

Epidemiology of Hepatitis C in Northern First Nation Communities in Saskatchewan, 2011-2021

Emmanuel Dankwah¹, Grace Akinjobi¹, James Piad¹, Nnamdi Ndubuka^{1,2}

¹Northern Inter-Tribal Health Authority, Prince Albert, Canada; ²University of Saskatchewan, Department of Community Health and Epidemiology, Saskatoon, Canada

Background

- Hepatitis C virus (HCV) infection has caused significant morbidity and mortality worldwide. In Canada, HCV infection rate stood at 30.4 cases per 100,000 population in 2019. The Saskatchewan rate is about 73% higher than the national rate (52.5 per 100,000 people).
- The situation is even dire among Indigenous people in Canada. In 2010, the rate of new HCV infection among indigenous people was 4.7-fold greater compared to non-Indigenous population.
- Despite the elevated risk of acquiring HCV infection among Indigenous Canadians, there is a paucity of research in HCV infection among this population.

Study Objective

- This study aims to describe the distribution and trends of HCV infection in northern Saskatchewan First Nation communities between 2011 and 2021 to support targeted public health response.

Methodology

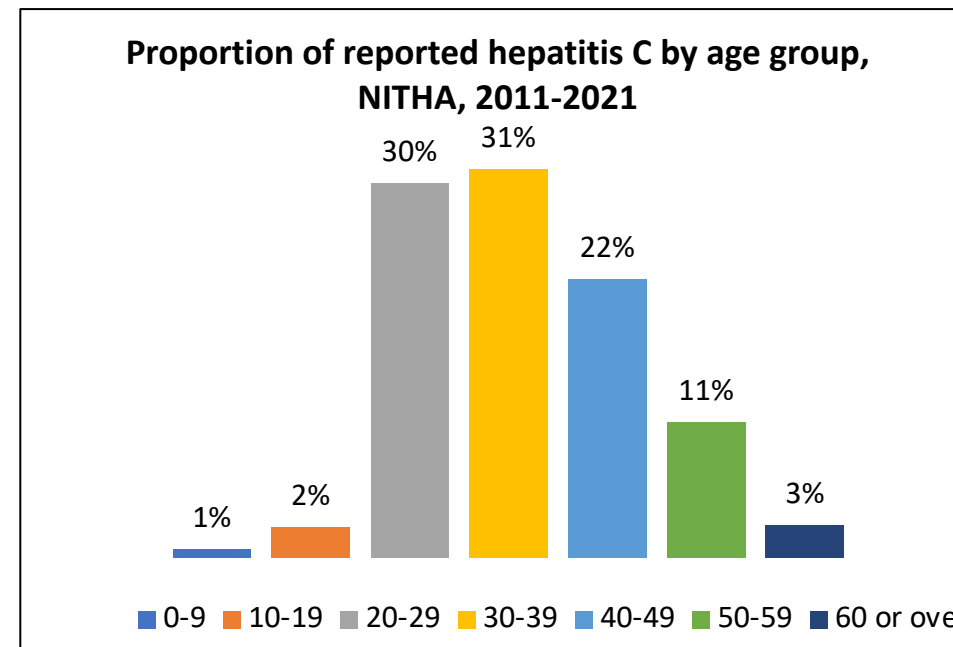
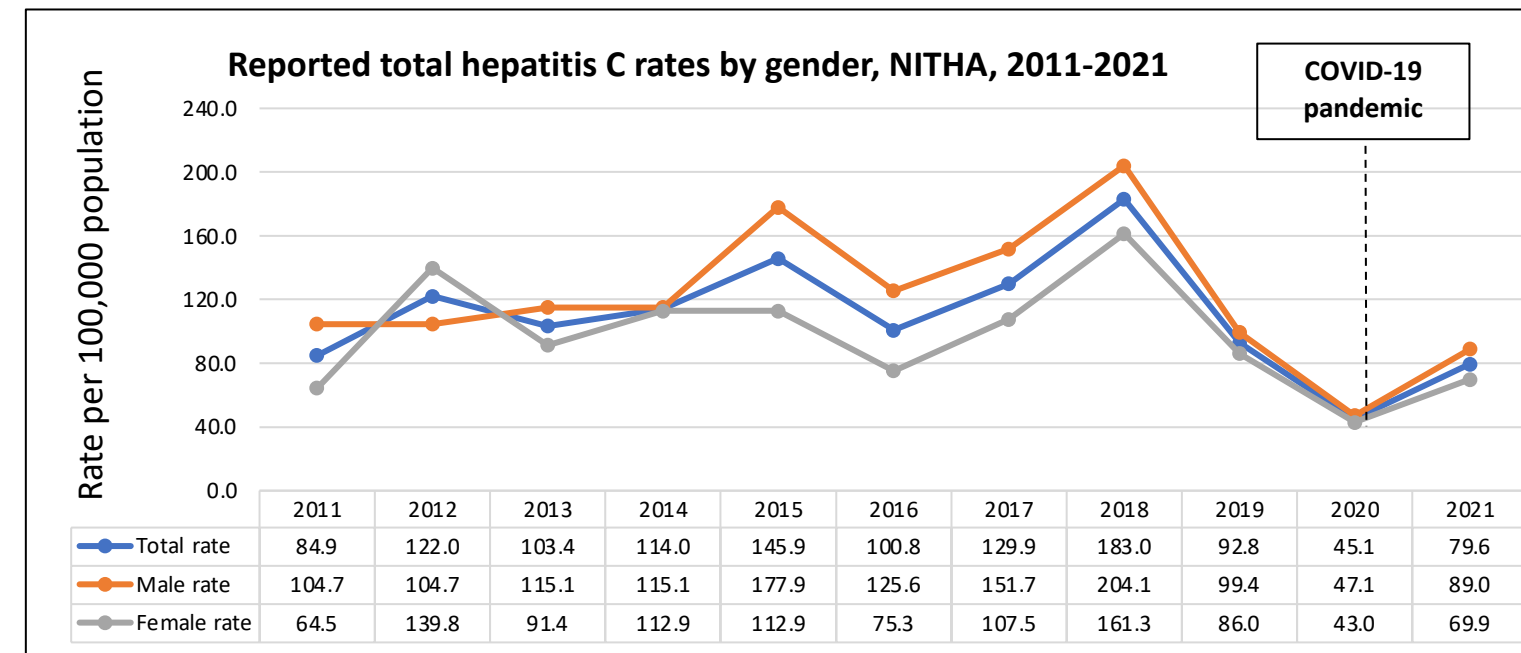
- A linked population-based data on HCV infections that spanned from January 1, 2011 to December 31, 2021 was used for this analyses.
- HCV data from Panorama (a centralized Investigation and Outbreak Management database), MicroStrategy, and provincial laboratory data on HCV testing in or near northern Saskatchewan First Nation communities were combined for this study.
- Age, sex, geographic residence, risk factors and temporal trends were examined using descriptive statistics.

Result

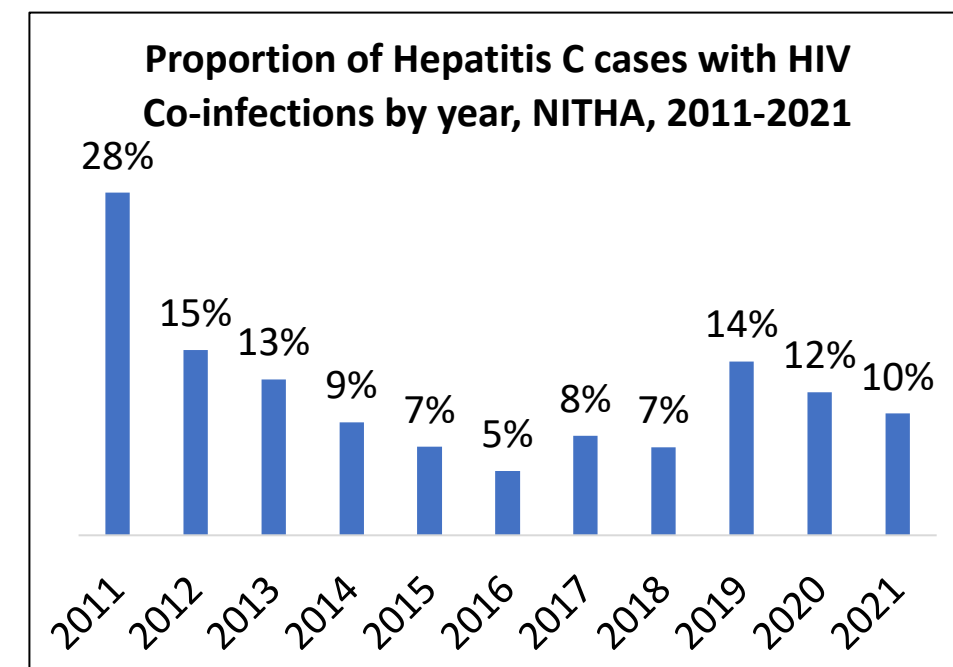
- Over the study period, 453 HCV cases were reported and 56% of the cases were male.



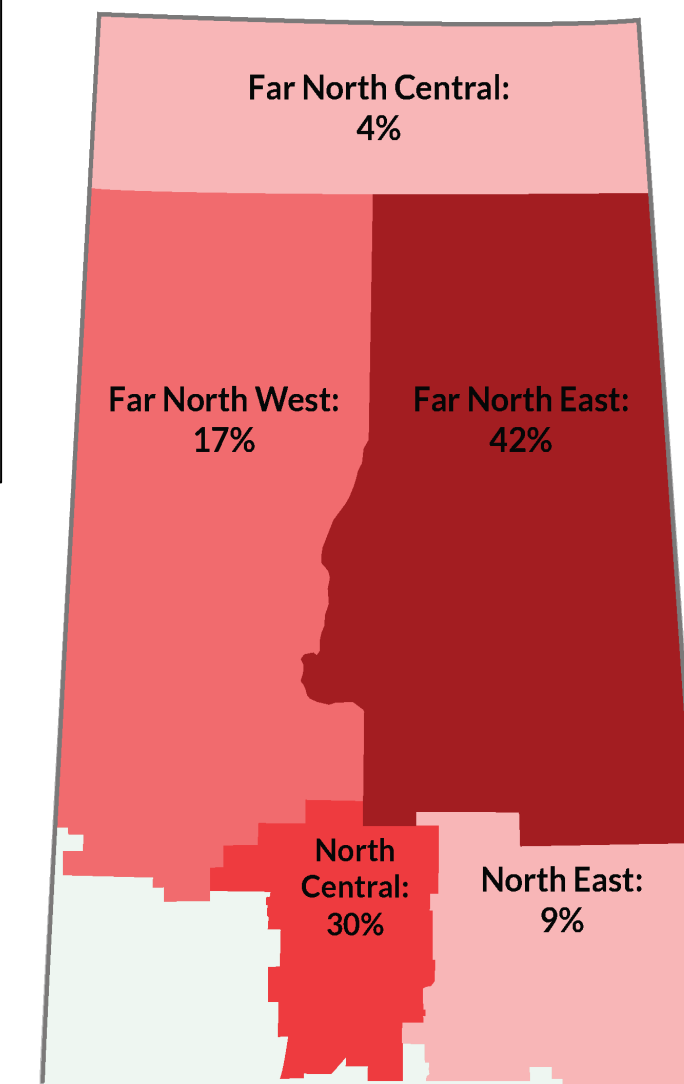
- From 2018 to 2019, there was a 49% decline in the total reported case rate. The rate further declined in 2020, perhaps due to low testing rate as a result of COVID-19 response.
- But, the total case rate increased markedly by 76% in 2021 from 2020.
- Gender specific rates indicate that male and female case rates increased by 89% and 63% respectively in 2021 compared to 2020.



Those aged 20-29 (30%) and 30-39 years old (31%) had higher proportion of hepatitis C cases.



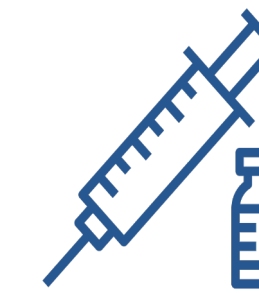
Proportion of Hepatitis C cases by Geographic Zones, NITHA, 2011-2021



Over 70% of HCV cases resides in Far North East (42%) and North Central (30%) zones.

Selected Risk factors

- Substance use has been observed to increase the risk for hepatitis C infection.
- The use of injection drug (14%), alcohol (11%) and illicit non-injection drug (7%) were key drivers.



Injection Drug Use 14%



Alcohol and Non-injection Drug Use 18%



More than 2 partners in last 3 months 7%

Conclusion

- Based on 2021 surveillance data, about 80 people out of every 100,000 northern Saskatchewan First Nation people has hepatitis C infection.
- Overall decline was observed over the stipulated time period, but in 2021 HCV infection rate began to rise.
- There is a higher rate of HCV infection among males, and a growing burden of HCV infection among females.
- A significant portion of those with HCV infection are substance users, young adults and residents of Far North East zone.
- Our study findings are critical baseline information for culturally appropriate public health interventions. Nonetheless, future comprehensive evaluation is warranted.

Acknowledgements

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