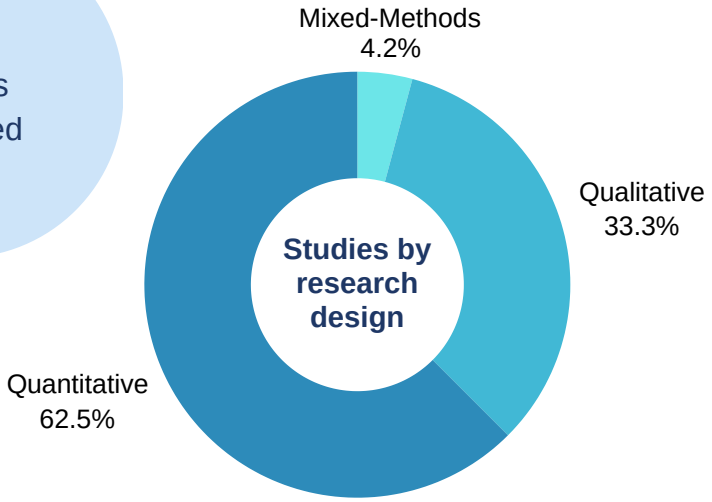
The impact of COVID-19 on healthcare, health outcomes, and experiences for adults with SCI/D: A review of what is known

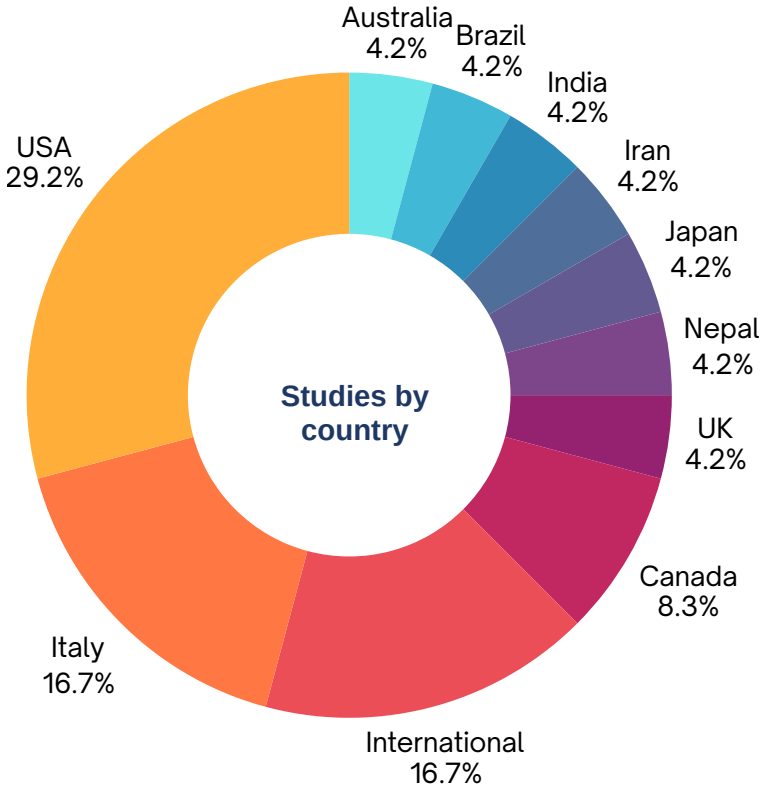
Defining the issue

Around the world, the COVID-19 pandemic has brought about major changes in how people experience, access and use healthcare services. Additionally, the impact of COVID-19 can vary as people with existing health conditions can be at a greater risk of experiencing severe symptoms and negative health outcomes (e.g. difficulty breathing, severe pneumonia, organ failure, death). People living with spinal cord injuries/ dysfunction (SCI/D) often use healthcare services to manage their condition and other health issues. As a result, COVID-19 may have impacted people with SCI/D more than other groups. In our scoping review, we looked at what has been reported on the impacts of the COVID-19 virus and pandemic on adults with SCI/D.

What did we do to better understand this?

We conducted a search in November 2022 to see what studies have found about the impact of the COVID-19 virus and pandemic on adults with SCI/D. Specifically, we created a summary of what is known about the impacts on healthcare, changes in health, and experiences.





We found **24 studies from around the world, reporting on the multiple impacts on healthcare during the pandemic for adults with SCI/D**. Of these 24 studies, 18 were in outpatient settings, 3 in in-patient, 2 in both, and 1 that was not explicitly stated.

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What did we find in our review of studies that looked at the impact of the COVID-19 on adults with SCI/D?

Overall, studies from across the globe and accross multiple healthcare systems found:

Challenges accessing healthcare

Access to healthcare for people with SCI/D was challenging during the COVID-19 pandemic. These issues were found to negatively impact people's mental and overall health, and included:

- **Less access** to specialists, medical supplies/equipment, medication, therapies, outpatient services, and homecare services.
- **Delays or cancelations** of appointments and medical procedures.

Impact on patient *experiences*

The reviewed studies showed that some individuals with SCI/D experienced **changes in caregiving support**.

- **Changes in caregiving support** due to shortage of staff for home caregiving and increased risk of virus exposure from caregivers (e.g. personal support workers) who visit multiple homes. This led to more demand and stress for families.
- **Shortages in medical supplies and devices** impacted some individuals with SCI/D.
- **Better access to COVID-19 information and guidelines for people with SCI/D** was needed**,** with healthcare providers also expressing a need for more information on how the virus impacts people with disabilities.

Increase in virtual care

Use of virtual care (e.g., video, telephone) increased amongst people with SCI/D from the very beginning of the COVID-19 pandemic.

- **Virtual appointments allowed for continued access to care in a way that was safe** for both patients and providers as it reduced exposure to the virus and helped people maintain social distancing. Most studies noted that patients had a **high level of satisfaction with virtual care and similar levels of quality as in-person appointments.**
- Patients found some of the **advantages** of virtual care to be that it:
  - made it easier to schedule routine appointments, follow-ups, and consultations.
  - reduced transportation issues and associated costs.
  - made it easier to access prescription refills and consulting on medications virtually was easier.
  - made it easier to access patient education materials.
- The **disadvantages** of virtual appointments were:
  - the inability to receive physical assessments and treatments (e.g. injections, physiotherapy).
  - concerns that appointments were rushed and impersonal.
  - access to technology, digital literacy, as well audio and video connectivity issues.
  - privacy and confidentiality needed improvement to in order to continue to use virtual care.

Impact on patient *outcomes*

Most studies showed that there was **no major difference seen in symptoms, treatment, health conditions, quality of life or mortality** for individuals with or without SCI/D when infected with COVID-19. However:

- One study concluded that **certain patient characteristics such as age, smoking status, and body mass index, were related to increased risk of infection and death**.
- Studies that looked at **general health outcomes during the pandemic** found that individuals with SCI/D had **increased or worsened secondary conditions** such as pain and urinary tract infections, and overall felt that their health had worsened.

Key takeaways on the impact of the COVID-19 pandemic on people living with SCI/D:

- Increased capacity and uptake of virtual care occurred from the very start of the pandemic and continued to increase as the pandemic went on.
- Increased challenges with accessing healthcare professionals and services, as well as medical supplies, were experienced throughout the pandemic. This had a negative impact on mental health and wellbeing.
- A decrease in formal caregiving during the pandemic led to increased stress and strain on informal caregiving from family or friends.
- There was limited health literacy about COVID-19, especially around the risks faced by people with SCI/D.

Limitations and need for future work:

- There were limited studies and no conclusive findings on the impact of other factors such as socioeconomic status and discrimination, when evaluating access to care.
- Further research is needed to identify ongoing limitations of virtual care and possible solutions for addressing them.
- A greater understanding is needed to determine if SCI/D patients with multiple health conditions experienced greater challenges in accessing care or worse health outcomes during the pandemic.

Further reading:

- Senthinathan, A., Tadrous, M., Hussain, S., Ahmad, A., Chu, C., Craven, B. C., Jaglal, S. B., Moineddin, R., Cadel, L., Noonan, V. K., Shepherd, J., McKay, S., Tu, K., & Guilcher, S. J. T. (2024). COVID-19 and Mortality in the Spinal Cord Injury Population: Examining the Impact of Sex, Mental Health, and Injury Etiology. Healthcare (Basel, Switzerland), 12(19), 2002. https://doi.org/10.3390/healthcare12192002
- Senthinathan, A., Cimino, S., Jaglal, S. B., Craven, B. C., Tu, K., & Guilcher, S. (2024). The impact of the COVID-19 virus and pandemic on healthcare utilization, access, delivery, experiences, and outcomes in the spinal cord injuries/dysfunction population: A scoping review study. PloS one, 19(2), e0297384. https://doi.org/10.1371/journal.pone.0297384
- Mei, A., Senthinathan, A., Hussain, S., Tadrous, M., Noonan, V. K., Jaglal, S. B., Moineddin, R., Craven, B. C., McKay, S., Cadel, L., Shepherd, J., Tu, K., & Guilcher, S. J. T. (2024). COVID-19 Vaccine Uptake among People with Spinal Cord Injury and Dysfunction in Ontario, Canada: A Population-Based Retrospective Cohort Study. Healthcare (Basel, Switzerland), 12(17), 1799. https://doi.org/10.3390/healthcare12171799
- Senthinathan, A., Tadrous, M., Hussain, S., McKay, S., Moineddin, R., Chu, C., Jaglal, S. B., Shepherd, J., Cadel, L., Noonan, V. K., Craven, B. C., Tu, K., & Guilcher, S. J. T. (2024). Examining the impact of the COVID-19 pandemic on homecare services among individuals with traumatic and non-traumatic spinal cord injuries. Spinal cord, 62(7), 406–413. https://doi.org/10.1038/s41393-024-00999-2

Full scoping review: Senthinathan, A. et al., (2024). The impact of the COVID-19 virus and pandemic on healthcare utilization, access, delivery, experiences, and outcomes in the spinal cord injuries/dysfunction population: A scoping review study. PloS one, 19(2), e0297384.

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