, New Horizons Select Medical, Goodwill Staffing, and Elite Intellicare Staffing. Within CUPE affiliated facilities, there are 17 contracted workers currently employed; these are primarily licensed practical nurses and a few medical radiation technologists. A examination of job postings in March 2023 found that there were 40 open positions for contract healthcare workers in rural parts of Saskatchewan. These included openings for registered nurses, nurse practitioners, licensed practical nurses, medical laboratory technologists, and advanced care paramedics. The average wage being paid to an RN working on contract in northern Saskatchewan is \$86.60 per hour, almost double the wage of an RN working in the public healthcare sector. Higher wages in the private sector may push an overworked healthcare workforce out of the public sector. While the government has stated that these contracts are only in place to diminish service disruptions, questions arise about the effectiveness of this tool to solve staffing shortages in the long term (Fominoff, 2023). A rise in contract workers may also signify a shift towards privatization within the Saskatchewan healthcare system, which should worry all citizens.

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# POSSIBLE IMPACTS FOR CUPE LOCAL 5430

Employees may leave the public sector in their search for stable and secure employment.

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Employees and their families may leave rural communities in search of jobs and better pay in urban centres.

Rural healthcare employees may switch careers and move out of the healthcare sector completely

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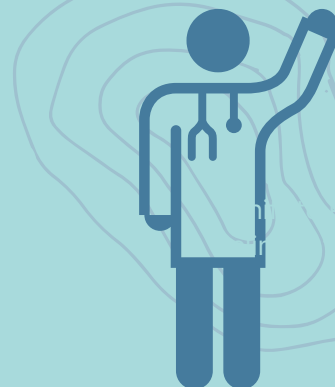


4

The public system may shift closer to a privatized system of care, including fee for service care

An Increase in contract workers for higher wages with no benefits may decrease opportunities for those choosing to live in rural communities.

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## FUTURE DIRECTIONS

A lack of available data meant that several avenues of study were not able to be pursued during this first phase of this research project. Perhaps most significantly, we were unable to quantify the full extent to which service disruptions occurred following the COVID-19 pandemic. Further, more transparency in the number of contracted out workers would have provided additional clarity into the extent to which privatization has entered healthcare in rural Saskatchewan. The lack of this data is troubling, as it obfuscates the full extent of the problems plaguing healthcare in rural parts of the province. Fewer publicly-available reports are available on the Saskatchewan Health Authority website when contrasted with the amount of publications posted on the former regional health authorities' sites. From surveying the media, it is explicitly apparent that rural residents are frustrated with the state of healthcare in their communities. This warrants future study to provide these residents with greater clarity on the issues they know are present allowing them to push for government action.



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## 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>

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>

Cairns, J. (2022, November 15). Five Kamsack hospital beds re-open, says Merriman. *SaskToday*. <https://www.sasktoday.ca/provincial-news/kamsack-hospital-beds-now-back-open-says-merriman-6104869>

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## REFERENCES

- 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.). *Telehealth*. <https://www.ehealthsask.ca/services/telehealth>
- eHealth Saskatchewan. (2020, September). *Telehealth community list*. <https://www.ehealthsask.ca/services/telehealth/Documents/Community%20List%20%20-%20Sept%202020.pdf>
- Fominoff, L. (2023, March 16). Sask. travel nurse program under the microscope at SARM convention. *650 CKOM*. <https://www.ckom.com/2023/03/16/sask-travel-nurse-program-under-the-microscope-at-sarm-convention/>
- 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>
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## REFERENCES

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, 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. (2017b, 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. (2017c, 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. (2017d, 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. (2017e, 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. (2017f, 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.

---

---

## REFERENCES

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](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](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>

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>

---

---

## REFERENCES

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. (2022, 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. (2022, 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. (2022, 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. (2022, 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>

Martin, A., & Tank, P. (2020, April 9). Ventilators to remain centralized in rural, northern areas of province; 300 more life-saving devices on order, bringing Saskatchewan's total to 750. *Regina Leader-Post*. <https://leaderpost.com/news/local-news/covid-19-in-rural-northern-sask-ventilators-will-remain-centralized>

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>

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>

---

---

## REFERENCES

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](https://auditor.sk.ca/pub/publications/public_reports/2022/Volume%202/2022-report-volume-2-full-report.pdf)

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

---

---

## REFERENCES

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>

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>

---

---

## REFERENCES

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>

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/pmnl/news-pmnl/canada-news-pmnl/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/saskatchewan-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>

---

---

## REFERENCES

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>

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>

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